

*Shim Teo as a Social Catalyst for the Elderly of Korea*

by  
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*A thesis  
presented to the University of Waterloo  
in fulfillment of the  
thesis requirement for the degree of  
Master of Architecture*

*Waterloo, Ontario, Canada, 2022  
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## *Author's Declaration*

This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## *Abstract*

Korean society can be described as a society that is built on the idea of ‘care’ and ‘share’. From the centuries-old constitution which declared Korea to be a ‘country embracing filial duties’ and an old saying of ‘respecting the elderly’, the care for the most vulnerable members of the population is evident throughout Korea’s history and public space. As Korea embraces the digitalization of critical services and infrastructures, along with the redevelopment of traditional markets and sites, the aging population is now being pushed away from the rest of society. With the overall increase of the aging population, as well as the depression arising from the aging population, this predicament ultimately poses a pressing question for Korean society: how do we best care for our elderly?

This thesis looks at the ‘*Shim Teos*’ (directly translated as ‘Rest Stops’), as an answer to the isolation faced by the aging population of Korea. ‘*Shim Teos*’ are highly functional urban furniture implemented by the government. They are typically placed in places of congregation and high traffic public spaces for the citizens to rest in or take shelter in. The concept of the *Shim Teos* was conceived from a society built on the idea of care for its citizens.

This thesis will explore different types of *Shim Teos* in relation to three socially and environmentally distinct sites, Seoul Peace Park, Suwon Terminal, and Suwon Neungsil Village, through in-person site visits, site documentations and mapping. Different site conditions will be cross-referenced with different types of *Shim Teos* placed in the site, as well as the success of the *Shim Teos*, in terms of how well used they are. This thesis will also explore the evolution and cultural significance of older forms of *Shim Teos* through Korea’s Genre Painting, ‘*Pong Sok Hwa*’. From this research, a series of new designs of *Shim Teos* will emerge, which will not only be a place for the aging population to reconnect with society, but will also be more attuned to the elderly’s physical needs, and a place for the newer generation to reconnect with Korean culture.

## *Acknowledgement*

First of all, I would like to acknowledge the supports and contributions of my family, especially my mother, Miyang Kim and my father, Yonghun Lee. This thesis would not have been possible without their support from Korea.

I would like to thank Professor Rick Andrighetti, my supervisor, for his guidance and sharing his insights and design expertise throughout the duration of writing this thesis.

I would also like to thank Dr. Tracey Winton who have encouraged me to pursue my thesis topic from TRD1 and have since continued to encourage and motivate me.

Lastly, I would like to thank my friends for being my moral support through the past few years.

Thank you. 감사합니다.

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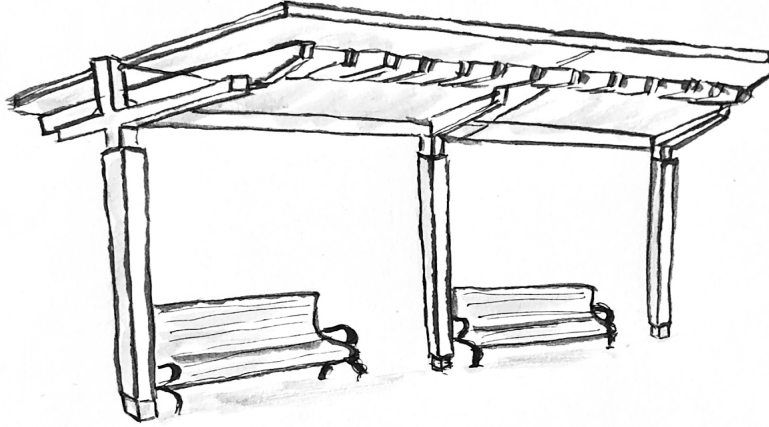
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# *Prelude*

*This story is based on my observations  
from the visit to Neungsil Village Senior  
Apartment Complex.*



고독. (*GoDok*) noun. Translated to Solitude.  
Loneliness. Seclusion. Isolation.



Gogu (April 20<sup>th</sup>)

The sound of spring rain wakes me up. It is still dark outside.

I get up and turn on the TV. The morning news is on. It will be raining the entire day.

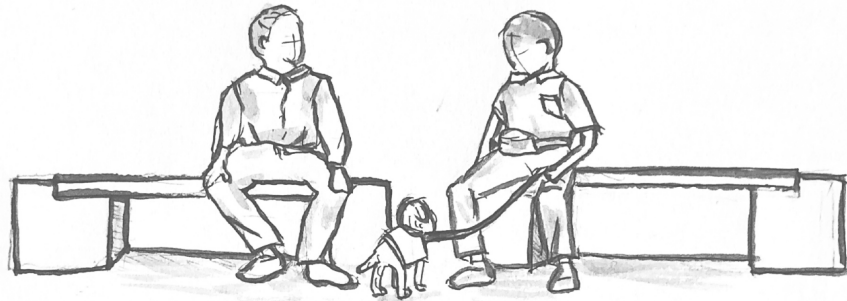
Breakfast for this morning is a small bowl of congee and leftover steamed tofu from last night.

According to my doctor, congee raises my blood sugar level, which means I need to exercise daily.

I put on my scarf, hat and raincoat and head out.

The cool spring rain gently taps on my raincoat. It is cold. The rain muddies up the local hiking path, so I decide to walk around the apartment complex instead.

After a short walk, I sit on the communal rest stop beside the neighbourhood playground. Even though there are plenty of rest stops around the apartment complex (I believe it's due to the presence of senior residences nearby), this is one of the very few sheltered rest stops. As I settle down, the sun rises.



### Soseo (July 5th)

The cicadas outside are off to an early morning. Their loud singing voices signal the beginning of summer.

My breakfast is a plate of frozen dumplings. I steam the dumplings to soften up the skins. I wash them down with a cup of cold barley tea.

The usual morning hike happens before the sun rises. Early morning and late nights are the only two times in a day that I am able to go out, as the summer heat tires me out easily.

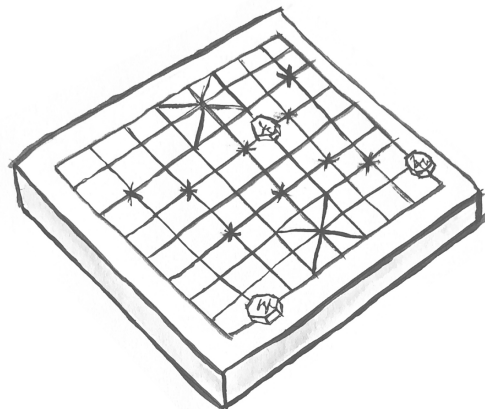
I grab a bottle of barley tea on the way out. I get dehydrated easily in the summer.

Towards the end of my hike, I lie down on a bench under a large oak tree. The leaves are wide enough to shade me from the blazing summer sun.

Soon later I see my neighbour hiking with his companion, a small white dog.

We exchange our usual greeting. We talk about our day. What we had for breakfast. The plain but grateful small talk.

As the sun rises to the top, we walk to the senior community centre beside our residence. We will spend the rest of the day at the fully air-conditioned centre, where we will be provided with snacks and a simple lunch.



### Daseo (July 23rd)

I wake up from the unbearable heat. I am sweating. I switch my electric fan to the maximum setting and turn its direction towards me.

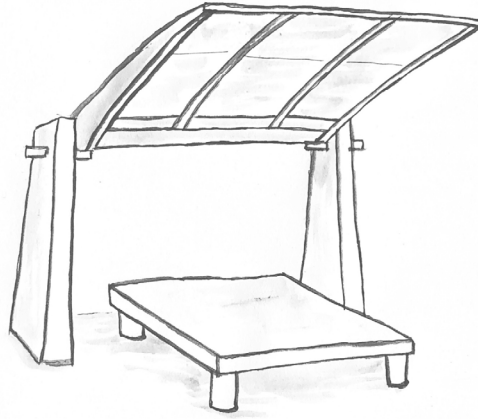
I don't have an appetite this morning from the heat, so instead of having a Hansik (Korean food) for breakfast, I drink a bottle of banana milk purchased last week from a local convenience store.

Instead of my usual morning hike, I decide to walk to the senior community center as soon as it opens. Even early mornings are too hot to go outside.

The senior community center is already packed with my neighbours. I grab a cup of cold water from the water dispenser near the entrance.

I participate in a series of Janggi games (Korean Chess) with my neighbors until lunch. We complain about the heat and wonder when the fall will begin.

After lunch, I participate in a not-for-profit art class. I am not interested in the topic, but it is a good way to spend the day. It will run until dinnertime, when I will head back home to cook up a simple carb-free dinner.



Cheoseo (August 23rd)

Beautiful weather today. A few of my neighbours and I decide to take our breakfast to a long walk to the large park this morning.

I grab the cream bun given by the senior community center.

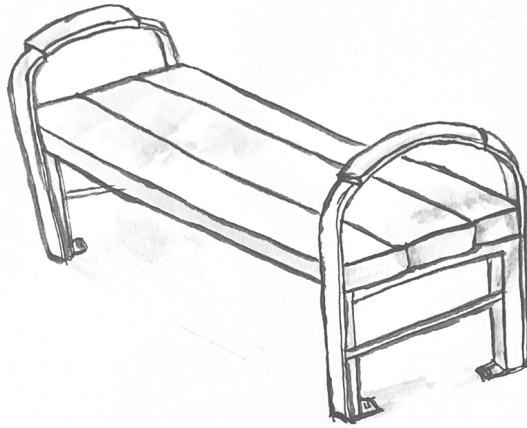
The sound of cicadas has disappeared. It signals the end of summer and the beginning of fall. I am grateful for the temperate weather of fall.

Along the walk to the park, we stop by the early morning seafood market nearby to purchase a bottle of cheap Makgeolli (Korean rice wine) and a small plate of sardine hwae (sashimi). A delicacy only available during fall. We chat with the vendor for a little bit. The usual talk about our day. Our dull life.

As we arrive at the park, we see many of the seniors already settling down around to enjoy the last grasp of summer.

We sit on the large raised wooden patio. We sit in a circle, with our meal in the center.

This social life will soon disappear once the winter cold begins.



Baengno (September 9th)

It is starting to get cold. My curtains are all lowered to keep the heat in. I have switched my summer blanket to double layered winter blanket.

Juk (congee) and a bowl of seaweed soup are my breakfast this morning. All my meals are warm now.

I decide to hike in the afternoon, when the sun is up and the asphalt has soaked up the heat, so it will be warmer.

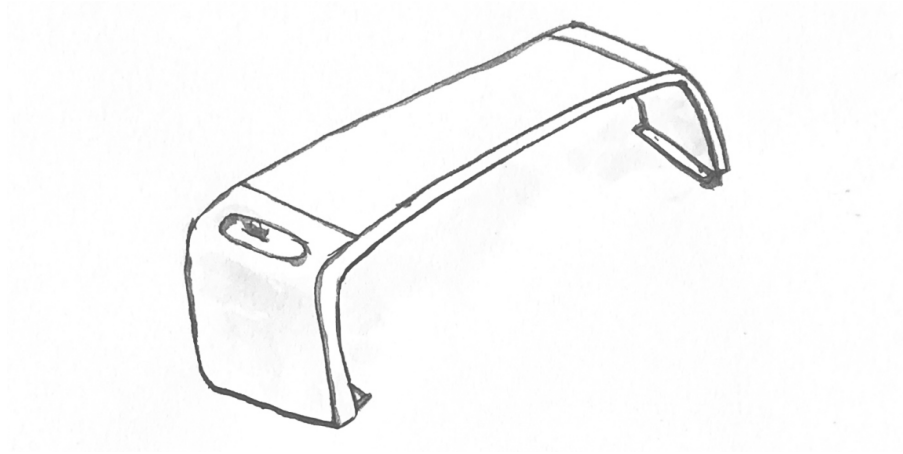
I need to wear my winter jacket now.

I spot the acorns and ginkgo fruits that have fallen on the ground. The fall harvest festival is near.

I sit on the bench on a sidewalk and watch people going about their business. Most of the people are out to celebrate the fall weather and to watch the beautifully colored leaves.

I stay seated for a few hours to watch the leaves as well.

I head back home for lunch, which is only few hours before the sunset. The days are getting shorter.



Ipdong (November 7th)

It is very cold this morning.

I turn on the TV and make a bowl of egg porridge. It is a simple dish that I often make when I don't have an appetite. I add water and raw egg to instant rice and boil until all the ingredients are cooked.

I watch the morning news as I eat.

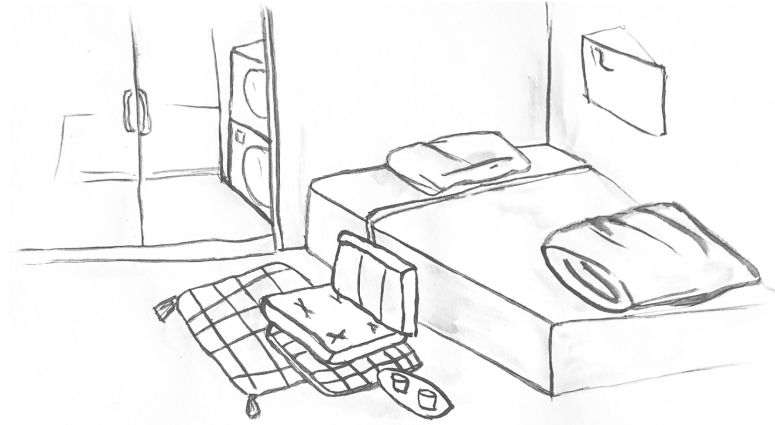
I will head outside for a short walk and a social gathering at a senior center late in the afternoon when the sun is high up.

I rest on the heated bus stop bench on the way. The heat is turned on this time. As I warm up my cold body, I decide to end my walk and head to the senior center.

There is a kettle full of hot barley tea and a bowl of tangerines at the entrance which I help myself to. I am very fond of tangerines, but the doctor has recommended maximum intake of 2 each day for my blood sugar level.

My neighbours and I sit side by side to watch a sports game. We watch in silence.

I head back right before the sunset.



Dongji (December 22nd)

There is a heavy snowfall outside. I decide to delay my breakfast so I could continue to stay inside my warm blanket and watch TV.

The breakfast is a leftover bowl of whole chicken soup with herbs, cooked two days ago. The chicken was given by the social welfare center.

As much as I want to head outside for fresh air, my social care worker and doctor have warned against heading out during a snowfall. Or when the snow is on the ground. Or when it's too cold. Winter can be deadly for an old man like me. I walk along the hallway of the apartment to get some exercise. Many of the entrance doors are slightly open despite the cold. It's our way of trying to reconnect to society during winter.

After lunch, I am visited by my social care worker. I make instant coffee for both of us.

Today he brought me a bag of rice, a packet of instant noodles, instant side dishes and a small bag of personal hygiene products.

He doesn't stay for long, as he has a few more seniors to visit for the day. He leaves without drinking his coffee.

I spend the rest of the day watching TV.





Gyeongchip (March 5th)

The snowfall that started last night has turned into rainfall this morning. It is the first rain of the year.

The rain stops just as I finish up my small breakfast, a steamed sweet potato.

I decide to take a very short walk around my apartment complex, as the rain has melted off the snow on the asphalt. It might be still too cold and slippery, but I am feeling too isolated and lonely staying in my house every day.

I take my umbrella with me just in case.

Even though it is not snowing anymore, the weather is still too chilly for a long walk.

I visit the shaded rest stop near my building for a quick stop. The cold air tires me out quickly.

In between the yellow, barren grass, I can see a glimpse of green colour, which are the spring sprouts making their way out of the thawed ground.

I am happy for the spring to come so I can continue my outdoor exercises and maintain a social connection.



## *Chapter 1: Introduction*

## 1.1 Introduction: History of the Public Space in Korea

The Republic of Korea is a nation full of rich cultural and political history, and the Shim Teo is one of the many by-products of a society built upon the principle of 'care' for its citizens. The history of socialization, democracy and care is directly related to the development and the evolution of public space, including the Shim Teo which is a micro public space itself. To understand the idea of the Shim Teo, it is important to understand the history behind the public space of Korea, specifically the public square, the earliest form of public space found in Korea's history.

The earliest public square was recorded to be established during the Bronze Age (3500~1200 B.C.E)<sup>1</sup>. This was the age of communal living when the earliest forms of villages were established. Small straw huts were placed in a circular formation, and the space in the center became the public square of the village. Crops were grown together and hunted animals were split at the public square, as well as cooking, conflict resolution, rituals, and festivals. These events that took place in the public square helped to mitigate conflict between villagers and brought the entire village together as one, allowing it to survive. One could even say that the evolution and expansion of the village happened right at the public square.

As shown in Jeju Island's Samyang-dong Excavation Site of the 500-100 A.D (fig. 1.1)<sup>2</sup>, the public square is placed in the middle of the residential straw huts, which is a space for assembly and for fire pits<sup>3</sup>. The symbolism of the public square, a place of democracy, changed dramatically as the government system of Korea became a monarchy from individual Goryeo tribes, as democratic decision-making and public space were no longer needed. Instead, the public squares were placed in front of the palaces, as they became a space for the ruler to be worshiped by the citizens. Along with lavish palaces, the public squares became a place for the ruler to display his power to the citizens, as public punishments and coronation ceremonies also took place in the squares to instill fear and respect upon the citizens.

With the beginning of Japan's colonialism of Korea, the Korean Empire officially ended in 1910, thus effectively ending the monarchy of the Joseon Dynasty<sup>4</sup>. When the U.S Army and the USSR captured Korea in 1945 and ended colonial rule, Korea was divided into two occupational zones, the North, and the South.

<sup>1</sup> yongman Kim, "History of Public Squares," Life History of Korea, 2012, <https://terms.naver.com/entry.naver?docid=3574286&cid=59022&categoryId=59022>.

<sup>2</sup> "Archaeological Site in Samyang-Dong, Jeju," Cultural Heritage Administration, 2006, [http://english.cha.go.kr/chaen/search/selectGeneralSearchDetail.do;jsessionid=TV1op3qT9QqjTwxFqdWoGU3VU8AEQbY77X8FTSBH3VopC71E4jmmWCTYkRlBgnyY.cha-was01\\_servlet\\_engine4?mn=EN\\_02\\_02&sCcebKdcd=13&ccebAsno=04160000&sCcebCtcd=50&pageIndex=38&region=&canAsset=&ccebPcd1=&searchWrd=&startNum=&endNum=&stCcebAsdt=&enCcebAsdt=&cancel=&ccebKdcd=13&ccebCtcd=](http://english.cha.go.kr/chaen/search/selectGeneralSearchDetail.do;jsessionid=TV1op3qT9QqjTwxFqdWoGU3VU8AEQbY77X8FTSBH3VopC71E4jmmWCTYkRlBgnyY.cha-was01_servlet_engine4?mn=EN_02_02&sCcebKdcd=13&ccebAsno=04160000&sCcebCtcd=50&pageIndex=38&region=&canAsset=&ccebPcd1=&searchWrd=&startNum=&endNum=&stCcebAsdt=&enCcebAsdt=&cancel=&ccebKdcd=13&ccebCtcd=)

<sup>3</sup> Kim, "History of Public Squares."

<sup>4</sup> Erin Blakemore, "How Japan Took Control of Korea," History.com, 2020, <https://www.history.com/news/japan-colonization-korea>.

From the Korean war to the present day, Korea's political climate shifted back and forth from dictatorship to democracy, and finally became the democratic nation that is today. The usage and the symbolism of public space also shifted back and forth with the political climate. An example of this would be in the 1980, when the residents of Gwangju took to the streets to protest the dictatorship and martial law under the ROK Army General Chun Doo Hwan<sup>5</sup>. The Gwangju Democratization Movement held protests at the entrance square at the Chonnam National University, and this event became the symbol of democracy in Korea's history<sup>6</sup>. After the turmoil of the post-Korean war and power struggles between politicians, the public space became a symbol for festivities and celebrations. In the 2002 FIFA World Cup, which was hosted by both Korea and Japan, the citizens took to the street and square to celebrate the winnings.

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5 "Chun Doo Hwan," in *Britannica*, 2022, <https://www.britannica.com/biography/Chun-Doo-Hwan>.

6 Chong Suk Han, "Kwangju Uprising," in *Britannica*, n.d., <https://www.britannica.com/event/Kwangju-Uprising>.



*Fig. 1.1 Sammyang-dong excavation site*

*Fig. 1.2 Communal grinding mill*



*Fig. 1.3 Typical middle class residence of Joseon Dynasty*

*Fig. 1.4 Typical upper class residence of Joseon Dynasty*



## 1.2 The History of Public and Private Space in Korea

From the Bronze Age to the 21<sup>st</sup> century, the idea of co-existence was prevalent in Korea's History<sup>7</sup>. For example, the tribes of the Bronze Age lived together in tight-knit villages with communal cooking and farming squares, and the citizens of the 20<sup>th</sup> century united together to rise against the tyranny of Japan and dictatorship.

There is a very fine line between the public and the private realm in Korea's culture, even under different political climates. There is no social stigma when the activities which are often reserved for the private realm, such as eating, cooking, and sleeping, are conducted in the public realm. This is in stark contrast to Western culture, where hostile architecture is encouraged and installed (also known as exclusionary design or defensive urban design) to prevent these types of activities. Examples of hostile designs are the long benches with armrests placed right in the middle to prevent people from sleeping on them, or spikes installed on a large patch of pavement to prevent tents from being erected. The fine line between the public realm and the private realm is the main reason why Shim Teo is designed to host such a rich range of activities. Therefore, the Shim Teo ought to accommodate a much wider range of activities than typical urban furniture.

This barely distinguishable line between the public and the private realm can be shown through the design of the residential architecture of the Joseon Dynasty. Even though materiality and size are different between middle-class and lower-class residential buildings, the purpose of the fences around the building remained the same: an element to divide up individual properties. The height of the average male in the Joseon Dynasty is 161.cm and the female is 148.9 cm<sup>8</sup>. Even with this low average height of the people, the fence of the residential buildings is not high enough to cover up the field of vision nor to deter people from breaking in, with them being 1.2-1.3m in height<sup>9</sup>. This gives passersby a full unobstructed view of the interior and the exterior of the residence. The fences were also mostly made from humble, easily accessible materials such as straws and clay. There are also many shared facilities between the villages, such as the public rotary grinding mills, which were built and used together by the villagers.

7 Kim, "History of Public Squares."

8 Gil Won Kim, "The average height of the Joseon Dynasty was 161.1 cm for males and 148.9 cm for females," *Yun Hwap News*, 2012, <https://www.yna.co.kr/view/AKR20120130142300017#:~:tex- t=%EC%84%9C%EC%9A%B8%EB%8C%80%EC%9D%98%EB%8C%80%20%ED%95%B4%EB%B6%80%ED%95%99%EA%B5%90%EC%8B%A4%20%ED%99%A9%EC%98%81%EC%9D%BC,%EB%B6%84%EC%84%9D%EB%90%90%EB%8B%A4%EA%B3%A0%2031%EC%9D%BC%20%EB%B0%9D%ED%98%94%EB%8B%A4>.

9 Pil Gu Jang, "Fence," in *Encyclopedia of Korean Folk Culture*, n.d., <https://folkency.nfm.go.kr/kr/topic/detail/8290>.



### 1.3 Shim Teo: Korea's Public Rest Stop

Korean Rest Stops, directly translated from the Korean word 쉼터 (Shim Teo), are simple architectural structures that are placed in public spaces for the citizens to linger in. The word 쉼터 is a conjunction of two characters 쉼 and 터, with the 쉼 (Shim) meaning the act of 'rest' and 터 (Teo) meaning space or a place. The two letters combined describe a place to stop during a journey to rest. Characters of 쉼터 are also derived from the Chinese characters 'Hyu' 休 and 'Ji' 基. The character 休 means 'rest' and is a combination of characters 人 (human) and 木 (tree), meaning 'a person finds rest by being with a tree'. This indicates that the act of rest is directly related to nature. 基 is a combination of the characters 土 (earth, dirt) and 其 (that/those/these)<sup>10</sup>. These two characters combined have a definition of 'a place to raise the foundation of a house or a wall'. With these derivations, one can conclude that Shim Teos, by definition, are an architectural place to rest, in harmony with nature.

Just by walking along a particular road, one can spot various types of Shim Teos populating the public realm. The culture of providing a place to rest and socialize guarantees that in the urban planning of a newer city, the spaces for the Shim Teos are taken into consideration. Even though they might not be as well integrated into the urban setting as they could potentially be, they are not seen as out of place or an eyesore to the community.

### 1.4 The Shim Teo Types

If one were to categorize the Shim Teo simply by its form, there are five unique types of Shim Teo. These types either integrate nature in their element or take inspiration from it. They also take into consideration Korean culture by integrating traditional woodwork, materiality and colour into their shape and form. The types of Shim Teos shown below are categorized solely by their form.

While focusing exclusively on the form may be problematic in this thesis, this section is solely to get the readers to familiarize themselves with the Shim Teos and introduce this foreign concept of popular micro public space in Korea.

<sup>10</sup> "People find rest by going to a tree," *Seeing the world wearing a hat* (blog), 2017, <https://m.blog.naver.com/PostView.naver?isHttpsRedirect=true&blogId=grtiger2&logNo=221036487816>.

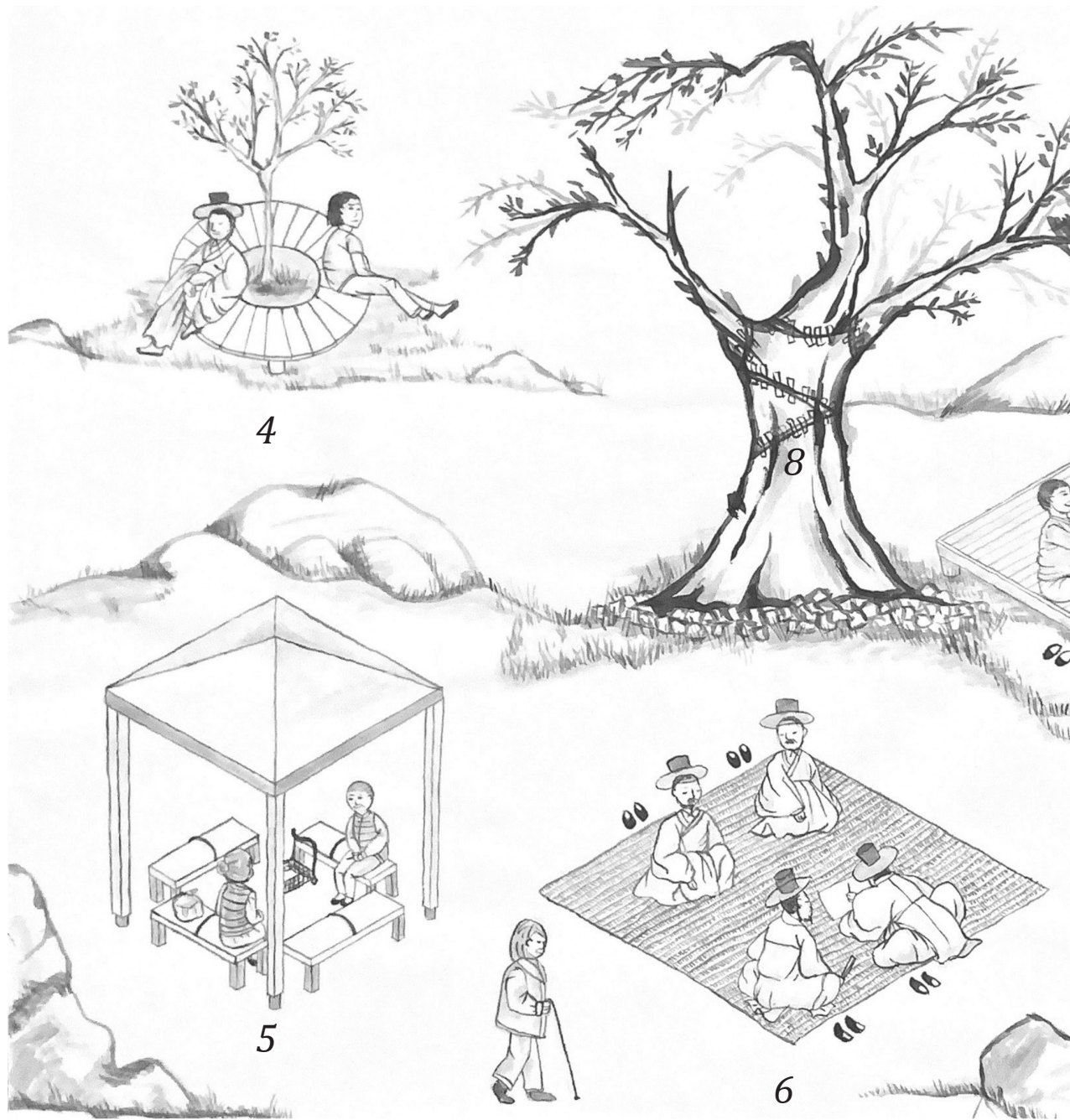


Fig. 1.5 Collage of Shim Teos

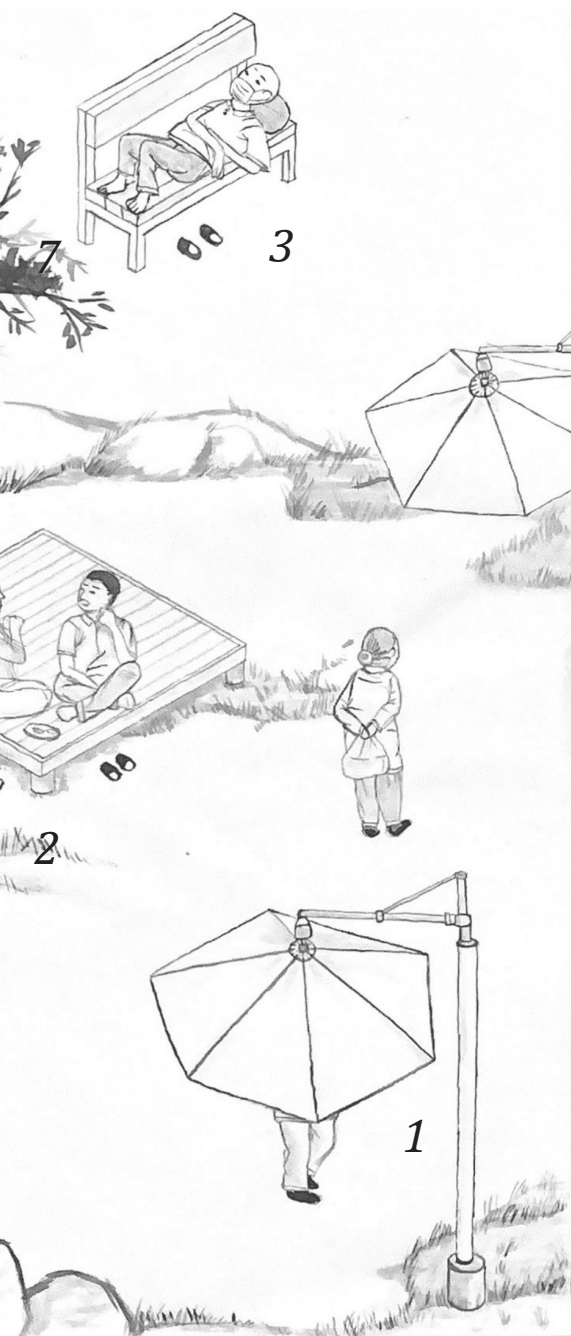


Figure 1.5 'The Evolution of Shim Teos throughout History'. This acrylic on mylar painting shows different types of both modern and historical Shim Teos.

The Spirit Tree, placed in the center of the painting, is an element that has long been associated with the Shim Teos in the past. It symbolizes the connection between heaven and earth and is said to be the pillar that protects the village from evil spirits. Stones are placed at the base of the Spirit Tree to prevent people from getting too close to the Spirit Tree and contaminating it. The Spirit Tree is typically placed at the entry of the village or at the village square, both sites where Shim Teos were often placed as well.

Other elements, such as 'Golden String', a straw rope weaved with a white paper wrapped around the Spirit Tree, and 'Magpie's nest', placed on the upper right branch of the Spirit Tree, symbolize good luck and warding off evil from the community.

Placed at the centre of the drawing is the straw mat, occupied by Joseon Dynasty's Confucian scholars. The straw mat can be considered as one of the earliest forms of the Shim Teos. Branching from the straw mat are the modern types of the Shim Teos, weaved into the landscape to symbolize their connection to nature.

1. Parasol Shim Teo
2. Deck Shim Teo
3. Unsheltered Bench Shim Teo
4. Donut Shim Teo
5. Sheltered Bench Shim Teo
6. Straw Mat
7. Magpie's Nest
8. Gold String

## Parasol

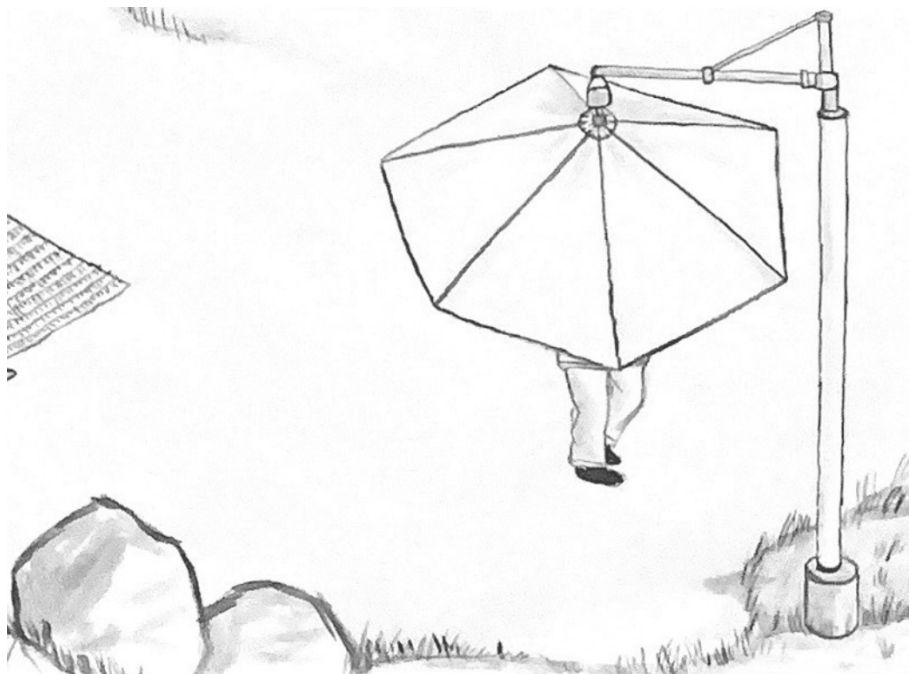
Parasols are the evolution of the trees that Koreans in the past used to rest under for shade but are now instead placed in compact urban settings where large branchy trees are not ideal. This type is typically found beside traffic lights and four- or five-way intersections. To give greenery to this Shim Teo, patches of landscaped areas called 'urban forests' are placed nearby (fig. 1.7). The primary function of this type is to shelter people from the sun while they wait to cross the street. During cooler seasons, the Parasol types are either folded up or dismantled (see fig. 1.8).

The urban planning of Korea's newer cities, such as Suwon and Seoul, is designed with automobiles prioritized over pedestrians, hence the red streetlights are long, and the sidewalks are narrow. The waiting period for the light to turn green is dependent on the traffic flow, time of the day, and the length of the path. This means that for a large intersection with a consistent heavy traffic flow during rush hour, the pedestrians will be waiting for a long time for the light to turn green. With the duration of the green light being dependent on the length of the sidewalk, with 1sec/m +4~7 sec to get on the sidewalk and for school zone and elderly zone 0.8sec/m +4~7 sec, the green light duration is not very long<sup>11</sup>. Since this type is placed in a high foot traffic intersection, some vendors have taken advantage of the location and the shelter it provides and set up a small market underneath. This type ultimately encourages the people vulnerable to heat waves to head outside, as it provides intermediate rest zones between main shelters and services. Even if they are small in size and simple in form, they have very crucial functions in society.

## Problem

Parasol Types are the most frequently found and used type, as they can be easily erected, and are designed to address a very specific but widespread issue in Korea, the heat wave. This means that the shape and form of this type are very limited, and only allow for a limited range of activities to take place. This type doesn't expect or encourage people to linger for more than the duration of the streetlight. Since the duration of the streetlight can often be long, for the elderly population it might be very stressful and fatiguing to stand in the heat for a long time, even though they are fully sheltered against the sun. Korea's summer is very humid, therefore sheltering against the sun doesn't fully provide protection from the heat. Fig 1.9 shows an elderly woman leaning against a large planter while waiting for the streetlight under the parasol type, placed in front of the Hwaseong Fortress.

<sup>11</sup> Hyun Ji Shin, "At what time do the crosswalk red and green lights change?," *Edaily*, 2020, <http://snap-time.edaily.co.kr/2020/10/%ED%9A%A1%EB%8B%A8%EB%B3%B4%EB%8F%84-%EB%B9%A8%EA%B0%84%EB%B6%88-%EC%B4%88%EB%A1%9D%EB%B6%88%EC%9D%80-%EC%96%B4%EB%96%A4-%EC%8B%9C%EA%B0%84-%EA%B8%B0%EC%A4%80%EC%9C%BC%EB%A1%9C-%EB%B0%94%EB%80%94/>.



*Fig. 1.6 Parasol type*





*Fig. 1.7 Urban forest*

*Fig. 1.8 Folded up parasol*

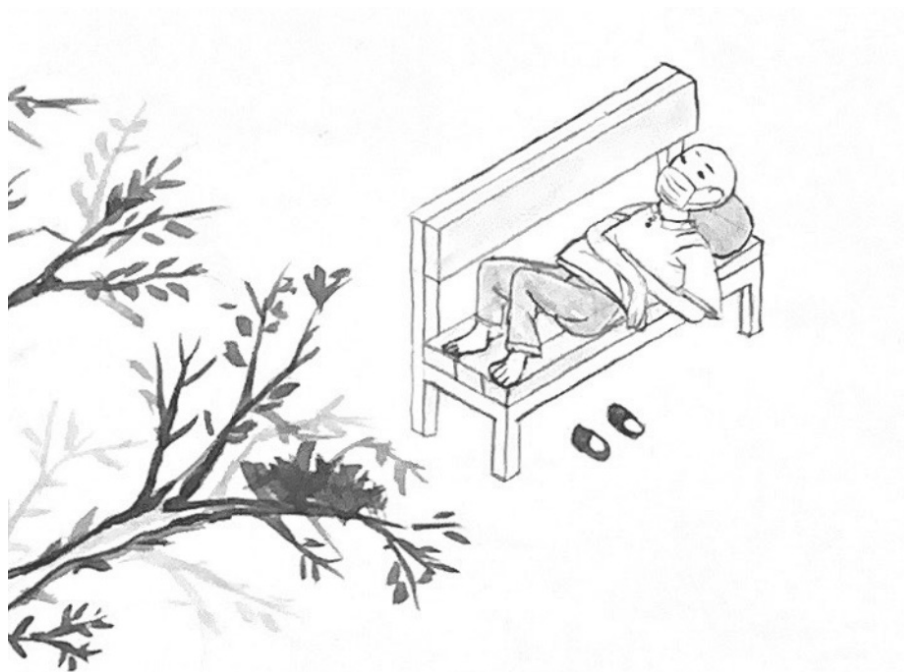
*Fig. 1.9 Parasol at Hwaseong Fortress*

## Unsheltered Bench

The term 'bench' is used for convenience in this thesis and for people to understand its form better, but this type consists of not just a typical bench form, but all linear seating arrangements without artificial shading elements, ranging from concrete seat walls to just a typical wood and steel bench. They are often placed under trees or a pre-existing detached canopy for sheltering. Since they are simple in construction, inexpensive and don't take up much space due to their linear form, they are placed in a wide range of locations. The placement of this type is seemingly random, as they are often small in form, and can be easily displaced. They are the closest to the Western idea of 'park bench', but instead of actively discouraging sleeping or lingering on the benches, this type actively encourages longer usage by unbroken linear forms and creative colour and decoration to attract users.

### Problem

Similar to the parasol type, the shape of this typology doesn't allow for social activities to take place on its own. Some of the moveable types can be rearranged to form a circular formation, however, the non-moveable, narrow types are hard to host social congregations. Since this type doesn't provide any form of shelter, when placed in a location without natural shelters, they can be quite uncomfortable to use, especially during heat waves or seasons with heavy precipitation.



*Fig. 1.10 Unsheltered bench type*

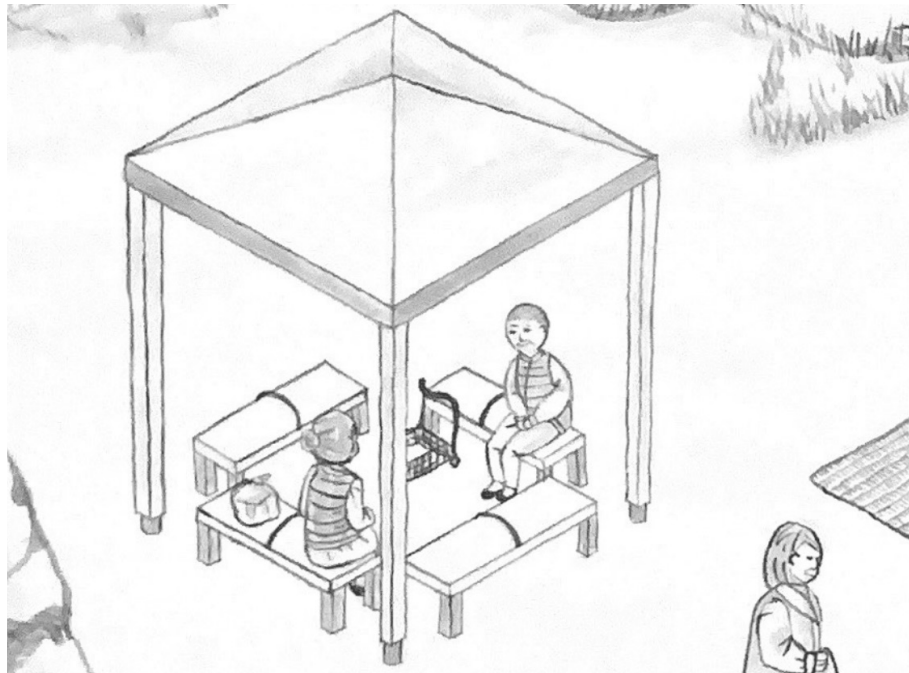


## Sheltered bench

The sheltered bench is the type with an integrated artificial shading element. It is often a combination of the parasol type with the unsheltered bench type. The linear seating element is either connected or placed right underneath an artificial shading element. There is a lot more experimentation with the shape of this type, as it contains additional components. There are instances in which the sheltering element is used to harvest solar energy, and the seating element re-distributes the energy in the form of an outlet or heating. This type is often found in proximity or conjunction with the outdoor public exercise equipment. People, either individually or in groups would exercise and rest on this Shim Teo. A small congregation of people, mostly the elderly who take advantage of the free exercise machines, are found in this typology.

### Problem

The sheltered bench type, due to its size and the additional sheltering element, can only be placed on a level landscaped space. They are hard to be placed in uneven forested spaces, such as urban gardens, as their size might not fit amongst trees, due to their artificial sheltering element. Since this type is found alongside public exercise equipment, providing a comfortable place to rest could be said to be its primary function. Since the size and shape of this type are typically short and narrow, people are unable to rest comfortably.



*Fig. 1.11 Sheltered bench type*

## Deck

Based on the site visits conducted for this thesis, the deck type is the most frequently inhabited type. The deck type includes any Shim Teo that has a form of a raised deck. The shape and size of this type allows for a wide range of activities for any demographic. This is the type that can be called 'socially comfortable'<sup>12</sup> as occupying this space in any way while participating in social activities is comfortable for most people. This type is also often found in association with public exercise equipment. Many of the deck types found on the street are always well-used by the general public, such as families, individuals, couples, and children. This type is also placed by private organizations such as convenience stores and restaurants to attract customers (fig. 1.13).

## Problem

As the deck type can get quite hefty in size, this type can only be placed in a large and level space. The height of the deck type varies with different locations. Some are raised at a height that is comfortable for the elderly to move from the walkers/scooters to the platforms, but most of them are too low for a comfortable transition. Other than the location and height constraint, there are no other visible problems associated with this type.

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<sup>12</sup> William Whyte, *The Social Life of Small Urban Spaces*, 1980.



*Fig. 1.12 Deck type*



*Fig. 1.13 Deck type outside a seafood restaurant*

## Donut

This type is a circular or rectangular deck type with a hole in the middle, for aesthetic purposes or to insert a sheltering element, typically either a parasol or a tree. It is the newest form of the Shim Teo, a conjunction between the sheltered/unsheltered bench type and the deck type. Being the newer type means that the materiality and the design of this type are more creative than the other types. The shading elements are more creative with this type as well. They range from parasols to pitched roofs to trees.

## Problem

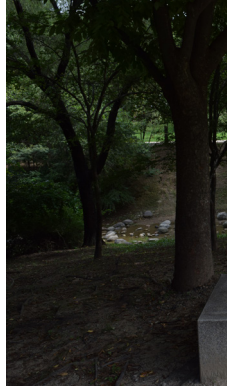
Similar to the sheltered/unsheltered bench type, this type doesn't allow for social activities. The element inserted in the hole in the center prevents people from sitting in a circle or facing each other. This results in people not using this Shim Teo for a long period of time. Since this type is highly aesthetic in form, many of the donut bench types have low functionality and are not comfortable to rest or to socialize in. Trees planted in the middle for the shading function are often too small to provide adequate shading. From site visits, they are also the most unpopular type out of the five types.

The five different types of Shim Teos presented are both unique and crucial in the function they play in Korean society. Based on the site visits, the success of the Shim Teos largely depended on their placement, over their form. The most minimal Shim Teos that met the specific needs of the community were more successful than the Shim Teos that are extravagant but irrelevant. The form became of secondary importance, and Shim Teos which allowed for a wide range of activities were more successful than the Shim Teos that allowed for limited activities.



*Fig. 1.14 Donut type*

















### 1.5 The History of the Rest Stop through 풍속화 (Poong Sok Hwa)

The form and the shape of the modern-day Shim Teos can be traced back to the historical Shim Teos. Even though they weren't necessarily called 'Shim Teo', the function remained the same: a place to rest and socialize. Through various artifacts, one can see the evolution and the materiality of the Shim Teos. The artifacts of focus of this thesis are the paintings in the genre of 'Poong Sok Hwa'. Poong Sok Hwa (풍속화), is a Korean version of Genre Painting. The direct translation of the name '풍속화' is 'culture painting', and the primary goal of the culture painting is to document the daily lives of the citizens. It was also used to record and make observations of citizens' lives for the ruling class, who did not live close to the citizens, but still needed to know their lifestyle to make policies<sup>13</sup>. Below is a series of Poong Sok Hwa which depict the earliest forms of the Shim Teo in the Joseon Dynasty and post-Joseon Dynasty.

#### Gathering of Scholars

This painting is called '후원아집도', translated as 'Gathering of Scholars' and its painter is unknown, but highly speculated to be by a 19-century painter 백은배 (Baek Eun Bae)<sup>14</sup>. This painting depicts a gathering of upper-class scholars, with three scholars playing 바둑, a traditional Korean board game (or known as 'Go'), sitting on a straw mat and two scholars resting under a pine tree looking at an art scroll. A boy, speculated to be one of the scholar's servants, is fishing at a pond nearby. A pine tree shown in this drawing, with its overhanging busy branches and curved trunk, provides an ideal spot to hold activities underneath. Even though these activities are happening in a private space, the Shim Teos are clearly depicted, as a space underneath the pine tree, and a straw mat. This painting shows the relationship and coexistence between the act of socialization, rest, and nature.

13 Byung Mo Jung, "Poong Sok Hwa," in *Encyclopedia of Korean Culture*, n.d., [http://encykorea.aks.ac.kr/Contents/Item/E0060400#:~:text=%EA%B6%81%EA%B6%90%EC%9D%B4%20%EC%95%84%EB%8B%8C%20%EB%AF%B-C%EA%B0%84%EC%9D%98,%EC%86%8D%ED%99%94.&text=%EC%A2%81%EC%9D%80%20%EC%9D%98%EB%AF%B8%EB%A1%9C%20%EC%82%AC%EC%9A%A9%EB%90%A0%20%EB%95%8C%EC%97%90%EB%8A%94,%E5%9C%96\)%EB%A1%9C%20%EB%82%98%EB%88%8C%20%EC%88%98%20%EC%9E%88%EB%8B%A4](http://encykorea.aks.ac.kr/Contents/Item/E0060400#:~:text=%EA%B6%81%EA%B6%90%EC%9D%B4%20%EC%95%84%EB%8B%8C%20%EB%AF%B-C%EA%B0%84%EC%9D%98,%EC%86%8D%ED%99%94.&text=%EC%A2%81%EC%9D%80%20%EC%9D%98%EB%AF%B8%EB%A1%9C%20%EC%82%AC%EC%9A%A9%EB%90%A0%20%EB%95%8C%EC%97%90%EB%8A%94,%E5%9C%96)%EB%A1%9C%20%EB%82%98%EB%88%8C%20%EC%88%98%20%EC%9E%88%EB%8B%A4).

14 "Gathering of Scholars," *Old Painting Room* (blog), 2012, <https://m.blog.naver.com/dankoon2001/60169133931>.





*Fig. 1.15 Gathering of Scholars*

### Painting of Seok Chun's Relaxation

This painting is by 김희겸 (Kim Hee Gyeum), a Joseon Dynasty painter, drawn in June 1748, during King Young-Jo's 24<sup>th</sup> year of ruling<sup>15</sup>. (Historical time in Korea is recorded not as a date, but as the number of ruling years of the current ruler). The name of the painting is called '석천한유도' (Painting of Seok Chun's Relaxation), a portrait of the real-life person 석천 (Seok-Chun), whose name is included in the title. This painting features Seok Chun resting in 정자, (Jung-Ja) which is a type of Korean Gazebo and one of the earliest forms of Shim Teo. Seok Chun was a military officer from a renowned military family and is depicted to be physically healthy. There are tell-tale signs of his profession in this painting, which are the depiction of the falcon, red sword, horse, and indulgences (women), items which symbolize military men.

The word 정자 (Jung Ja) contains the Chinese character (정 亭), which is translated as a 'place to stay' and is also a generic term to describe a semi-residential building in Korea<sup>16</sup>. Jung Ja shown here is very elaborate and is within the fence of the private residence. The footing is of stone, and the flooring, balcony fence, and roofing are of wood. Even though the roofing is the primary sheltering element, this Jung Ja is placed under a willow tree and pine tree, which further supports the fact that the act of 'rest' is closely associated with nature. This form of elaborate Jung Ja was used exclusively by upper-class citizens who had the wealth and the power to finance intricately adorned architecture. It is interesting to note how the Jung Ja has been a property of the upper class but evolved into more of a democratic public structure in the modern day.

15 "Painting of Seok Chun's Relaxation," *Story of Hong Sung* (blog), 2017, <https://m.blog.naver.com/PostView.naver?isHttpsRedirect=true&blogId=hsgstory&logNo=221055841278>.

16 <https://www.koreascience.or.kr/article/JAKO199471663776038.pdf>



*Fig. 1.16 Painting of Seok Chun's Relaxation*

## Water Hunting

This painting is by 김득신 (Kim-Deuk Shin) a painter in the post-Joseon dynasty, most famous for his Poong Sok Hwa. It is called '천렵도' or translated as water hunting<sup>17</sup>. It depicts a group of fishermen resting under a large willow tree, having a simple meal and sharing a single fish. In this painting, the Shim Teo is a cleared-out space underneath the large willow tree. The fishermen are taking a break from fishing to socialize and eat, two primary activities which are associated with the modern-day Shim Teo. They are sitting in a circular formation, with the main dish in the center. The lack of side dishes and sharing of a single fish indicate their status as a commoner, and the fishing rod and water birds gathered around the rod indicates their profession, fishermen. The willow shown here gives shading for the fishermen, and the woven straw roofing is added to their simple wood boat to provide shelter during fishing. This painting also clearly shows Korea's communal dining culture, which remained the same throughout history up to the 21<sup>st</sup> century. Banchan, translated as side dishes, and main dishes are placed in the center and the people would sit in a circle with their own individual rice bowls and share the dishes together.

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<sup>17</sup> "Kim Deuk Shin's Water Hunting," *Artist Park Myung Sun's Gallery* (blog), 2018, <https://m.blog.naver.com/jwwoo0/221333605858>.





*Fig. 1.17 Water Hunting*

## Midday Nap in Summer

This painting is by another Joseon dynasty painter 윤두서 (Yoon Doo Seo), called 하일오수도 (夏日午睡圖) which translates to 'Midday Nap in Summer'<sup>18</sup>. In this painting, the scholar is both dignified in clothing and form while napping. He is resting under a tree for shade, and on a simple raised wooden deck, similar to Jung Ja, but without the roof. This type of Shim Teo is called 'Maru', or 'Raised Flooring'. Figures 1.2 and 1.21 shows a few of the many different types of Maru present in Korean Rest Stops and architectures. The tree shown is providing enough comfort and shading in this image, as he has a fan beside him that he is not using and is looking quite at peace. The form and the size of the deck type shown in this painting allows for the occupants to sleep comfortably. This is a textbook example of a style of drawing called 수하인물형 which translates as 'Human Figure Under a Tree'. This style of drawing depicts a human figure under a tree, popular with painters in the post-17th century. Both humans and the trees are the main figures, and this style symbolizes the harmony between human and nature as symbolized by the tree. This painting romanticizes the act of taking a midday nap out in the open, an act that is well-received in Korean culture, in contrast to Western culture, where sleeping out in the open is discouraged. This cultural acceptance of sleeping out in open is translated into the deck as well as other types of the Shim Teos, seen in figure 1.19, where a well-dressed middle-aged man is taking a nap on a sheltered bench type at 1:00 pm in Mapo, Korea.

18 In Sook Lee, "Praisal of Old Paintings by Lee In Sook, Yoon Doo Seo's Midday Nap in Summer," *Maeil News*, 2020, <http://news.imaeil.com/page/view/2020091514190784576>.

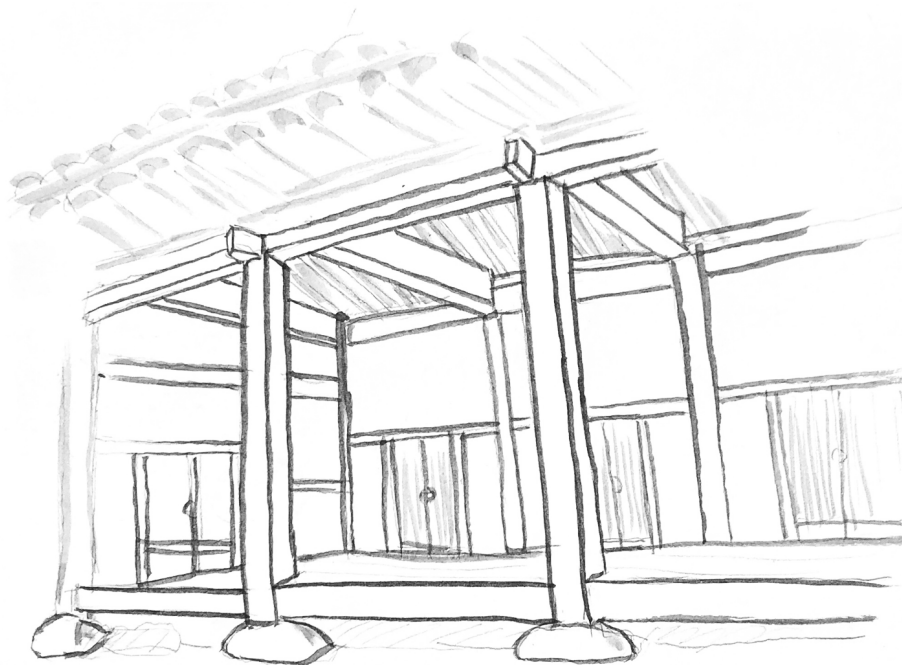


*Fig. 1.18 Midday Nap in Summer*





*Fig. 1.19 Napping in sheltered bench*



*Fig. 1.20 Dae Chung Maru*

*Biggest and most well-known Maru type. Typically occupies an entire room*



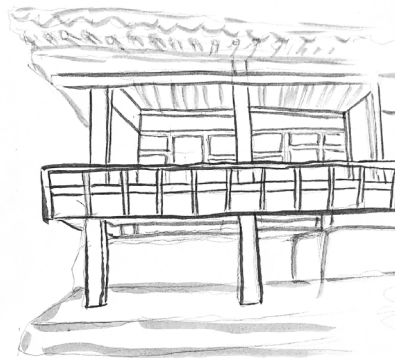
*Hun-Ham*

*Narrow Maru type built around the existing Maru. Acts as a balcony*



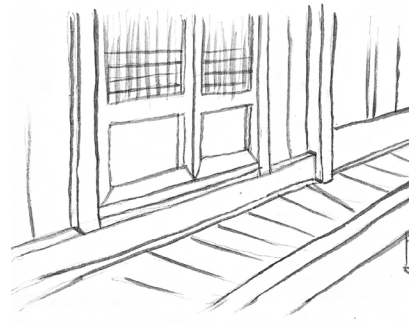
*Tae-Maru*

*Linear circulation Maru type built along the inside of the column grid*



*Nu-Maru*

*Raised Maru that is typically connected to Dae Chung Maru. Was used by the high-class male members of the household as a place to study and give orders*



*Chok-Maru*

*Long circulation Maru type built along the outside of the column grid*

*Fig. 1.21 Different Maru types*

## Mo Jung by the Cliff

This painting is another work by the same painter Yoon Doo Seo and is called 수애모정도, translated as 'Mo Jung by the Cliff'<sup>19</sup>. It shows the mountain range of Korean geography, and a large pine tree with a 모정 (茅亭) underneath. 모정 (Mo-Jung) is one of the earliest forms of the Shim Teo and is a public building in the farming village built by the villagers to shelter from the summer heat or to rest in summer<sup>20</sup>. Since Mo-Jung is only used in summer, there are no walls, just a raised wooden deck floor (Maru) and a straw roof, supported by wooden columns, shown in figure 1.22. Mo Jung is very similar to Jung-Ja (정자) in form and can be categorized as a subtype of Jung Ja. The only difference is that a Jung Ja is often used by the upper class, and can be quite intricate in shape and form, whereas a Mo-Jung is for all classes and is quite rough in materiality and form. Mo Jung can be said as the more democratic version of Jung Ja. Other than being a place of rest and shelter, Mo Jung was often used as a village assembly site, where discussions, elections, and group tasks such as straw weaving were held. They were usually placed at the entrance of a village, or in between the village and the fields, so the workers from the field could access and rest during breaks<sup>21</sup>. From the research titled 'Distribution characteristics and historical development of Mo Jung', 37.7% of the Mo Jung are placed at the village entrance, 27.8% were placed at the border between the rice fields and the residential zone, and the remaining 25.3% of the Mo Jung were placed in the center of the rice fields<sup>22</sup>. Figure 1.23 shows the placement of Mo Jung in four different village conditions, from the 162 Mo Jung studied in Jeollanam Province. This shows that the remaining Mo Jung in the 21<sup>st</sup> century is placed in areas of high human activities, beside a large 'spirit' tree (a large tree placed at the center of the village, said to prevent evil spirits from entering the village and to purify the village). The birth of Mo Jung, when viewed as a communal space for rural farming villages, is estimated to be in the 17<sup>th</sup> century, after the great Imjin War and Qing's invasion of Joseon. The brutal Imjin War (1592-1598) and the Qing's invasion of Joseon (1636) resulted in social turmoil and large-scale destruction of villages, and ultimately the re-organization of villages during the wars<sup>23</sup>. Therefore, it is highly speculated that permanent and well-integrated structures such as Mo Jung were said to be constructed during that period. In the 21<sup>st</sup> century, Mo Jung has evolved into village community centres and senior centres in rural villages.

19 Han Seok Son, "Yoon Doo Seo's Yoon Family Heirlooms," *Flower in Hand* (blog), 2017, <https://m.blog.naver.com/PostView.naver?isHttpsRedirect=true&blogId=hssn2710&logNo=220925429763>.

20 "Mo Jung," in *Joseon Dynasty Wiki*, n.d., [http://dh.aks.ac.kr/sillokwiki/index.php/%EB%A8%EC%A0%95\(%E8%8C%85%E4%BA%AD\)#:~:text=%EB%A8%EC%A0%95\(%E8%8C%85%E4%BA%AD\)%EC%9D%80%20%EC%A7%9A,%EC%9D%B4%EC%9E%90%20%ED%9C%B4%EC%8B%9D%EC%B2%98%EB%A1%9C%20%EC%9D%B4%EC%9A%A9%EB%90%98%EC%97%88%EB%8B%A4](http://dh.aks.ac.kr/sillokwiki/index.php/%EB%A8%EC%A0%95(%E8%8C%85%E4%BA%AD)#:~:text=%EB%A8%EC%A0%95(%E8%8C%85%E4%BA%AD)%EC%9D%80%20%EC%A7%9A,%EC%9D%B4%EC%9E%90%20%ED%9C%B4%EC%8B%9D%EC%B2%98%EB%A1%9C%20%EC%9D%B4%EC%9A%A9%EB%90%98%EC%97%88%EB%8B%A4).

21 Bong Hui Jeon, "Distributive characteristics and historical development of Mo Jung - Focusing on the case of Jeonnam region," *National Research Institute of Cultural Heritage* 27 (1994): 203-22.

22 Jeon.

23 Jeon.



*Fig. 1.22 Mo Jung by the Cliff*



<b>Placement Location</b>		<b># of Mojung</b>
<i>Between Village and the Farmland</i>	<i>Entrance to the Village</i>	61 (37.7%)
	<i>Spirit Tree</i>	33 (20.4%)
	<i>Creek</i>	9 (5.6%)
	<i>Lake, Large bodies of Water</i>	3 (1.9%)
<i>Farmland</i>	<i>Road Passing through the Farmland</i>	6 (3.7%)
	<i>Roadside</i>	5 (3.1%)
	<i>Beside Ricefield</i>	17 (10.5%)
	<i>Brook</i>	8 (4.9%)
	<i>Spirit Tree</i>	4 (2.5%)
	<i>Communal Well</i>	1 (0.6%)
<i>Outside the Village</i>	<i>Top of the Mountain</i>	3 (1.9%)
	<i>Playground</i>	1 (0.6%)
	<i>Spirit Tree</i>	1 (0.6%)
<i>Within the Village</i>	<i>Between 2 Villages</i>	6 (3.7%)
	<i>Between 3 Villages</i>	1 (0.6%)
	<i>Between 5 Villages</i>	1 (0.6%)
<b>Total</b>		<b>162 (100.2%)</b>

Fig. 1.23 Mo Jung placement characteristics

## Ju Mak

This painting, named Ju Mak, is by one of the most famous painters of the Joseon Dynasty, 김홍도 (Kim Hong Do). This painting features a more permanent historical Shim Teo called 주막 (Joo-Mak)<sup>24</sup>. Joo Mak is similar to a guest house or roadside motel of Western culture. The Joo Mak featured in this painting is a simple residential structure with clay walls, wood columns and straw roofing, very typical building material for working-class residential buildings. The owner of the Joo Mak, a woman on the left side of the painting is serving her guests, with her child by her side. The guests are presumably travellers passing by the Joo Mak, according to their attire and baggage. While the main function of the Joo Mak is to provide a place to rest and/or serve meals to the travellers, it also became a meeting spot and a place to socialize amongst themselves.

Joo Mak's first made an appearance in the Joseon Dynasty, when the Buddhist-temple-run guest houses became non-operable due to the repression of Buddhism<sup>25</sup>. The guest houses managed by the Buddhist temple were called 원院 (Won), and during the repression of Buddhism became an extremely uncomfortable place to rest, due to lack of funding from the government. At the beginning of the 18<sup>th</sup> century, Joo Mak began to appear on the side of well-travelled roads, as well as at the foot of mountains. This was due to the danger of traveling across the mountains during the night, as Siberian Tiger attacks were frequent post-Japanese colonialism in Korea. The first iteration of Joo Mak was just a simple structure that provided a sheltered place to sleep and sometimes for meals<sup>26</sup>. The travelers had to bring their own cutlery, blanket, and pillows. The functionality of the Joo Mak focused more and more on providing meal service, and Joo Mak that only provided meals began to pop up. The main characteristic of Joo Mak is the placement of the kitchen beside the Maru, which enabled travelers to eat and rest on the Maru without going inside the Joo Mak.

24 "Joo Mak," National Museum of Korea, n.d., <https://www.museum.go.kr/site/main/relic/treasure/view?relicid=537>.

25 Yeon Sick Jung, "Isn't this the place to have a drink?," National Folk Museum, n.d., <https://webzine.nfm.go.kr/2016/07/30/%ED%95%9C%EC%9E%94-%ED%95%98%EB%8A%94-%EA%B3%B3%EC%9D%B4-%EC%95%84%EB%8B%88%EB%9D%BC>

%EA%B3%A0%EC%9A%9A/.

26 Do Sick Bae, "Joo Mak," in *Encyclopedia of Korean Culture*, n.d., <http://encykorea.aks.ac.kr/Contents/Item/E0053227>.



*Fig. 1.24 Ju Mak*

## Calculating the Bill at Ju Mak

'Calculating a Bill at Ju Mak' is by 성협 (Seung-Hyup) and is another painting of Poong Sok Hwa<sup>27</sup>. This painting depicts a roadside Joo Mak, and the woman selling rice wine to a farmer, under a simple homemade sheltering structure. The roofing of the structure is straw, with two thick wooden branches supporting the roof. She is also sitting on a straw mat, with a circular straw headgear placed in front of her which she would have used to cushion the ceramic jar of wine on top of her head while she was carrying it. Rice straw was a multi-purpose material in the historical Korean culture, as rice farming was one of the most common professions, therefore there was abundant straw after the harvest season. It is also very tensile and durable, allowing it to be shaped in many ways. Straw-roofed structures such as the Shim Teo shown in this painting were very common. Layering them as depicted in this painting, the thinner end of the straw facing the outside with a pitched slope, allows it to become an effective water-resistant roof.

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27

"Seung Hyup's Poong Sok Hwa," *Sound of Bird, Sound of Wing* (blog), 2021, <https://goforkorea.tistory.com/537>.



Fig. 1.25 Calculating the Bill at Ju Mak

## Conclusion

Shim Teo embodies the idea of care for the populace and the close relationship between the rest and nature, shown in Poong Sok Hwa and other various historical artifacts. This specific artifact of the past and present, when studied, is able to tell a beautiful story of a nation that cared deeply for its citizens, evolved by working communally, and respected nature and learned to live in harmony with it, instead of trying to master it. It is also interesting to note how the design and form of Shim Teo reflected the current socio-political state of the time; for instance, the types that were reserved for the upper-class during monarchy are now used democratically in contemporary society. The Shim Teo is more than just urban furniture. It is a story of society's past, its present-day climate, and its hopes for the future.

*Chapter 2: Aging Population*





*Fig. 2.1 Group of elderly in Peace Park, Seoul*



## 2.1 Korea and the History of Respecting the Elders

The average lifespan of a typical Joseon Dynasty citizen was 35. For the upper-class citizen, the number was higher, at around 55 years<sup>1</sup>. Therefore, living up to the age of the 'elderly' was seen as a blessing from heaven, and the elderly were highly respected, regardless of gender or class. 'Respect for the Elderly', or '노인 공경' was an ideology which became popularized during the Sejong Ruling in Joseon Dynasty, declared Joseon to be 효국(孝國), or translated as a 'Country embracing Filial Duties'. King Sejong founded the 양로연(養老宴) in his 2<sup>nd</sup> year of ruling in 1420, which is a festival specifically dedicated to the elderly population of Joseon. He ordered that there must be a festival every spring and fall for the citizens over the age of 70 in major cities in Korea. At this festival, all citizens, even the lowest class 천민 (Chun-Meen) were invited. This was a controversial but significant move, as Chun-Meen, a group which consists of butchers, courtesans, and slaves, were highly marginalized in Korea. For the elderly with disabilities, slaves were brought in to carry them to the festival. During his 17<sup>th</sup> year of the ruling, King Sejong also ordered that all citizens over the age of 100 receive 10 'Seok' of white rice (1 Seok is approximately 160kg) every year, meat, and alcohol to be received every month, and the number of the elderly to be recorded and reported back to him (Taken from 세종실록 67권, 세종 17년 1월, translated as Sejong's Records, 67<sup>th</sup> volume, 17<sup>th</sup> year of the ruling, January). For the elderly past the age of 70, their families were ordered to take care of them until their passing, and for the elderly past the age of 80, the male members of the family were spared mandatory military service<sup>2</sup>.

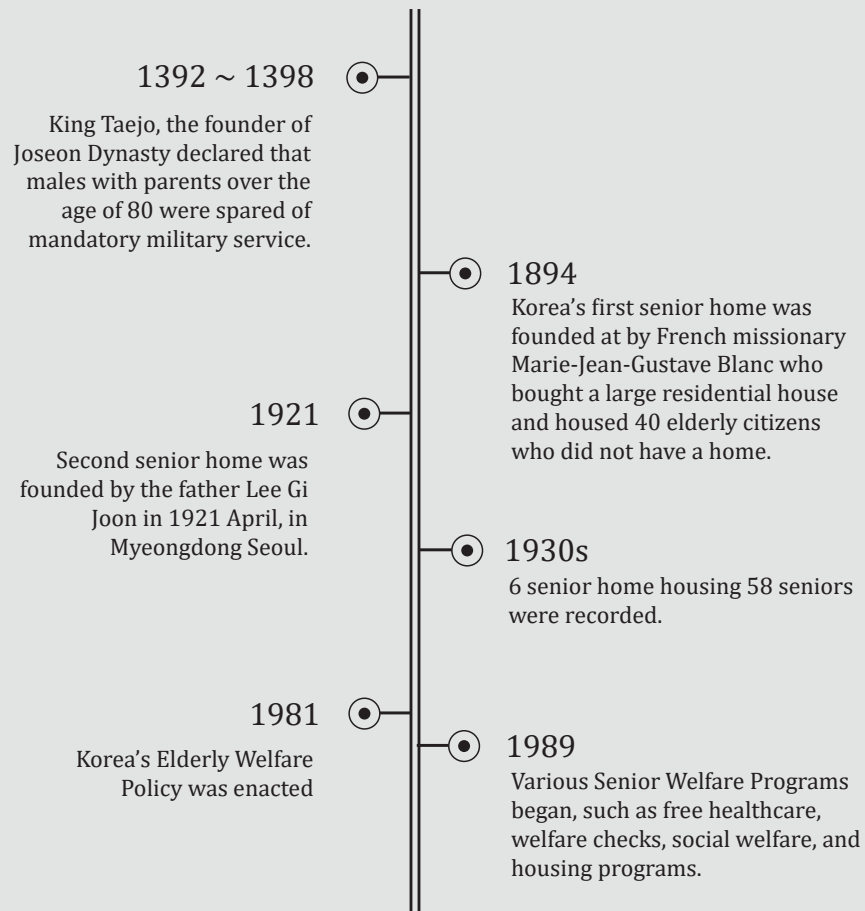
1 Yong Kwan Lee, "The average life expectancy of the Joseon Dynasty was 35... For Emperor it is 46 years old," *Mun Hwa News*, 2013, <http://www.munhwa.com/news/view.html?no=2013122601071127163002>.

2 Hyung Hun Kim, "There Was No Discrimination between Men and Women, and There Was No Discrimination of Class or Race in Respect for the Elderly," *Media Jeju*, 2015, <https://www.mediajeju.com/news/articleView.html?idxno=178229#:~:text=ED%8A%B9%ED%9E%88%20%EC%84%B1%EB%A6%AC%ED%95%99%20%EC%82%AC%EA%B3%A0%EA%B0%80%20%EA%B9%8A%EC%9D%B4,%EB%85%B8%EC%9D%B8%20%EA%B3%B5%EA%B2%BD%EC%9D%84%20%EB%A7%90%ED%95%98%EA%B3%A0%20%EC%9E%88%EB%8B%A4.&text=%EC%84%B8%EC%A2%85%2017%EB%85%84%EC%9D%B4%EB%A9%B4%201435,%EB%8F%8C%EB%B3%B4%EB%9D%BC%EB%A9%B4%EC%84%9C%20%EB%82%B4%EB%A6%B0%20%EB%AA%85%EB%A0%B9%EC%9D%B4%EB%8B%A4.&text=%EC%A1%B0%EC%84%A0%EC%9D%80%2070%EC%84%B8%20%EC%9D%B4%EC%83%81%EC%9D%B4%EB%A9%B4%20%EC%9D%91%EB%8B%B9%20%EB%8C%80%EC%A0%91%EC%9D%84%20%EB%B0%9B%EB%8A%94%20%EA%B5%AC%EC%A1%B0%EC%98%80%EB%8B%A4.>



Fig. 2.2 Festival dedicated to the elderly

## Timeline of Development of Filial Duties of Korea



\* Healthcare system is seriously lacking, as 45% of the outpatient treatments, 50% of the hospital treatment and 70% of the clinical costs are covered by the government.

\* For the elderly in financial hardships, outpatient costs are fully covered, and 50-80% of the hospitalization costs are covered by the government.

*Fig. 2.3 Timeline of filial duties*

## 2.2 Korea and the Increasing Elderly Population

As with Western countries, after the World War II and the Korean War, and the stabilization of Korea's political climate, Korea saw a boom in population growth. The Baby Boom generation then retired in the 21<sup>st</sup> century and surpassed the 70+ age group and is continuing to increase as of this moment. With the rising population of the elderly, it is predicted that 40% of Korea's population will be in the 70+ age group by 2051, speculated by the Government of Korea<sup>3</sup>. The population of single elderly also continues to rise as well, and in 2019 the population of the single elderly was 1.5million, making up 26% of the single population<sup>4</sup>.

The term 'elderly' is used broadly and flexibly in Korea. From the age of 62, citizens can apply for government pension, and from the age of 65 citizens can claim senior benefits for different services. From the age of 70, citizens qualify for Alzheimer's insurance and require a mandatory senior driving program. For the purpose of this thesis, the term 'elderly' will be used to label individuals over the age of 60, the qualifying age to apply for government-subsidized senior residences and the age of retirement<sup>5</sup>.

With the rise of the elderly and single elderly population, the depression and suicide rate amongst the population have also risen. According to surveys taken by the Health Insurance Review and Assessment Service, from 2009 to 2014, the age group with the highest depression rate is the 70+ age group, at 22.2%, followed by 50s, at 21% and 60s, at 17.4%<sup>6</sup>. Figure 2.4, based on the Suicide Prevention Paper published by the Ministry of Health and Welfare in 2019 shows that the 60, 70, and 80+ age groups have the highest suicide rate in Korea in 2017<sup>7</sup>.

According to the Social Research Report conducted by the government in 2016, the top 3 reasons for the contemplation of suicide were financial difficulties, at 37.5%, followed by declining health, at 32.8%, and isolation, at 14.3% (see fig. 2.4). Financial difficulties amongst the elderly population are a problem in Korea. According to the 'OECD Society at a Glance' 2016 report, the relative poverty rate of the elderly in Korea, which is the poverty rate of elderly whose

3 "Predictable Financial Management for Future Generations" (Korea Institute of Public Finance, 2014), file:///C:/Users/clscj/Downloads/%EB%AF%B8%EB%9E%98%EC%84%B8%EB%8C%80%EB%A5%BC%EC%9C%84%ED%95%9C%EC%98%88%EC%B8%A1%EA%B0%80%EB%8A%A5%ED%95%9C%EC%9E%AC%EC%A0%95%EC%9A%B4%EC%9A%A9\_%EA%B0%9C%EC%9B%90%2%EC%A3%BC%EB%85%84%A%BB%B0%EB%85%90%EC%84%B8%EB%AF%B8%EB%82%98\_kipf\_140903\_%EB%B0%9C%ED%91%9C%EC%9E%90%EB%A3%8C.pdf.

4 Jung Ewn Lee et al., "A Study on the Types and Characteristics of Social Service Needs of the Elderly Living Alone" (Chungnam National University, 2021), <http://jsscnu.re.kr/xml/29923/29923.pdf>.

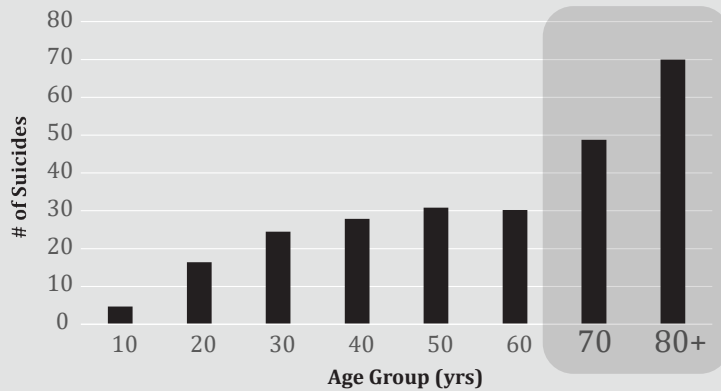
5 Kyung Soo Jung, "Age of senior raised to 70, each welfare standards vary," *Herald News*, 2020, <http://news.heraldcorp.com/view.php?ud=20200829000008#:~:text=%EB%8C%80%EC%B2%B4%EB%A1%9C%2065%EC%84%B8%EB%A5%BC%20%EB%85%B8%EC%9D%B8,%EC%97%B0%EB%A0%B9%EC%97%90%20%EC%B0%A8%EC%9D%B4%EA%B0%80%20%EC%9E%88%EB%8B%A4.&text=%EB%A8%B-C%EC%A0%80%20%EA%B3%A0%EB%A0%B9%EC%9E%90%20%EA%B3%A0%EC%9A%A9%EC%B4%B9%EC%A7%84%EB%B2%95%EC%9D%80,%EC%9D%80%20%EC%A4%80%EA%B3%A0%EB%A0%B9%EC%9E%90%EB%A1%9C%20%EB%B3%B8%EB%8B%A4.>

6 Jun Suk Bang, "Consideration in the 100-Year-Old Age: The Conditions and Responses of the Elderly Living Alone," *The Yakup News*, 2021, <https://www.yakup.com/pharmlplus/index.html?nid=3000132547&mode=view&cat=23>.

7 "2019 Suicide Prevention Paper" (Ministry of Health & Welfare Korea Suicide Prevention Center, 2019), [http://www.mohw.go.kr/upload/viewer/skin/doc.html?fn=1560220081482\\_20190611112804.pdf&rs=/upload/viewer/result/202211/](http://www.mohw.go.kr/upload/viewer/skin/doc.html?fn=1560220081482_20190611112804.pdf&rs=/upload/viewer/result/202211/).

# A Look Into Korea's Elderly Population: Data

Korea's Annual Suicide Rate by Age in 2017



## Top reasons for Contemplating Suicide in Elderly Population of Korea



## More than half of the Elderly Population have no Social Participation Rate

**52%** of Elderly citizens are reported not participating in any form of social activities, followed by

**13%** that participated 1-2 times a month

**20%** 1-2 times a week

**15%** 3-4 times a week

Fig. 2.4 Elderly data

income is less than 50% of Korea's national average income, was 48.8%. This is almost 4 times higher<sup>8</sup> than the OECD's average for the relative poverty rate of the elderly which was 12.1%. This data indicates that accessible and free public space for socialization is very important amongst the elderly population, as public transportation and entry fee are not feasible for a large percentage of the elderly population. According to the 'Current Status of Social Relations Network Survey for Senior Living Alone Report' in 2018, the most popular places where social activities take place for the elderly population are senior community centres, religious institutions, and social welfare centres<sup>9</sup>. These spaces are all the free, not-for-profit institutions which provide daily activities, meals, and programs and are found all over the city. Shim Teos have great potential to join this list of spaces, as they are populous in number, could be both accessible in distance and form and are socially congregational. Especially during the COVID-19 pandemic, when indoor social services were either shut down or cut down their operating hours, outdoor social spaces such as Shim Teos played a big role in the socialization of the elderly population.

### 2.3 Elderly Population -Analyzing Socialization Pattern

There are three main categories of spaces of socialization and rest for the elderly in Korea: Commercial, Institution and Outdoor.

Commercial spaces include banks, local convenience stores, and automated ice cream shops, which are the places that provide for-profit services but with lenient entry and occupation restrictions. These places are either of very large scale, thus the presence of non-paying customers has very little impact on the business or provide services that are affordable enough for low-income group such as the elderly. Fig 2.5 shows the typical layout of banks in Korea. Banks, popular with the elderly as a place to rest during extreme weather conditions, have a large waiting zone separate from the business and service zones. The waiting zones are equipped with services aimed to provide comfort and entertainment to the clients, such as air conditioning, hot and cold beverage machines, and TV. The separation of business zones into waiting zones allows the elderly take to advantage of the services without feeling pressured to purchase service. Deck type Shim Teos placed outside businesses are of a similar concept. Since they are placed in separation from the business zones, the elderly can use the space without paying.

Institutions are places that are government funded or by not-for-profit organizations such as religious buildings, community centers, welfare centres, or public transit. These places are easily accessible as they are numerous and provide entertainment and services needed by the elderly. Even though these places cater more towards the elderly, since they receive government funding, there are rules and regulations to be followed in order to utilize the services.

<sup>8</sup> Chan Hyung Park, "OECD's Highest Suicide Rate for the Elderly Is Korea... What Do Older People Struggle with the Most?," *KBS News*, 2019, <https://news.kbs.co.kr/news/view.do?ncd=4292513>.

<sup>9</sup> Do Rhee Jung, "One in two elderly people living alone are 'not socially active,'" *Welfare News*, 2019, <https://www.welfare-net/news/articleView.html?idxno=69321>.



The services provided are also directly affected by the amount of funding they receive and vary by province and zones.

Outdoor spaces include parks, public squares, and Shim Teos. This thesis will specifically focus on Shim Teos, in relation to its surrounding context, which includes streetscape, institutional and private services used by the elderly, and outdoor spaces. Fig 2.6 and 2.8 show two large areas of the congregation of elderly, in relation to the nearby human activity zones, and the path connecting the activity zones. The zones of human activities are represented with red dots, and the transportation hubs are represented with green dots. The connections between these zones are represented by red dotted lines.

The first zone of the congregation is located in the Huam neighbourhood located in Seoul. Placed in a traffic island of a 3-way intersection, this congregation takes place under the parasol type. As the parasol type only provides shade and shelter, the elderly have brought in their own comfortable means of seating, ranging from a plastic seat to a full gaming chair. The chairs are arranged in a circular formation, in twos, or by themselves, based on the individuals' preferences. Since this congregation took place during the pandemic, the chairs are spaced out to accommodate social distancing. The congregation is facing a traditional snack bar, convenience store and a Korean barbeque restaurant. There are also many convenience stores surrounding the congregation, within 5 minutes of walking distance, as well as bus stops.

The second congregation takes place in Sorae neighbourhood in Incheon. The congregation consists of groups of elderly sitting in a donut formation surrounding the bridge footings. Spaces under the bridge have long been a popular place of rest and socialization, due to the shelter that the bridge provides. The most famous landmark of Sorae neighbourhood is the extremely popular Sorae wet market. Incheon, being the portside city, supplies Korea with fresh seafood from the Yellow Sea. Sorae is one of the port neighbourhoods where fishing boats dock and people are able to buy fresh seafood at a reasonable price. Most of the elderly are consuming the products that they purchased from the market, which is a 10 min walk from the site of the congregation. Sorae Terminal is also a 5 minute walk from the congregation, which places it in between two important points of interest.

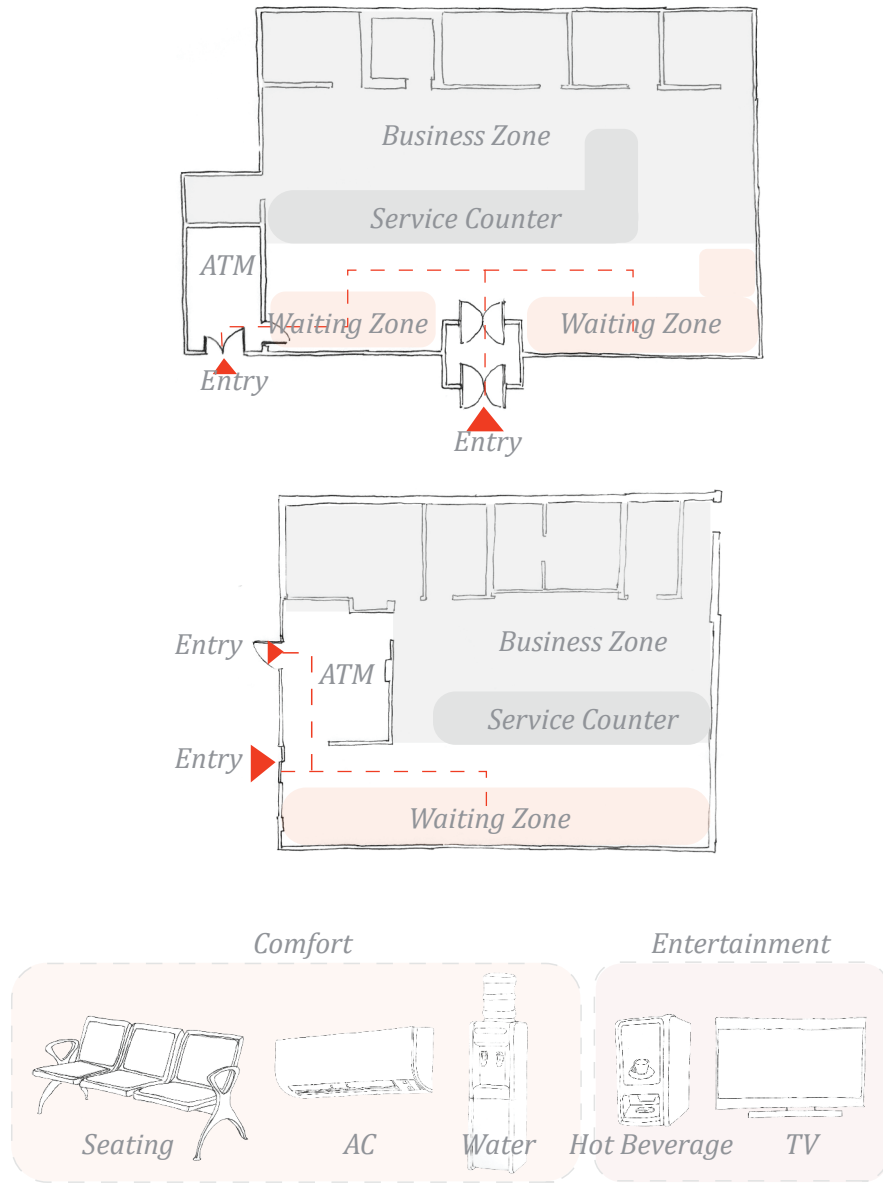
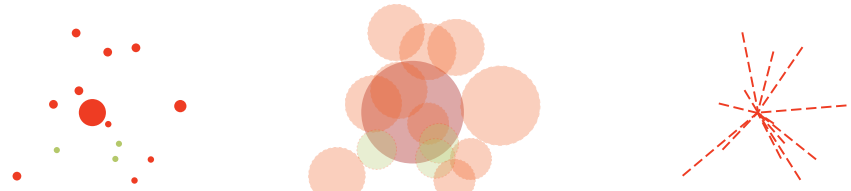
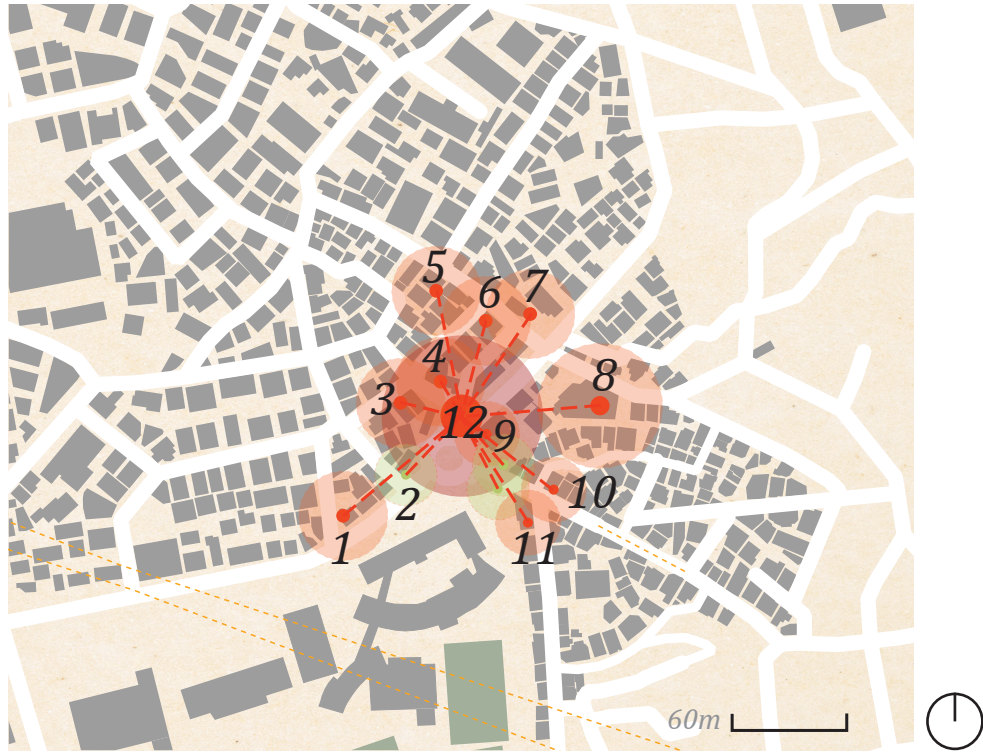


Fig. 2.5 Typical bank layouts and services



*Areas of Interest*

*Human Activities*

*Connection Path*

- 1. CU Convenience
- 2. Bus Stop
- 3. Discount Grocer
- 4. Snack Bar
- 5. Convenience
- 6. Ministop Convenience

- 7. Tom & Toms Coffee
- 8. Young Ju Church
- 9. Woori Bank
- 10. Pyung Gang Acupuncture
- 11. GS25 Convenience
- 12. Congregation

*Fig. 2.6 Map and programs of Huam-dong, Seoul*



*Fig. 2.7 Huam Dong congregation*



1. Sorae Port Terminal
2. Sorae Bridge Underpass Congregation
3. Sorae Port Seafood Market

Fig. 2.8 Map of Sorae Port, Incheon





*Fig. 2.9 Sorae bridge underpass congregation*





*Fig. 2.10 Deck type outside a convenience store*



*Fig. 2.11 Shim Teos outside Baskin Robbins*



*Fig. 2.12 Group of elderly sitting on a mat in Suwon Terminal*

## 2.4 Conclusion

Korea suffers deeply from growing social isolation and depression faced by the large majority of its population, the people over the age of 60. They are also the age group with the highest poverty rate, which makes them one of the most vulnerable groups in Korea. With the rapid digitalization of essential services and existing institutional services not being sufficiently accessible or accommodating, it is crucial for accessible outdoor public spaces such as Shim Teos to be designed to demonstrate their full potential.

To address the social isolation issues faced by the elderly, it is important to study in detail the social settings that the elderly favour. This will help us understand the characteristics and urban contexts of successful public spaces and apply these observations towards designing the solution: the new type of Shim Teo.

The additional modifications to the existing Shim Teos clearly define the programs that need to be added to the Shim Teo to make it more desirable and comfortable. As well, they show the types of programs that are favoured in each specific site context. These studies showed that for the zones with heavy public congregation, it is important to provide not just sheltering elements, but also a space to sit in any formation or direction, be it circular, face to face, looking out, looking in, or lying down. Identifying the most compatible type of Shim Teo for a specific site condition should be the highest priority when designing a new type of Shim Teo.

## *Chapter 3: Site Context*





*Fig. 3.1 Drying peppers in summer heat*



## Chapter 3. Overall Site Context

### 3.1 Site Context: Climate

The Republic of Korea (South Korea) is situated in East Asia, sharing a border with North Korea. Its climate is generally described as continental, with cold dry winters and hot humid summers (Citation). The average winter temperature of Seoul, the capital, is around  $-5^{\circ}\text{C}$ , and the average summer temperature across the country is around  $25^{\circ}\text{C}$ . The annual precipitation is around 900 to 1,500mm, which is affected by northeast Asian monsoons<sup>1</sup>. The summer monsoon season is from June to August, being the months with the highest rate of precipitation. Korea is also manifesting the result of global warming, and in 2050, the average temperature is expected to rise by  $3.9^{\circ}\text{C}$  from the 2010<sup>2</sup>. With the rise of the average temperature, heatwave days are also expected to increase by 2.8 times from the present day to 2060<sup>3</sup>.

Similar to Canada, Korea has distinct 4 seasons throughout the year; spring, summer, fall and winter. Figure 3.2 shows the breakdown of the 4 seasons into 6 smaller micro seasons each for a total of 24 micro seasons. Understanding the climate as well as the microclimate of Korea will help determine the behaviour pattern of the elderly during each of the microclimates as well as their physical needs. The 24 micro seasons are named based on the behaviour of animals during that season (similar to Groundhog Day in Canada and the U.S), as well as the type of activity, typical weather conditions and traditional folktales.

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1 Ick Lew Young, "South Korea," in *Britannica*, 2022, <https://www.britannica.com/place/South-Korea>.

2 Dae Soo Kim, Jong Chul Park, and Yeo Ra Chae, "The Policy Measures to Reduce Heat-Wave Damage of Vulnerable Groups in Korea," *Environmental Policy (Korea Environmental Policy, 2020)*, <http://jepa.or.kr/xml/24767/24767.pdf>.

3 Kim, Park, and Chae.

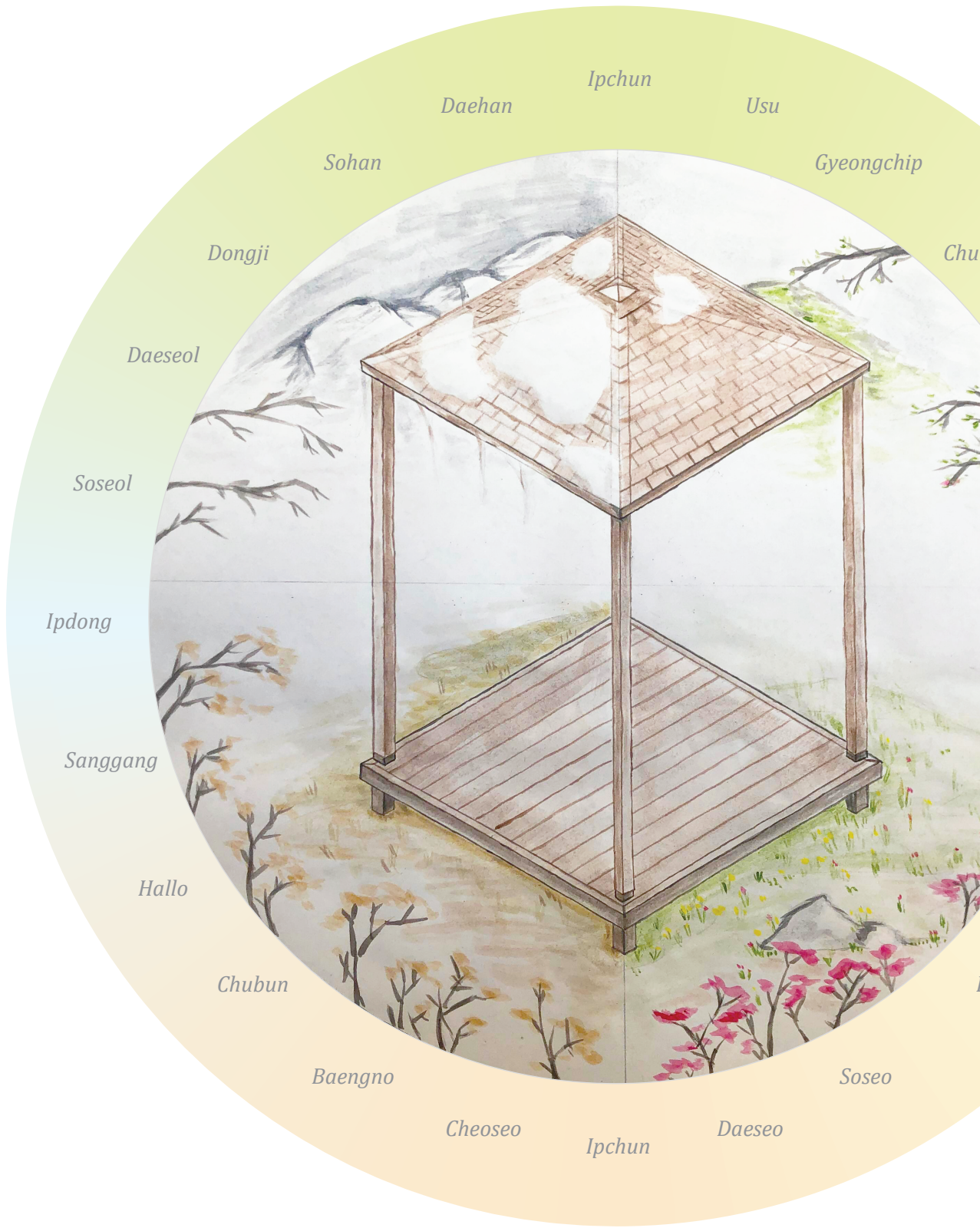


Fig. 3.2 24 microseasons



### Spring:

**Ipchun** (입춘) translates directly to 'entering spring'. Typically falls on Feb. 4<sup>th</sup>

**Usu** (우수) translates to 'snow becomes rain and ice melts to become water'. Typically falls on Feb. 19

**Gyeongchip** (경칩) translates to 'hibernating insects and animals wake up in surprise from thunder'. Meaning hibernating animals start to wake up. Beginning of the spring semester in Korean schools. Typically falls on Mar. 5<sup>th</sup>

**Chunbun** (춘분) (vernal equinox), translates to 'spring divided'. Day and night are equally divided into 12 hrs. Typically falls on March 21<sup>st</sup>.

**Cheongmyeong** (청명) translates to 'sky is beginning to turn blue'. Typically falls on April 5<sup>th</sup>

**Gogu** (곡우) translates to 'spring rain enriching the grains'. If it rains on this day it is said to be a successful harvest. Typically falls on April 20<sup>th</sup>

### Summer:

**Ipha** (입하) translates to 'entering of summer. Typically falls on May 6<sup>th</sup>

**Soman** (소만) translates to 'day of full sun and growth'. Beginning of early summer and growth of greens. Typically falls on May 21<sup>st</sup>

**Mangjong** (망종) translates to 'a right season to sow the seeds of the grain'. As per the translation, this is the time to plant crops with long roots e.g., rice or barley. Typically falls on June 6<sup>th</sup>

**Haji** (하지) translates to 'arrival of summer'. Summer solstice. Marks the beginning of the summer monsoon rainy season. Typically falls on June 22<sup>nd</sup>

**Soseo** (소서) translates to 'little heat'. Marks the beginning of summer heat. Typically falls on July 5<sup>th</sup>

**Daeseo** (대서) translates to 'big heat'. The hottest day of the year, after the heavy rainfall season. Typically falls on July 23<sup>rd</sup>

### Autumn

**Ipchu** (입추) translates to 'entering fall'. Typically falls on August 8<sup>th</sup>

**Cheoseo** (처서) translates to 'heat is over'. A day when the summer heat stops, and the cool breeze of fall comes. Typically falls on August 23<sup>rd</sup>

Source: Encyclopedia of Korean Culture

**Baengno** (백로) translates to 'a day of dew settling on the fall harvest'. Completely fall. Typically falls on Sept. 9<sup>th</sup>

**Chubun** (추분) translates to 'fall divided'. The length of day and night is the same. Typically falls on Sept. 23<sup>rd</sup>

**Hallo** (한로) translates to 'cold dews form'. Typically falls on Oct. 8<sup>th</sup>

**Sanggang** (상강) translates to 'time of frost'. Marks the end of the fall. T peak of the fall foliage viewing season. Typically falls on Oct. 23<sup>rd</sup>

### Winter

**Ipdong** (입동) translates to 'entering winter'. Typically falls on Nov. 7<sup>th</sup>

**Soseol** (소설) translates to 'small snowfall'. First snowfall, the second phase of Winter. Typically falls on Nov. 23<sup>rd</sup>

**Daeseol** (대설) translates to big snowfall. Folktale tells that if there is heavy snowfall on this day the future harvest will be a success. Typically falls on Dec. 7<sup>th</sup>

**Dongji** (동지) translates to 'resurrection of the sun'. The shortest day and also the coldest day. Winter solstice. Koreans typically consume red bean porridge on this day to rid of evil. Typically falls on Dec. 22<sup>nd</sup>.

**Sohan** (소한) translates to 'small cold'. Beginning to get cold. Typically falls on Jan. 5<sup>th</sup>

**Daehan** (대한) translates to 'big cold'. Coldest day of the year. Typically falls on Jan. 20<sup>th</sup>

## 3.2 Site Context: Geography

The overall geography of Korea is very mountainous, with Taebeak Mountains<sup>4</sup> stretching from the Eastern edge to down South of the coastline and Sobaek Mountains<sup>5</sup> stretching diagonally from Northeast towards Southwest.

<sup>4</sup> "Taebeak Mountains," in *Britannica*, 1998, <https://www.britannica.com/place/Taebeak-Mountains>.

<sup>5</sup> "Sobaek Mountains," in *Britannica*, 1998, <https://www.britannica.com/place/Sobaek-Mountains>.

### 3.3 Climate's Effect on the Elderly

The polarizing climate, especially the hot summers, is taking a great toll on mental and physical health of the elderly in Korea. There are annual heat-wave-related mortalities in Korea, noticeably higher in the vulnerable group composed mainly of elderly people. The thesis by Kim et al. 'The Policy Measures to Reduce Heat-Wave Damage of Vulnerable Groups in Korea'<sup>6</sup> researched the different factors that contribute to the heatwave-related mortality rate and the response of the vulnerable groups to the heatwave. The 'vulnerable' as defined by this thesis is an individual who falls under any of the six criteria: low income, which is defined as under 500,000 KWR of monthly income (around \$500 CAD), recipient of government-assisted living, single elderly, people with arthritis, people with high blood pressure, and people over the age of 75. This definition was determined by the 2018 report by the Korean Centre for Disease Control and Prevention which revealed that in 2018, 48 people died from heatwave-related causes, and out of them, 15 people died at home, and also out of 28 of 48 people were above the age of 75<sup>7</sup>. From this data, one could extrapolate that heatwave death is most commonly found in a group with physical or financial restraints which forces them indoors at home. Therefore, the term 'vulnerable to heatwave related complications' was applied to the individuals with financial and physical difficulties.

The thesis by Kim et al. investigated the measures taken by the vulnerable group during the heatwaves in Korea. It was revealed that they are mostly passive actions, due to physical and/or financial constraints. Figure 3.3 shows the top 5 places that the vulnerable group seeks out during the heatwave.

This finding corresponds to the socialization pattern of the elderly section above. These five places are easily accessible in terms of physical location and financial contribution. They also offer services other than a place to rest, such as free water, TV, or spaces for socialization.

The thesis by Kim et al. also investigated the different roofing and exterior building materials and how they absorb and retain heat during heatwaves. Steel sheet roof building is shown to absorb the most heat, with the interior temperature shown to be around 4 to 6°C higher than the exterior temperature. It is followed by the slate roof being 3.8°C higher than the exterior temperature and the panel roof being 2.0°C higher than the exterior temperature. Exterior building materials investigated are mud, masonry, and concrete, three of the most popular single-family residential building materials in Korea. For the mud wall house, from 10:00~18:00, interior temperature was lower than the exterior, but from 18:00~8:00, interior temperature became higher, and from 00:00 ~6:00, interior temperature became 4°C higher than the exterior temperature. For masonry, from 20:00~6:00, interior temperature was 4°C higher than the exterior temperature. For concrete, due to its physical characteristics, the interior temperature was generally higher than the exterior temperature,

<sup>6</sup> Kim, Park, and Chae, "The Policy Measures to Reduce Heat-Wave Damage of Vulnerable Groups in Korea."  
<sup>7</sup> Kim, Park, and Chae.

<b>Division</b>	<b>Low Income (under 500,000 KWR)</b>	<b>Recipient of Government Assisted Living</b>	<b>Single Elderly</b>	<b>Arthritis</b>	<b>High Blood Pressure</b>	<b>Age Over 75</b>
<i>Heat Wave Shelter</i>	18	9	13	9	12	16
<i>Bank</i>	23	9	16	14	17	19
<i>Shading outside House</i>	5	4	2	3	2	5
<i>Convenience Store or Large Grocery Store</i>	0	0	0	0	0	0
<i>House</i>	1	1	1	1	0	0

*Fig. 3.3 Top 5 shelters visited during a heatwave*



but the difference is within 2°C. This demonstrates that building material has an important impact on the temperature inside a building and its fluctuation based on time of day.

This thesis interviewed 149 households under its 'vulnerable' criteria and found that 59 households depend on an electric fan to cool down during heatwaves, and 36 households are equipped with air conditioning but only use it for less than 2 hours due to financial limitations. Of the 120 people interviewed who fall under the vulnerable criteria, 39% of the people voiced that the main difficulty during the heatwave is not being able to go outside, due to inability to afford a comfortable transportation methods, existing physical difficulties or new physical difficulties that arise from high temperatures such as nausea, tiredness, or muscle pain.

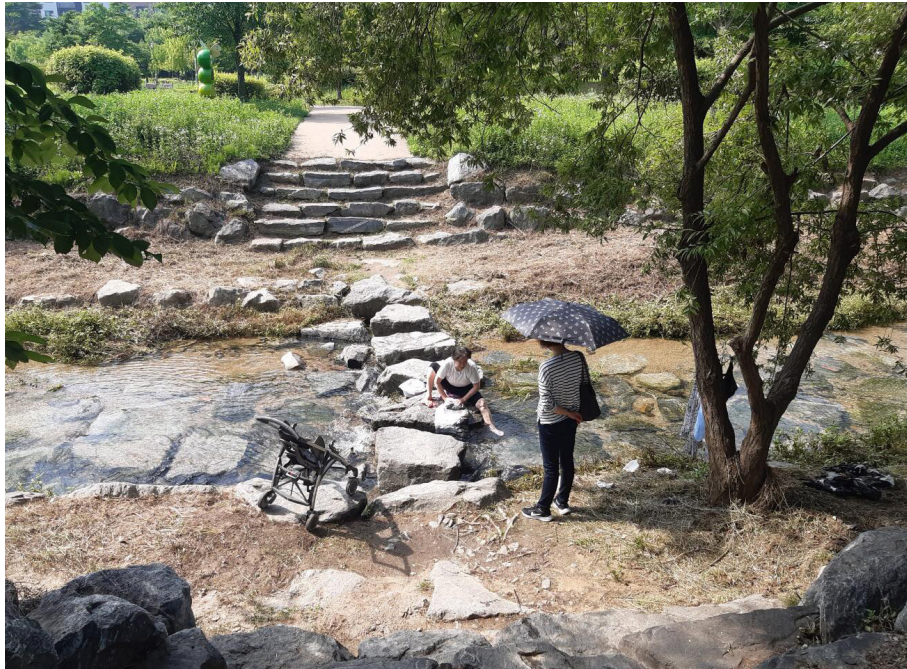
In conclusion, people with financial difficulties and physical disabilities are more vulnerable to heatwaves, and they respond to the heatwaves passively, such as by staying indoors or venturing to places within close proximity of their residence. The more vulnerable the individual is, the fewer actions they tend to take during the heatwave.

### 3.3 Conclusion

The 24 micro seasons reflect the importance of seasons and weather in Korean culture. It guided the citizens on when to plant specific types of crops, what to eat, what to expect from the weather, and what to be grateful for. It is another example of Korean culture's respect for nature, as it encourages the citizens to celebrate specific events occurring in nature. It is important that the Shim Teos are designed with the 24 micro seasons in mind, to coexist in harmony with nature.

As Korea's weather becomes more polarizing as a result of global warming, it is important to study the effects of weather on the elderly's dwelling, and their socialization patterns during extreme weather conditions. The thesis studied in this section called 'The Policy Measures to Reduce Heat-Wave Damage of Vulnerable Groups in Korea' by the Korea Environmental Policy revealed the importance of encouraging the elderly to actively seek out a place to rest and cool down during heatwaves instead of staying indoors, as many of the elderly that suffer from heatwave related difficulties do not have home cooling equipment. It is important that the Shim Teos are designed to be comfortable, accommodating, and most of all, accessible to the elderly. This would encourage the elderly to seek out the Shim Teos during a heatwave. The Shim Teos may be small in size and simple in form but can become a lifeline to the elderly during extreme weather conditions.

## *Chapter 4: Site Studies*



*Fig. 4.1 Laundry by the creek*

#### 4.1 Literature: The Social Life of Small Urban Spaces

The short book by William H. Whyte named '*The Social Life of Small Urban Spaces*' is a study of the relationship between small urban spaces and their greater urban and social context. Whyte closely follows the life of micro-urban spaces, specifically plazas, in New York City. The sections that were closely examined were *The Life of Plazas*, *Sitting Space*, and *Food*. Observations that were unique to New York City, such as climate and demographic, were not examined due to the cultural differences between the United States and Korea.

Whyte identifies that the best way of determining how a space is used by people is to observe it during off-peak hours<sup>1</sup>. When a place is crowded, people are forced to sit wherever there is a vacancy. When a place is empty, people can choose to find the space that suits their needs and is most comfortable for them.

Through observations of different plazas in New York, Whyte concluded that the best element to attract people to plazas are other people. His observations debunk a wildly speculated theory that in an urban context, people enjoy a secluded, intimate, and private 'oasis or 'retreat'<sup>2</sup>. People tend to favour spaces intersecting the central pedestrian circulation, and conversation between static users of the plaza tend to take place in the direct center of the pedestrian flow<sup>3</sup>.

Sitting spaces within the Plaza were also studied as a part of the research. Sun direction and aesthetics of the plaza, two factors that are typically placed in the high prioritization when designing plazas, were discovered to be not as influential in attracting people. Whyte believes that designers should instead look at the surroundings of the plaza at the eye level scale, not at the building level scale. Strip plazas were more successful in drawing people than square plazas when providing ample sitting spaces<sup>4</sup>. Whyte dove deeper into the idea of 'sitting' in a plaza directly influencing the popularity of the plaza. Physically comfortable sitting space is the minimum requirement, and socially comfortable sitting space is the design that designers should strive for. Whyte stated that this means that people should be able to choose how they sit, and where they sit<sup>5</sup>. He describes moveable chairs as the optimal sitting space, due to their flexibility in mobility. People can decide where to sit, whom to sit with, how close they want to be to the person they are sitting with, and the direction of the sun they may or may not want to sit under. Fixed seats force interaction between people, which deters people from sitting down.

Food is another factor that was identified to attract people to plazas. Whyte believes that 'food attracts people who attract more people'<sup>6</sup>. Food facilities such as street food vendors supply food and refreshments to the people using the plaza, who then linger more in the plaza to consume the food. They also provide

1 William Whyte, *The Social Life of Small Urban Spaces*, 1980.18  
2 Whyte. 19  
3 Whyte. 21  
4 Whyte. 26  
5 Whyte. 28  
6 Whyte. 52

the specific type of food and services needed by the people using the plaza. For example, cheap, quick and easy-to-eat street food are highly appealing to office workers working nearby or on lunch breaks.

This literature brings up a few points that can be directly applied to this thesis. Specifically, it demonstrates that: (1) people are the most successful element in drawing other people, (2) socially comfortable seating is the most preferred seating arrangement, and (3) food also is successful in adding vibrancy to a space.

## 4.2 Site Visit

This thesis focuses on three distinct sites in Seoul and Suwon: Peace Park, Neungsil Village and Suwon Terminal. These three sites represent three different social and urban conditions present in Korea. These three sites of study all have rest stops integrated into the environment, some of which attracted more users than others. In this section, the three sites will be explored and studied to determine the social, urban, and physical factors which would enable the rest stops to be successful. As explored in the previous section, the physical characteristics of the rest stops have less influence on its success than its surrounding sociological and urban factors. This idea will be a base for the research conducted at these three sites.



# Site Documentation: Peace Park









# Site Documentation: Peace Park

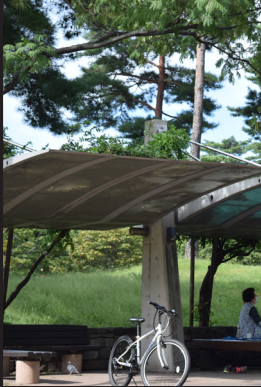










Fig. 4.2 Map of the World Cup Park



### 4.3 Peace Park

Peace Park is located in the heart of Mapo District, Seoul, the largest metropolitan city in Korea. Right adjacent to the famous Han River, there are many activities and services in very close proximity to this park. Peace Park is a South end portion of four smaller parks that make up the World Cup Park. It is located closest to the World Cup Stadium, various public transportation options, the main parking lot, and Mapo Seafood Market. The accessible nature of Peace Park allows it to have heavy foot traffic all year round, whether using the park's amenities or just passing through the park. The Peace Park is also in close proximity to the South-East residential zones, which makes it ideal for the residents to walk over to the park without difficulty.

Peace Park is open all year round and maintained by the Mapo District. From site visits, it was observed that during the weekends the park is used mostly by families with young children, and on the weekdays the park is used mostly by the elderly population. Two site visits were conducted at Peace Park: on March 11<sup>th</sup> 2022, and April 5<sup>th</sup> 2022. The site visit follows three Shim Teo units in Peace Park, labeled as 11.1, 11.2, and 11.3. The typical Shim Teo unit found in Peace Park consists of a deck type of Shim Teo in the centre, flanked by two benches on both sides, all shaded by concrete, steel, and PVC panels. The site visits aim to identify which of the three Shim Teo units are most well used, the demographic of people using the Shim Teos, the types of activities that take place there and how long people stay.

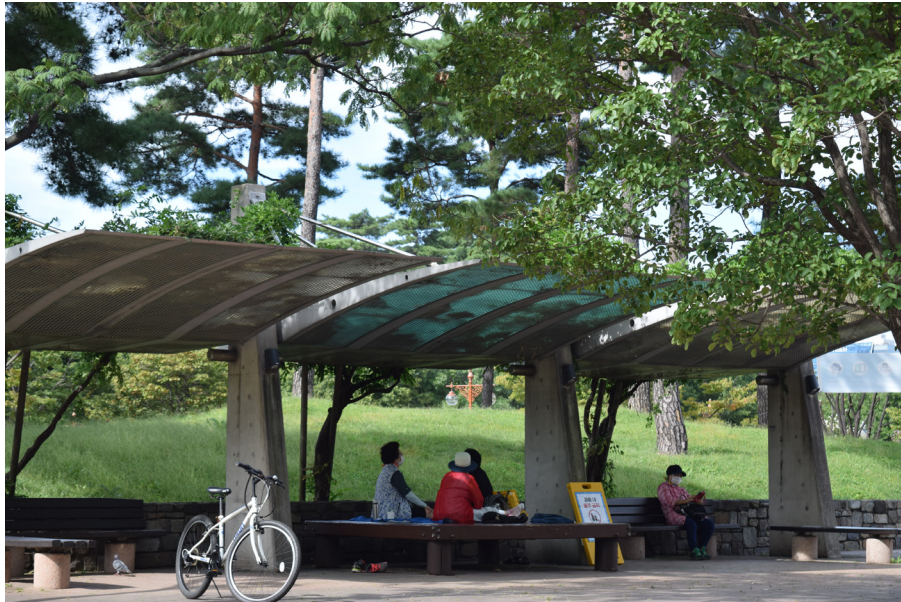
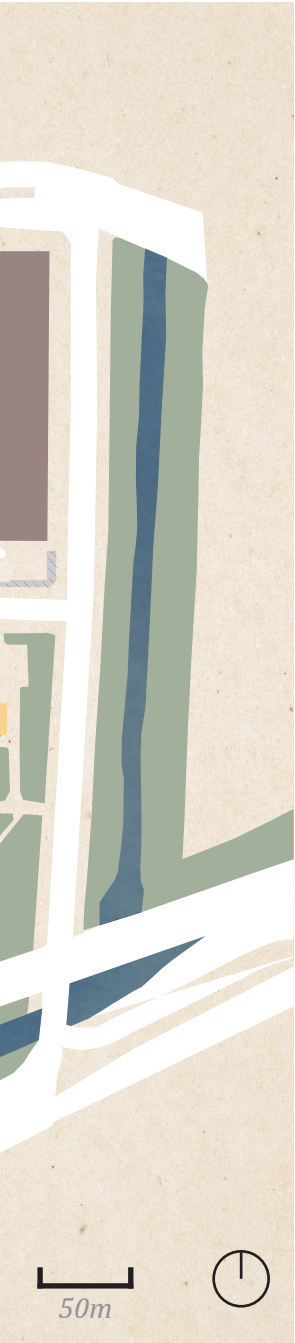
#### Legend

- Instituion*
- Green Space*
- Water*
- Heat Wave Cooling Station*
- Residential*
- Commercial*





*Fig. 4.3 Map of the Peace Park*







*Fig. 4.4 Typical deck type*

*Legend*

- |   |                                    |
|---|------------------------------------|
| <i>1. Mapo Seafood Market</i>                   | <i>15. Peace Plaza</i>             |
| <i>2. Playground</i>                            | <i>16. Peace Park UNISEF Plaza</i> |
| <i>3. Willow Forest</i>                         |                                    |
| <i>4. Forest Table</i>                          |                                    |
| <i>5. Seoul Hydraulic Pump Station</i>          |                                    |
| <i>6. Peace Grass Plaza</i>                     |                                    |
| <i>7. Seoul Energy Dream Education Centre</i>   |                                    |
| <i>8. Seoul Energy Dream Centre</i>             |                                    |
| <i>9. World Cup Convenience and Cafe</i>        |                                    |
| <i>10. Peace Park Fountain</i>                  |                                    |
| <i>11. 1 Sheltered Deck Shim Teo Location 1</i> |                                    |
| <i>11.2 Sheltered Deck Shim Teo Location 2</i>  |                                    |
| <i>11.3 Sheltered Deck Shim Teo Location 3</i>  |                                    |
| <i>12. Animal Park</i>                          |                                    |
| <i>13. Peace Park Parking</i>                   |                                    |
| <i>14. Seoul Sports Association</i>             |                                    |



# March 11th Site Visit: Location 1

<i>Image</i>	<i>Time</i>	<i>Group</i>	<i>Activity Description</i>
	10:39 a.m.	1	Grandparents out with grandchildren, resting
	11:00 a.m.	1	Grandparents resting, rest of the family out for a walk
	11:18 a.m.	1	Rest of the family joins the grandparents, still socializing
	11:40 a.m.	2	Family of 3, parents in 30s erect a tent at the empty lot on the right side of the Shim Teos



11:50 a.m. 3 *Mother in 30s and a daughter around 3~5 sit on the left side of the Shim Teo*



11:53 a.m. 4 *Woman in 70s sit on the right side of the Shim Teo, talking on the phone. Leaves at 12:19 p.m.*



11:55 a.m. 1 *Grandparents and Grandchildren pack to leave - stayed at Shim Teo for an hour and 20 min*



12:02 p.m. 5 *Parents in 30s and a daughter between 2~3 yr arrive and start eating lunch*



12:09 p.m. 3 *Mother is joined by her friend and her daughter, who stays for 30 min*



12:21 p.m. 5 & 6 *Group 5 leaves, and group 6 arrives, parent in 30s with a boy between 3~6*



12:21 p.m. 6 *Group 6 erects a tent beside the Shim Teo and right side of the bench*



12:25 p.m. 6 *Group 6 goes for a walk*





12:30 p.m. 7 *Mother in 30s with a daughter and a toddler son sits at the left side of the Shim Teo*



12:36 p.m. 7 *Group 7 leaves - stayed for 6 min*



12:43 p.m. 6 *Group 6 returns to the tent and are socializing*



12:49 p.m. 6 *Group 6 starts to play a game*



12:55 p.m. 8 *A mother in 40s and two teenage daughters sit on the left side of the Shim Teo - arrived with public shared bikes*



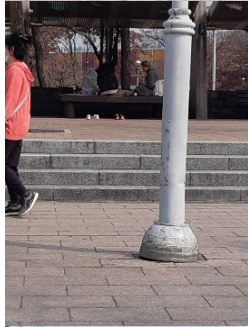
1:11 p.m. 8 *Group 8 leaves*

## March 11th Site Visit: Location 2

<i>Image</i>	<i>Time</i>	<i>Group</i>	<i>Activity Description</i>
	10:45 a.m.	1	Parents in 70s and daughter in 20s playing card game
	11:02 a.m.	1	Group 1 is still playing card game
	11:18 a.m.	1	Group 1 is still playing card game
	11:23 a.m.	1	Group 1 is still playing card game



11:29 a.m. 1 *Group 1 goes for a walk, leaving their belongings*



11:43 a.m. 1 *Group 1 comes back from the walk and continues the card game*



11:56 a.m. 2 *Woman in 70s sit on the right side of the Shim Teo and prepares a meal of instant cup noodles*



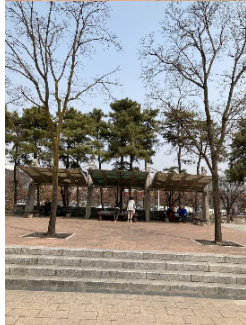
12:04 p.m. 3 *Man in 70s sits on the left side of the Shim Teo and rests*



12:08 p.m. 2 *Woman in 70s is joined by a man in 70s*



12:11 p.m. 1 *Group 7 leaves again leaving their belongings in the Shim Teo*



12:18 p.m. 1 *Group 7 returns*



12:42 p.m. 2 *Group 2 leaves*





12:45 p.m. 1 Family eats lunch  
- cup noodles,  
purchased on their  
walk



12:45 p.m. 3 Man eats lunch,  
leaves around  
12:55 p.m.



1:01 p.m. 4 Man in 70s arrives  
and sits on the left  
side of the Shim Teo  
and leaves after a  
min



1:05 p.m. 1 Family starts  
eating fruits



1:06 p.m. 5 *Couple (mf) and a man in 20s arrives and sits on the left side of the Shim Teo*

## March 11th Site Visit: Location 3

<i>Image</i>	<i>Time</i>	<i>Group</i>	<i>Activity Description</i>
	10:43 a.m.	1	Man in 60s drinking coffee and people watching
	11:03 a.m.	1	Leaves
	11:05 a.m.	2	2 females in 60s eating boiled pig trotter (jok-bal)
	11:18 a.m.	2	Group 2 is still eating



11:23 a.m. 2 Group 2 is still eating



11:32 a.m. 3 Male and female both in 70s and their grandson, 3, erect a tent on the right side of group 2 (Shim Teo)



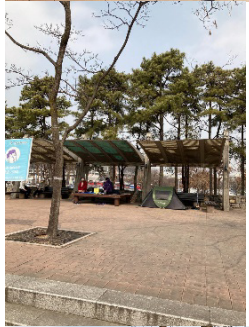
11:54 a.m. 4 Man in 70s sits on the left side of the Shim Teo - stays for 6 min



12:16 p.m. 3 Group 3 leaves their tent



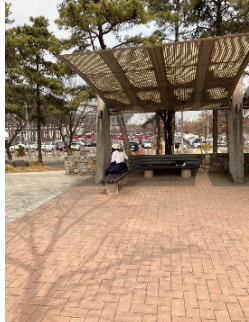
12:38 p.m. 3 *Group 3 returns to their tent and the grandfather and the grandson eat sandwiches*



12:50 p.m. 2 *Female friend arrives and joins group 2*



12:51 p.m. 5 *Male and female in 30s arrive and sit on the left side of the Shim Teo - leaves at 12:57 p.m.*



1:05 p.m. 6 *female in 30s arrives and sits on the left side of the Shim Teo - leaves at 1:09 p.m.*







**March 11th Site Visit: Additional Photos**



*Fig. 4.5 Inside the tent of Group 3*

## April 5th Site Visit: Location 1

<i>Image</i>	<i>Time</i>	<i>Group</i>	<i>Activity Description</i>
	2:37 p.m.	1	Group of 4 women friends in 60s
	2:38 p.m.	1	A journalist from KBS is filming their activities
	2:39 p.m.	2	A man in his 70s is sitting on a mat and covered in blanket on the left side of the Shim Teo
	2:40 p.m.	1	Group 1 is still enjoying filming with the journalist



2:47 p.m. 1 *Group 1 leaves*



2:49 p.m. 2 *The man sitting on the ground picks up his belongings and moves on the Shim Teo*



2:52 p.m. 2 *Still setting his belongings on the Shim Teo*



3:08 p.m. 2 *He is joined by his friend*





3:20 p.m. 2 *Leaves to get hot water*



3:23 p.m. 2 *Both starts eating instant cup noodles*



3:25 p.m. 2 *Still eating instant cup noodles*



3:28 p.m. 3 *Couple in their 60s sit on the left side of the Shim Teo*



3:38 p.m. 3 Group 3 leaves



3:53 p.m. 4 Man in 70s sit on the left side of the Shim Teo



3:54 p.m. 4 Starts eating fruits and drinking tea



3:56 p.m. 5 Man in 70s sits on the right side of the Shim Teo





3:59 p.m. 5 *Starts reading newspaper*



4:12 p.m. 5 *Group 5 leaves*






4:46 p.m. 4 *Group 4 leaves*



4:47 p.m. 2 *Group 2 gets ready to leave*

## April 5th Site Visit: Location 2

<i>Image</i>	<i>Time</i>	<i>Group</i>	<i>Activity Description</i>
	2:35 p.m.	1,2,3	Group 1 - two women in late 60s resting in Shim Teo, Group 2 - elderly couple on the right of Shim Teo, Group 3 - two friends in 30s on the left of Sim Teo
	2:42 p.m.	2	Group 2 is drinking Soju (Korean liquor)
	2:44 p.m.	3	Group 3 is eating doshirak - Korean packed lunch box
	2:46 p.m.	1	One of the women goes for a walk



2:50 p.m. *KBS Journalist from KBS moves from location 1 to location 2 to film*



2:53 p.m. *KBS Journalist introduces himself: KBS, 'Viral Video Department' - working on a story on elderlies and the peace park*



3:02 p.m. *4 Couple in their 60s sits on the left side of the Shim Teo*



3:10 p.m. *4 Group 4 leaves*





3:14 p.m. 5 Couple in their 50s and a woman friend shares the Shim Teo with group 1 - spontaneous socialization



3:16 p.m. 5 & 1 Group 5 is eating snacks and fruits



3:26 p.m. 5 & 1 Group 5 and 1 are sharing yakult (probiotic soft drink)



3:27 p.m. 2 Group 2 leaves



3:30 p.m. 5 & 1 *Group 1 and 5 are socializing over their yakult*



3:36 p.m. 4 *Group 4's friend (woman, 40s) joins*



3:37 p.m. 4 *Same as above*



3:39 p.m. 5 & 1 *One of the woman from the combined group moves to the right side of the Shim Teo to take a phone call*





3:41 p.m. 5 & 1 *The woman ends her call and rejoins the combined group*



3:50 p.m. 5 *Group 5 leaves*



3:57 p.m. 6 *Woman in 60s sits on the right side of Shim Teo*



4:05 p.m. 6 *Group 6 sets her belonging*



4:06 p.m. 6 *Same as above*



4:06 p.m. 6 *Group 6 is joined by her dog and partner*



4:06 p.m. 6 *Same as above*



4:13 p.m. 6 *Group 6 eats hwae (raw fish fillet) purchased from the market with soju*



4:35 p.m. 1 *Group 1 leaves*



4:35 p.m. 6 *Group 6 move to the Shim Teo*



4:38 p.m. 6 *Same as above*



4:40 p.m. 6 *Pictured: group 6's dog*







4:41 p.m.

6 *Pictured: hwaе, cream buns, roasted seaweed and makguli (rice wine)*



## April 5th Site Visit: Location 3

<i>Image</i>	<i>Time</i>	<i>Group</i>	<i>Activity Description</i>
	2:43 p.m.	1	3 women in 60s eating fried chicken with drinks
	2:43 p.m.	1	Same as above
	2:58 p.m.	1	KBS Journalist comes and talks to them
	3:00 p.m.	1	Filming



3:24 p.m. 1 *Group 1 has finished eating and leaves*



3:24 p.m. 2 *3 people in 70s move in to the Shim Teo - they eat hwaе and drink soju and makgoli*



3:24 p.m. 2 *Same as above*



3:31 p.m. 3 *2 people in 70s move in to the bench on the right side of Shim Teo*



3:45 p.m. 3 Group 3 leaves



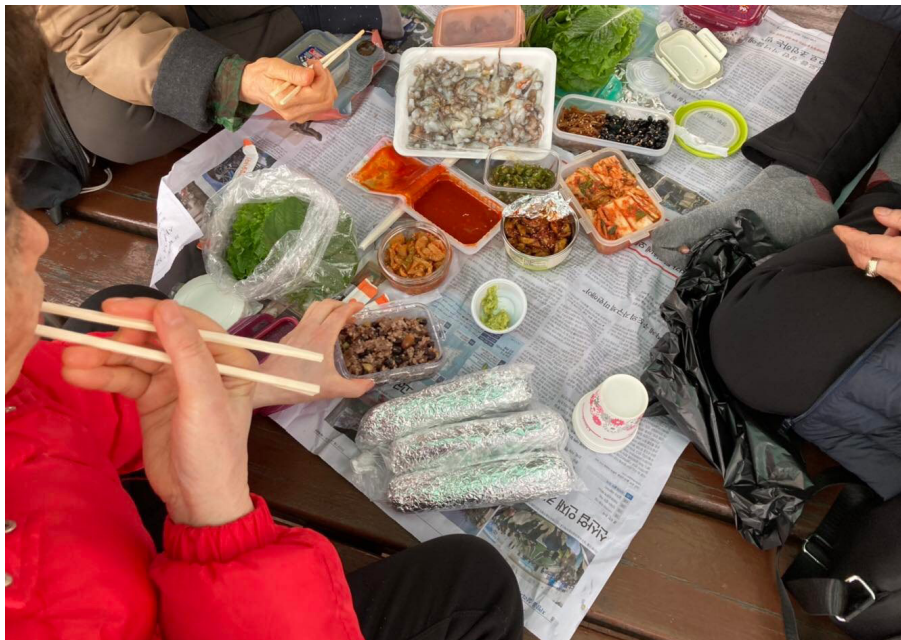
4:47 p.m. 3 Group 3 is seen to be on a walk along the Nanji pond



4:25 p.m. 2 Group 3 leaves



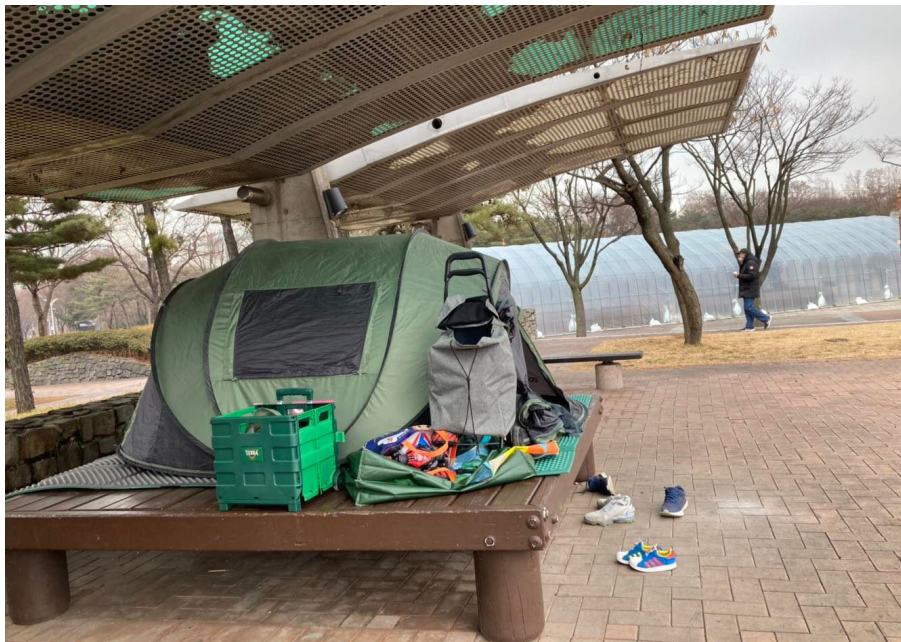
## Additional Site Photos: Feb. 26th



*Fig. 4.6 Close up of the Deck type*  
*Fig. 4.7 Closeup of the food shared*



## Additional Site Photos: Feb. 26th



*Fig. 4.8 Front view of the tent on the Deck*

*Fig. 4.9 Side view of the tent on the Deck*



*Fig. 4.10 Front view of the tent on the ground*

*Fig. 4.11 Side view of a tent on the ground*



#### 4.4 Peace Park Site Visit Observation

These site visits reveal the public's preference for the deck type over the bench type of Shim Teo. It was observed that the deck type will fill up first, followed by the bench type, and that when the deck type is freed up, the occupants of the bench type will take time and effort to move onto the deck type. It is also observed that socialization is the dominant activity which takes place on the deck type, followed by the act of rest. Food is always present in the act of socialization, whether it be a full meal or a cup of hot tea. The presence of a seafood market further encourages the consumption of food on the deck type. An interesting new element observed during the site visit was the appearance of tents. They are erected either directly on the ground or on the deck type. Other than providing additional shelter and warmth to the occupants during the cold spring season, they were also observed to provide a sense of togetherness amongst the occupants, which are solely family members. Typically deck types are occupied for longer than bench types, as the bench type is used mainly to rest during a journey to a destination, rather than being the destination itself. Location 1 was the most popular location out of the three. It is speculated that the close proximity to the paths that lead to Mapo Seafood Market, UNICEF Plaza and into the interior Peace Park gardens gives the location a heavier foot traffic.

# Site Documentation: Neungsil Village

















Fig. 4.12 Map of the Neungsil Village



#### 4.5 Neungsil Village

Neungsil Village is a newly built high-rise residential neighbourhood on the outskirts of Suwon. Located a 45 minute bus ride away from the Suwon Station, this residential development lacks both car and foot traffic. Buses come infrequently, and one can wait up to 30 minutes for a bus to arrive. The specific area of interest is the single apartment in Neungsil Village number 22, which is the rent-subsidized senior residential building. Similar to other types of senior residential buildings in Korea, there is a daycare and children's playground placed right at the centre of the complex. There are also many elderly-oriented services within Village 22, such as a social welfare centre, community centre, elderly exercise zones, and neighbourhood facilities. The senior apartment is flanked by the social welfare centre and designated scooter parking, allowing easy access to both services. Beside every elderly exercise zone, there are accompanying Shim Teos. As seen through the images, they are often left empty and not well used.



#### Legend

-  *Institution*
-  *Green Space*
-  *Water*
-  *Heat Wave Cooling Station*
-  *Residential*
-  *Commercial*



Fig. 4.13 Map of the Neungsil Village apartment complex 22





*Fig. 4.14 Aerial view of the Neungsil Village*

*Legend*

- 1. Social Welfare Centre*
- 2. Rest Shelter*
- 3. Dedicated Senior Housing Apartment*
- 4. Parking 1*
- 5. Outdoor Exercise Equipment Zone 1*
- 6. Childcare Facility*
- 7. Infant Playground*
- 8. Playground*
- 9. Outdoor Exercise Equipment Zone 2*
- 10. Residents Community Centre*
- 11. Parking 2*
- 12. Neighbourhood Living Facility*
- 13. Security Office*
- 14. Outdoor Exercise Equipment Zone 3*



## Additional Site Photos: Sep. 20



*Fig. 4.15 Outdoor exercise equipment zone 3*





*Fig. 4.16 Playground*



*Fig. 4.17 Shim Teo in outdoor exercise equipment zone 3*



*Fig. 4.18 Outdoor exercise equipment zone 1*



## Additional Site Photos: Feb. 28



*Fig. 4.19 Playground*





*Fig. 4.20 Scooter and bike parking space*

# Site Documentation: Suwon Station





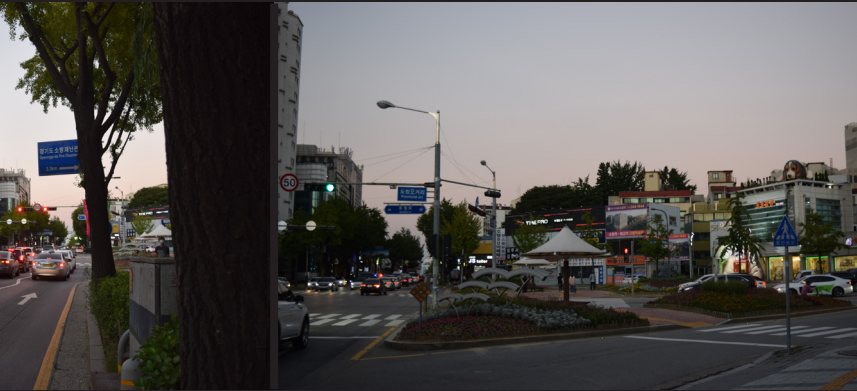














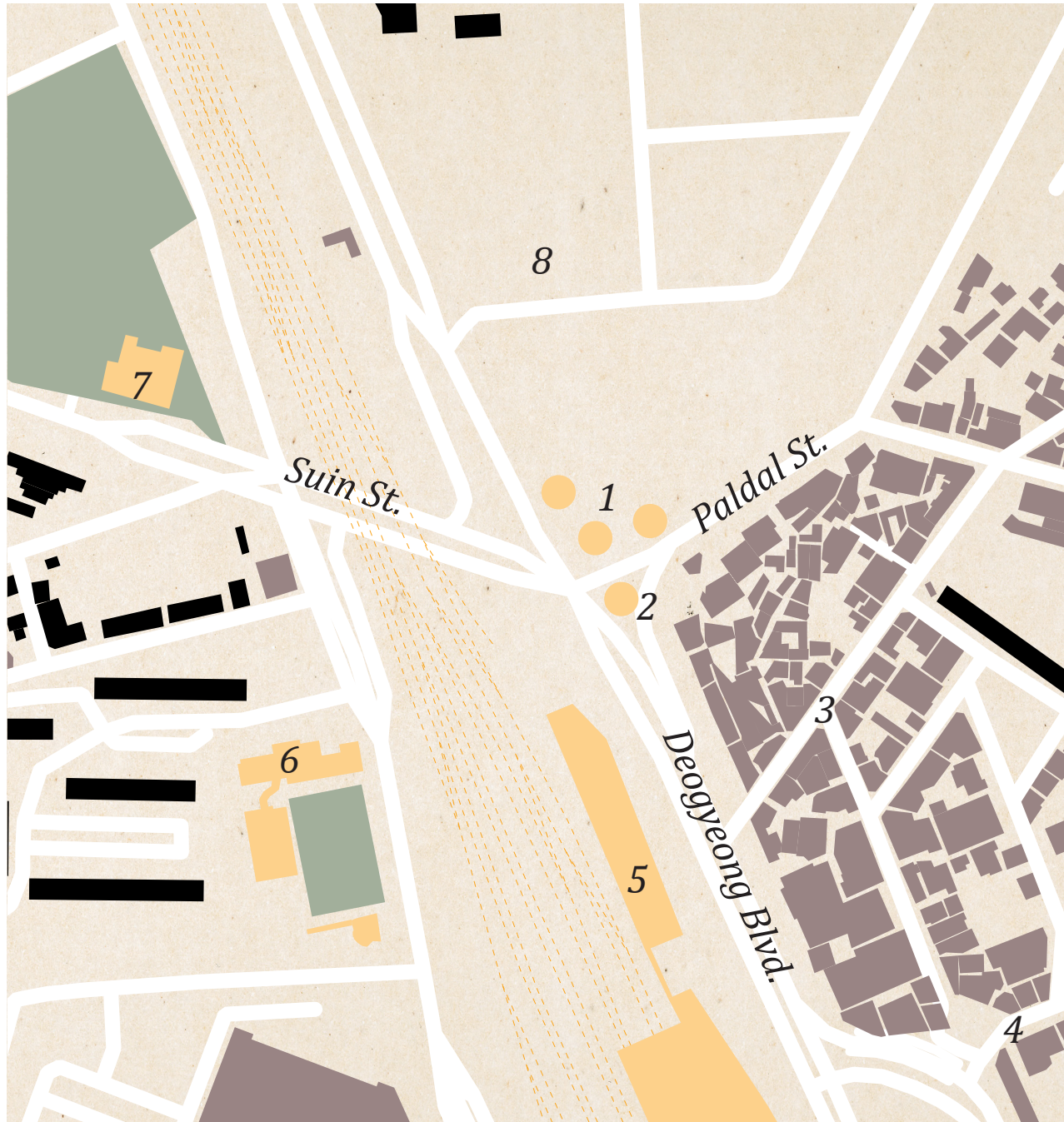
Fig. 4.21 Map of Suwon Terminal neighbourhood





*Legend*

- Institution*
- Green Space*
- Water*
- Heat Wave Cooling Station*
- Residential*
- Commercial*



*Fig. 4.22 Map of the Suwon Terminal North neighbourhood*





#### 4.6 Suwon Terminal

Suwon Terminal is a highly charged urban neighbourhood, with the Suwon terminal placed at the centre, surrounded by a mix of residential and commercial, and low-rise, mid-rise, and high-rise buildings. Suwon terminal embodies all the typical characteristics of Korea’s metropolitan zones: extremely heavy foot and car traffic all year round, close proximity to various government services and institutions, with high-rise residential zones surrounding the terminal. The two specific zones of interest are the North section of the Suwon Terminal with two Shim Teos (the donut type and the parasol type) and the East section of the terminal, which also features the parasol type and the donut type. Even though these two zones are in close proximity to each other, the usage of the sections is drastically different. The North section is left mostly empty, and the Shim Teos are left unused, whereas the East section is bustling with foot traffic and the Shim Teos are well-used.

#### *Legend*

1. Donut Type Shim Teo
2. Parasol Type Shim Teo
3. Suwon Terminal Red Light District Revitalization Project
4. Suwon Rodeo Road
5. Suwon Terminal
6. Seo-Pyn Elementary School
7. Korea Transportation Safety Authority Automobile Inspection Centre
8. Ongoing High Rise Residential Project

## Additional Site Photos

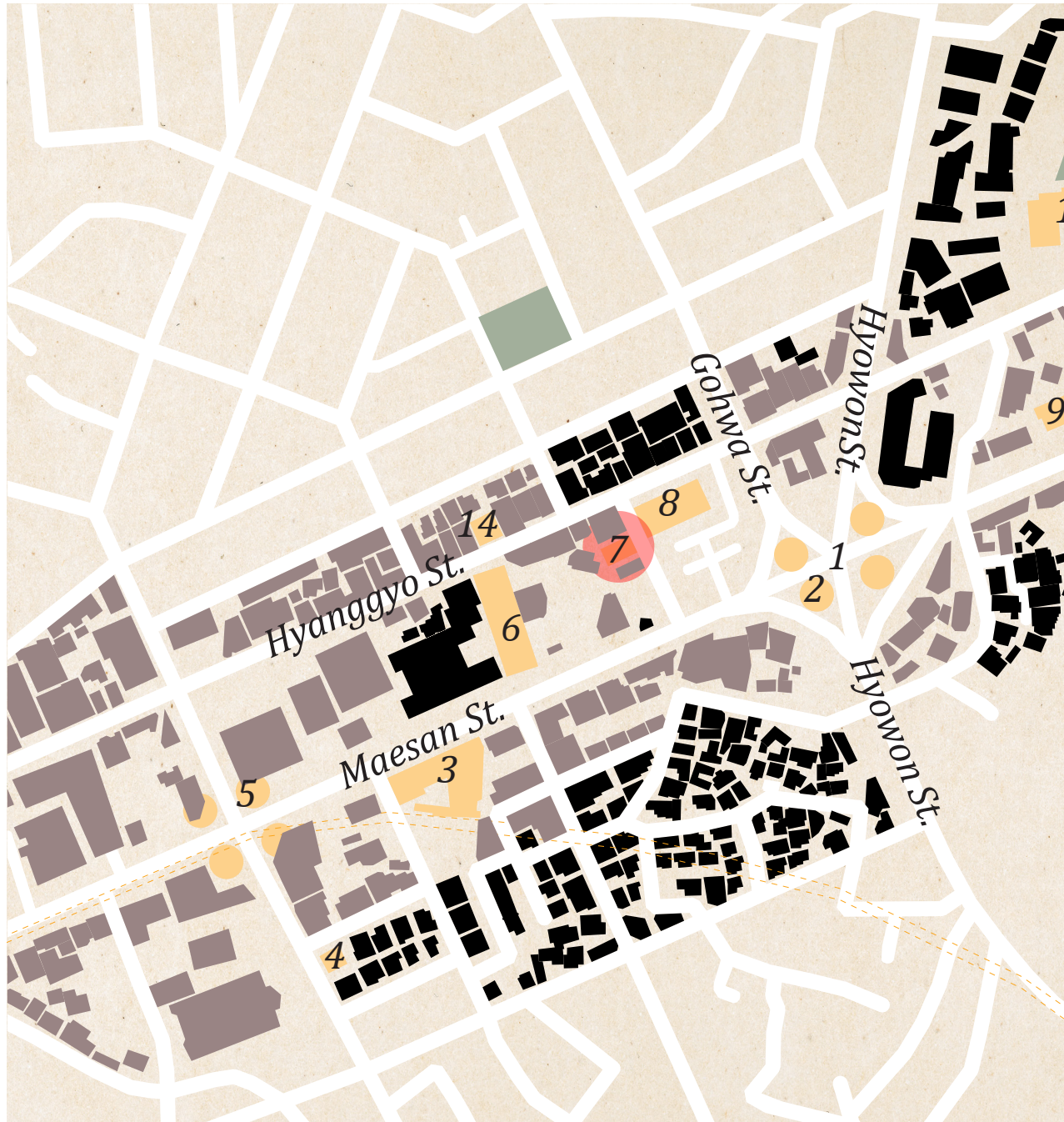


*Fig. 4.23 Landscaped zone inside the donut type*



*Fig. 4.24 Litters left inside the donut type*





*Fig. 4.25 Map of Suwon Terminal East neighbourhood*





*Legend*

1. Docheong Five Way Intersection
2. Donut Type Shim Teo
3. Church of God
4. Naeju Church
5. Parasol Type Shim Teo
6. Korea Nursery Association  
Gyeonggi Province Branch
7. Maesan Senior Centre
8. Suwon Tax Office
9. Gyeonggi Province Volunteer Centre
10. Suwon Jungbu Fire Station
11. Suwon Chinese Middle School
12. Maesan Elementary School
13. Gyodong Senior Centre
14. Ha Soon Church

## Additional Site Photos



*Fig. 4.26 Urban forest beside the donut type*



*Fig. 4.27 Socialization in the donut type*

#### 4.7 Conclusion

Studying the three distinct sites and the Shim Teos occupying these three sites has confirmed Whyte's theory on what makes a sitting and resting space successful: the surrounding actors and environments, as well as the shape and form of the sitting space. Deck-type Shim Teo of the Peace Park, next to the bustling seafood market and the Han River, was more used than the different varieties of Shim Teos of the Neungsil Village. The East side of the Suwon Terminal, even though it contained the same amount and the same type of Shim Teos as the North side, was used more frequently. The only difference between the two sections is that the north side was next to the developing zones and the East side was next to the popular Rodeo Street and many institutions and services. Regarding the forms of the Shim Teos, the deck type was favoured heavily over the bench type, when placed in the same site context. Donut type and parasol type saw little socialization taking place, with the occupants lingering for a very short period of time, typically during the duration of streetlight change. These observations indicate that human behaviours are not unique to Korean culture: people prefer more socially comfortable means of sitting, as well as vibrancy in the surrounding urban context.



## *Chapter 5: Design Proposal*



*Fig. 5.1* Makeshift shim teo in Suwon

## 5.1 Methodology

This section explores and proposes new Shim Teo types that will enhance the site where they are placed, address the issues that the current Shim Teos face, and embody Korean culture to the fullest. Below is the step-by-step methodology that will be used to develop new Shim Teo types.

- 1) **Design precedents will be studied and analyzed, on their own and also in conjunction with the Poong Sok Hwa analyzed in the first chapter.**

Design precedents with relevant site context, intent, and materiality will be chosen and analyzed. Sites in Asia, specifically in East Asia, will be preferred due to the similarity in culture and environment. Connection with the historical Shim Teos will be also made, referring to the Poong Sok Hwa analysis in Chapter 1.

- 2) **Potential materials of the new Shim Teo type which embody the Korean culture will be explored and experimented with.**

Materiality is extremely important in Shim Teos. It can make a space comfortable, inviting and culturally appropriate. Specifically, rice stalk will be explored. The historical uses and cultural significance of rice straw will be studied. Findings from the Korean Museum of Straw and Life (짚풀생활사박물관) will also be displayed in this section. After preliminary research, there will be physical experimentation with the straw and different types of long grass in Canada. The research and the experimentation will determine whether straw will be appropriate materiality for new Shim Teo types.

- 3) **Seven primary sites of the new Shim Teos will be identified and justified.**

The new Shim Teo types will be versatile and can be placed in many different locations. Seven broad site types will be determined in order to develop program-specific Shim Teo types. These sites will be determined by their relationship to the street, people, and nature.

- 4) **New Shim Teos, including their architectural drawings and renderings, will be proposed.**

New Shim Teos types will be determined at the end of the section. Accompanying architectural drawings and renderings will be developed to better understand the new Shim Teos and the design justification.

## 5.2 Precedent Studies: Senior Park

As discussed in previous chapters, the depression and suicide rate of the elderly in Korea is rising. This is a result of the social isolation of the elderly, from either physical or mental limitations, or both. Muscle mass decreases approximately 3-8% every decade after the age of 30, and the decline accelerates after the age of 60<sup>1</sup>. This makes everyday routine activities, such as walking or cooking, extremely difficult for the elderly. Loss of mobility contributes to a decrease in quality of life, thus contributing to depression. Senior Park is a playground that caters specifically to the elderly in Gwangjin District in Seoul, Korea. The park features 15 distinct pieces of exercise equipment that will stimulate and strengthen the muscles that are critical in the everyday life of the elderly, as well as stimulate blood flow. The park is distinct in the fact that it is one of the few outdoor spaces dedicated solely to the elderly. It is connected to various government services by shuttle buses, and the equipment at the park is designed solely for the elderly. While the current public exercise equipment as well as equipment of the private gyms are aimed to strengthen general muscles, the Senior Park's exercise equipment is aimed to strengthen specific muscles needed to conduct daily activities, such as strengthening finger muscles to open food containers. The main goal of the park is to help the elderly build up essential muscles and lead a healthier life, which will also lead to a healthier mental state. This park is one of the many initiatives by the government to address the depression and social isolation that elderly people face. By strengthening essential muscles, the elderly are able to physically take part in daily routines and actively seek out socialization networks. The success of the Senior Park can be attributed to its state-of-the-art equipment designed specifically for the elderly and its accessibility. This open-air public park requires very low maintenance which allows it to be opened 24/7. The only problem associated with this park is that all the equipment is expensive and as of this moment, it is the only park in the entire nation with the equipment. Only the elderly living along the shuttle bus line or within the walking distance of the park are able to access it. The new types of Shim Teo developed in this section will address these issues and take accessibility and cost into consideration.

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<sup>1</sup> Elena Volpi, Reza Nazemi, and Satoshi Fujita, "Muscle Tissue Changes with Aging.," *Current Opinion in Clinical Nutrition and Metabolic Care* 7, no. 4 (July 2004): 405-10, <https://doi.org/10.1097/01.mco.0000134362.76653.b2>.





*Fig. 5.2 Senior Park*

## Root Bench

Shim Teos present in Korea are typically mass-produced with set height and programs. Some of the Shim Teos discussed in previous chapters are great examples of this phenomenon. Benches along the roads all have the same height and length, and parasols have a set height and diameter. This actively discourages other programs to take place in the Shim Teos. Root Bench is a network of wooden benches reminiscent of tree roots, placed at the Han River Park in Seoul, Korea<sup>2</sup>. The linear benches share the same core and extend from the core in a radial formation. There are in total of three elevations of the Root Bench: children's chair (250mm), adult chair (450mm), and a table (750mm)<sup>3</sup>. With three elevations and different widths, the Root Bench indicates that it can be enjoyed in many different ways and accommodate different demographics of people. Lighting is also incorporated into the benches and allows them to be used all day. A wooden bench placed directly on the ground allows the benches and the users to integrate with nature. Accommodation, accessibility, and creativity are three main themes present in the Root Bench, which can be overlapped with the themes that the new Shim Teo types will be designed under.

<sup>2</sup> Maria Gonzalez, "Root Bench / Yong Ju Lee Architecture," *Arch Daily*, 2018, <https://www.archdaily.com/906027/root-bench-yong-ju-lee-architecture>.

<sup>3</sup> Jessica Stewart, "Clever Wood Bench Sprawls Out Like the Roots of a Tree in South Korea," *My Modern Met*, 2018, <https://mymodernmet.com/yong-ju-lee-root-bench/#:~:text=In%20a%20public%20park%20in,furniture%20for%20all%20to%20enjoy>.



*Fig. 5.3 Root Bench*

## THE GARDEN

With the rapid urbanization and digitalization of Korea's society, there is an evident loss of spaces for intimate socialization. Parks and Squares can be hard to spur a spontaneous conversation between strangers, more so between elderly and younger citizens. Loss of nature is evident as well with the urbanization, as demonstrated by parasol Shim Teos that have replaced the trees as the main means of shelter and shading. As there is a rise in the elderly being disconnected from society, there is an urgent need for spaces where they can socialize. The garden is a landscape design project situated in close proximity to the Minami-Machida Station, Japan<sup>4</sup>. The circular garden is placed in the site, along with furniture which allows the public to sit around the tree placed in the middle of the garden, face each other, and socialize. The circular furniture facing the tree allows the users to interact with nature simultaneously while socializing. The closedness of the circular garden bonds the users together with each other as well as with nature. The bonding of the public is critical in densely populated countries such as Japan and Korea, where close-knit communities are scarce. Spurring spontaneous discussions and socialization is important in designing micro public spaces such as Shim Teo. It is not just a place to rest: it is a main source of socialization for many of the elderly. The Shim Teos can be more successful by addressing and encouraging social programs that will take place.

4

"A Garden of Circles," 2019, <https://stgk.jp/EN/projects/minamimachida-the-garden/>.



*Fig. 5.4 The Garden*

### 5.3 Material Study: Straw

Jipul, translated as rice straw, was seen as a potential material to integrate into the new Shim Teo types. Jipul has a rich cultural significance in Korea and occupied a large part of Korean's daily life in a form of rites, clothing, shelter, and household items<sup>5</sup>. There are 5 main reasons for selecting Jipul as a main material for the new Shim Teo designs.

- 1) Jipul is a sustainable and renewable resource. Historically, Jipul crafts at the end of their lifespan were used as an environment-friendly fertilizer to grow more rice or other crops, as physical characteristics of Jipul allow it to be durable and water-resistant without any treatment.
- 2) Jipul crafts are reminiscent of the countryside and nature, and by placing Jipul in areas of the new Shim Teo where the users can physically interact with it, the users are brought closer to nature. It brings the experience of being in the countryside and nature to urban context.
- 3) Jipul craft was typically passed down from generation to generation, from fathers to sons and from mothers to daughters. The painting by Kim Deuk Shin, titled 'Straw Shoes Weaving in Summer', shows three generations participating in a straw weaving craft, under the shadow of a wooden entrance door, sitting on Jipul mats. The oldest generation, the grandfather, is overseeing the father's weaving, while the grandchild is learning the craft secondhand by looking over the grandfather's shoulder. By reviving this craft, it symbolizes the revival looking up to the elderly for wisdom and respect.
- 4) Jipul was the most democratic material used back in Korea's history. It was accessible, abundant, and versatile. Implementing a democratic material to build Shim Teos further symbolizes the democratic nature of these structures.
- 5) The fabrication process of Jipul artifact can be used as an opportunity to spread the knowledge of the craft and culture, and it can also provide entertainment to the elderly. Jipul craft is a highly stimulating activity that can be done individually or in a group, and it provides a place to start socialization and conversation.

As a material that enriched Korean culture, Jipul was studied and experimented with in this section. With restricted access to the Korean Jipul at the time of the preliminary experimentation, more locally available vegetation were instead experimented with. The two vegetations that were chosen are the Common Reed and the Side-Oats Grama, both native to Ontario. The site that these vegetations were collected from is Guildwood Park, located in Scarborough, Ontario. The preparation of these plants was inspired by the traditional ways of prepar-

<sup>5</sup> "Jipul Culture," Korean Museum of Straw and Life, n.d., <http://www.jipul.com/>.



ing Jipul. First, they were soaked in water to make them more tensile. Then, they were rubbed between two hands to form tight, twisted ropes. The ropes were then rolled up to be stored, and before they were used, they were again soaked in water. The two of the most popular Jipul fabric forms are circular and rectangular forms. The rectangular shape is formed by vertically knitting the Jipul ropes, and the circular shape is formed by radially knitting the Jipul ropes. The experiment yielded three observations. First, the crafting of Jipul artifacts is very physical. The rubbing of coarse grass and crouching to knit the ropes take a physical toll on one's body. Secondly, the physical characteristics of the vegetation are crucial. Thin plants are more brittle and required to be soaked in the water longer than thicker plants. The Side-Oats Grama was too thin to have enough tensile strength to create ropes. The pros of these materials are that they dry very fast, and when exposed to outside weather conditions, did not decompose easily. Overall, long grass vegetation is a very versatile material to work with and has great potential to be implemented in the thesis.

With the arrival of the Jipul ordered from Qingdao, China, and Suwon, Korea, proper material experimentation was conducted. Visibly, there are layers to the Jipul. The layers were categorized into three: outside, middle, and inner layers. The weak points of the Jipul are the nodes, therefore before the weaving experimentation, the nodes were either trimmed or soaked in water. Weaved Jipul ropes are cleaner and stronger than Side-Oats Grama ropes and have a beautiful beige shimmer.

Jipul weaving craft was a craft that was kept alive by being passed down between generations, from village elders teaching the youngsters to fathers teaching sons and mothers teaching daughters. By implementing this craft in the Shim Teos, it is symbolizing harmony between the generations, respect for the elderly and the craft of the past, and an exchange of wisdom between the older and the younger generation.



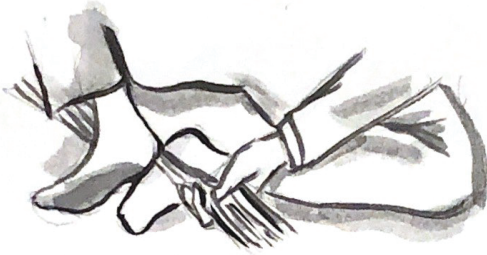
*Fig. 5.5 Jipul thatched roof*

*Fig. 5.6 Jipul raincoat*





*Fig. 5.7 Straw Shoes Weaving in Summer*  
*Fig. 5.8 Sideoats Grama at Guildwood Park*



*Place straw bunch between feet*



*Divide in two*



*Twist with both palms outstretched*



*Pull after twisting to tighten the rope*

*Fig. 5.9 Jipul rope weaving strategy*





*Soak in water*



*Soak the rope in water again*



*Basic starter knot*



*Intersect 3 starter knots and weave radially*



*Intersect starter knots horizontally*



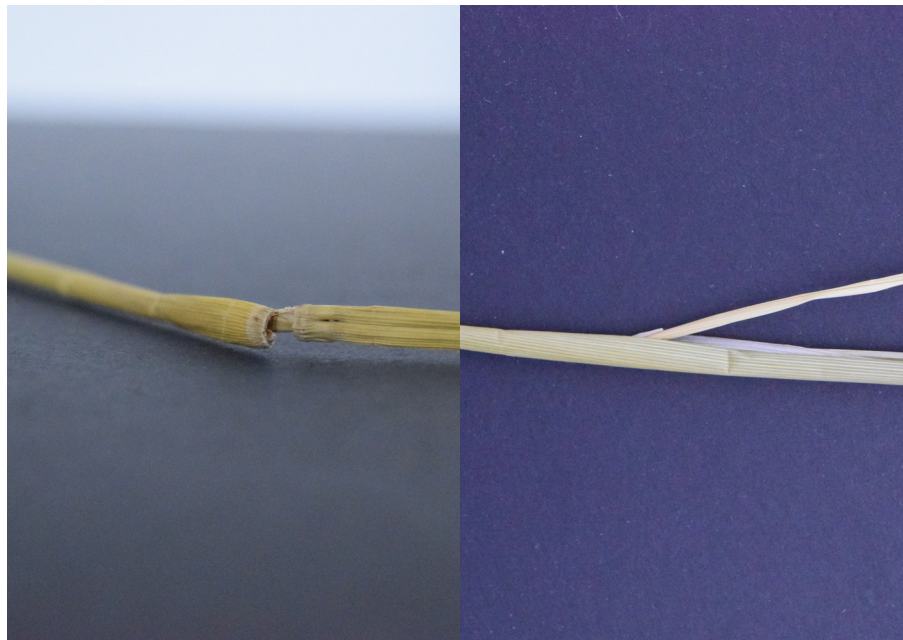
*Weave vertically*

*Fig. 5.10 Sideoats grama experimentation*



*Fig. 5.11 Rice field in Suwon*





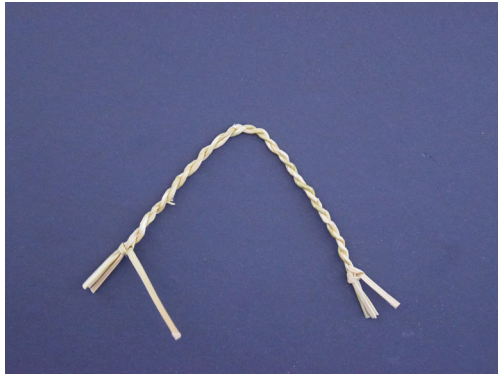
*Fig. 5.12 Outer, middle and inner layers*

*Fig. 5.13 Inner and outer layers*



*Fig. 5.14 Palms before and after weaving*

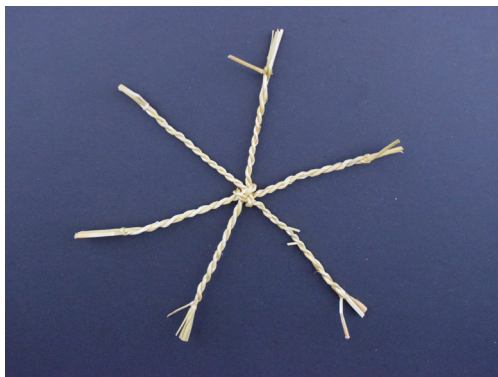




*Fold rope in half*



*Intersect 3 ropes*



*Tighten the ropes by pulling each ends until there is no gap*



*Place weaving jipul under one strand and weave and twist around the strand*

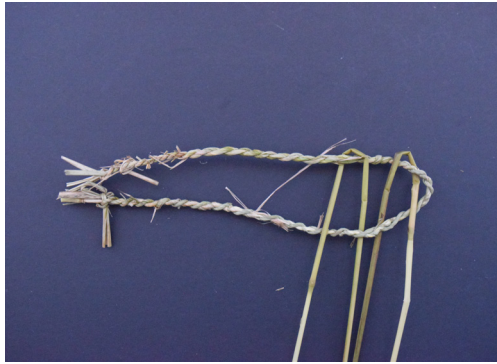


*Wrap and twist the other strand*

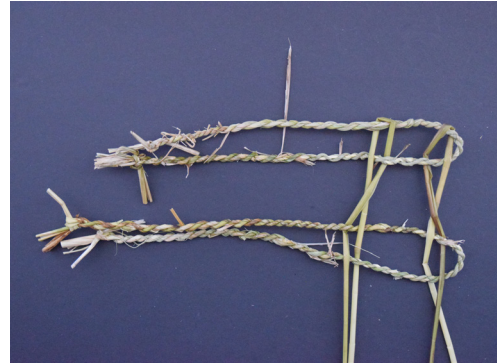


*Continue and link more weaving jipul when needed*

*Fig. 5.15 Circular form weaving s strategy*



*Fold Jipul rope in half and weave two strands of Jipul around it*



*Weave another Jipul Rope*



*Add more Jipul ropes until desired length is achieved. Tighten the weave*



*Tie the ends of the leftover strands of Jipul*



*Fold the strands of Jipul over to the same side as the ropes and interlock more Jipul Strands*



*Keep adding Jipul strands until desired length is achieved*

*Fig. 5.16 Mung-Suk (Jipul mat) weaving strategy*





*Place the weaving Jipul over the connection Jipul in X shape*



*Twist and wrap the connection Jipul around the weaving Jipul*



*Place another bunch of the weaving Jipul over the weaving Jipul*



*Twist and wrap again*



*Keep adding bunches of weaving Jipul until desired length is reached*



*Close up of the connection*

*Fig. 5.17 E-Ung (thatched roof) weaving strategy*

## 5.4 Design Guide: Site Conditions

The new Shim Teo types will be compatible with seven different site conditions of distinct characteristics. Instead of identifying a specific, real-life site in Korea, by identifying and analyzing different urban conditions, the new Shim Teos will be able to be placed in various locations. The new Shim Teos will be loosely designed to be compatible with many sites as possible, which will make them more accessible to the elderly. Shim Teos accommodating specific site conditions are important but increasing accessibility of the Shim Teos for a demographic with physical and financial constraints is more prioritized. The seven identified site conditions are: Pedestrian Crossing, Traffic Island, Urban Oasis/Forest, Streetside, Square/Plaza, Pockets, and Underpass.

### Pedestrian Crossing

Pedestrian Crossing is a path designated for pedestrians to cross that would otherwise be unsafe without assistance. The width and the length of the crossing are directly influenced by the road. There are many types of pedestrian crossings in Korea, such as informal crossing which is a crossing without traffic lights or signals, crossing with audio and visual signals and crossing accommodating both cyclists and pedestrians. The time it takes for the traffic light to change is dependent on the traffic flow and the length of the crossing. For long pedestrian crossing located in a heavy traffic zone requires seating elements for the elderly to shelter/rest on, and for a pedestrian crossing in a short, low-traffic zone, only a sheltering element is required.





*Fig. 5.18 Pedestrian crossing in Seoul*



*Fig. 5.19 Pedestrian crossing in Sorae*

## Traffic Island

A traffic island is an area located in the middle of a road in order to guide traffic and provide resting space for pedestrians crossing the road. They are typically raised and made of concrete. Traffic islands connect pedestrian paths between extremely heavy traffic roads. Both sheltering and resting elements are needed for a comfortable experience for the elderly crossing the traffic island.



*Fig. 5.20 Traffic island in Suwon*



### Urban Oasis/forest

Urban Oasis typically refers to landscaped man-made parks/green spaces located in an urban setting. Peace Park in Mapo, Seoul is an example of an Urban Oasis/Urban Forest. The size of the urban oasis varies, from a small patch of the landscaped area to a full-scale park. Types of Shim Teo needed for this space is related to the size of the oasis, as the size of the oasis dictates what types of activities can take place, and the intention of the oasis. Due to the heavy foot traffic, services and programs geared towards visitors, such as convenience stores and shareable food restaurants are present in close proximity to the urban oasis.



*Fig. 5.21 Seoul botanical garden*

## Streetside

Streetside refers to the sides of the pedestrian street that is often left empty/less traffic due to the flow of human traffic directed toward the centre of the street. People have taken advantage of the constant heavy foot traffic and the streetside is commonly used to host small street vendors and food stalls. The best example of this instance would be the advanced street food/vendor culture in Korea. In order to design for this site, one needs to understand that in Korean culture, the streetside is not just for circulation.



*Fig. 5.22 Street vendor along 13-World Cup Rd, Seoul*





*Fig. 5.23 Street vendor along 13-World Cup Rd, Seoul*



*Fig. 5.24 Street food cart beside Sincheon Station*

## Square/Plaza

Square/plazas are extremely common in Korea's urban setting. The use and purpose of a square are very similar to those in western culture: to host events, community gatherings, protests, or just a zoning requirement for high-rise buildings. They can be completely paved or have landscaped elements embedded in them. Large open space is not ideal for spontaneous socialization to occur. In order to design Shim Teo for this condition, one needs to provide a more contained space that draws people into a more structured and programmed space.



*Fig. 5.25 Demonstration outside Suwon Terminal*



## Pockets

Pocket refers to empty patch of land in urban/suburban setting, typically beside a pedestrian streetside. Many are left empty intentionally, to provide a place for small gatherings, or to place Shim Teos. Even though there is no specific government designation of programs in pockets, the public has claimed them and often one can see tents erected or a group of elderly sitting in circles socializing.



*Fig. 5.26 Shim Teo being erected in pocket in Seoul*





*Fig. 5.27 Man resting in a Shim Teo placed in a pocket*

## Underpass

Underpasses refer to spaces right below a bridge. The wind tunnel effect that takes place in underpass as well as being well shaded makes it ideal for people to use it under during the hot summer. Many underpasses are being developed into Shim Teos, with exercise equipment, painted walls and paved ground. This development is relatively new, as historically underpasses are tied to homelessness and thus not a desirable place for socialization. With modern development, the underpass has evolved into a space that is comfortable and social.



*Fig. 5.28 Exercise equipment in underpass*





*Fig. 5.29 Pet park in underpass*  
*Fig. 5.30 Exercise park in underpass*



*Fig. 5.31 Bench Shim Teos in underpass*

*Fig. 5.32 Socialization in underpass*



## 5.5 Design Theory: Sit to Stand Transfer

Sit to Stand Transfer refers to movement from sitting to standing, or vice versa<sup>6</sup>. This is the key physical task performed by the elderly when using Shim Teos. The seat height and size, and the components of the seat such as the backrest and the armrest are crucial in the STS movements, as they help stabilize the elderly when they are either rising or sitting. The higher the seat height, the less movement the elderly's knees and hips need to make to perform the STS, therefore more comfortable and attractive the higher seat will be to the elderly. Even though higher seats require less energy, if the seats are too high, then the seats become too uncomfortable as the feet won't be able to stably rest on the ground. There is also a risk of falling from the seat. The key to the comfortable seating for the elderly is to find a height that will have minimum STS distance. Observed through commercial models of the elderly bath chair available in Korea, many have a minimum seat height between 41cm to 46cm, and a maximum height between 54cm and 58cm. This is higher than height of a regular bench which is around 45.72cm ~50.8cm. The bath chairs all feature armrests and backrests, for the elderly to guide themselves onto the chair with ease with minimum assistance from the caregiver, or none.

## 5.6 Design Theory: Body Measurements

It is important that the new Shim Teo types address the physical characteristics of the demographic they are designed for, the people over the age group of 60. The height is studied to shrink as a person ages, therefore the elderly are observed to be typically smaller than the rest of Korea. The Sit to Stand Transfer Theory further highlighted the importance of the appropriate height of a seating element for the elderly. The Ministry of Commerce, Industry and Energy have created an online database of the average body parts dimensions of Koreans, categorized by age and gender. Figures 5.33 and 5.34 show the average body measurements of men in the age group 60s and women in the age group 60s.

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<sup>6</sup> Alethea Blackler et al., "Seating in Aged Care: Physical Fit, Independence and Comfort," *SAGE Open Medicine* 6 (January 1, 2018): 205031211774492, <https://doi.org/10.1177/2050312117744925>.

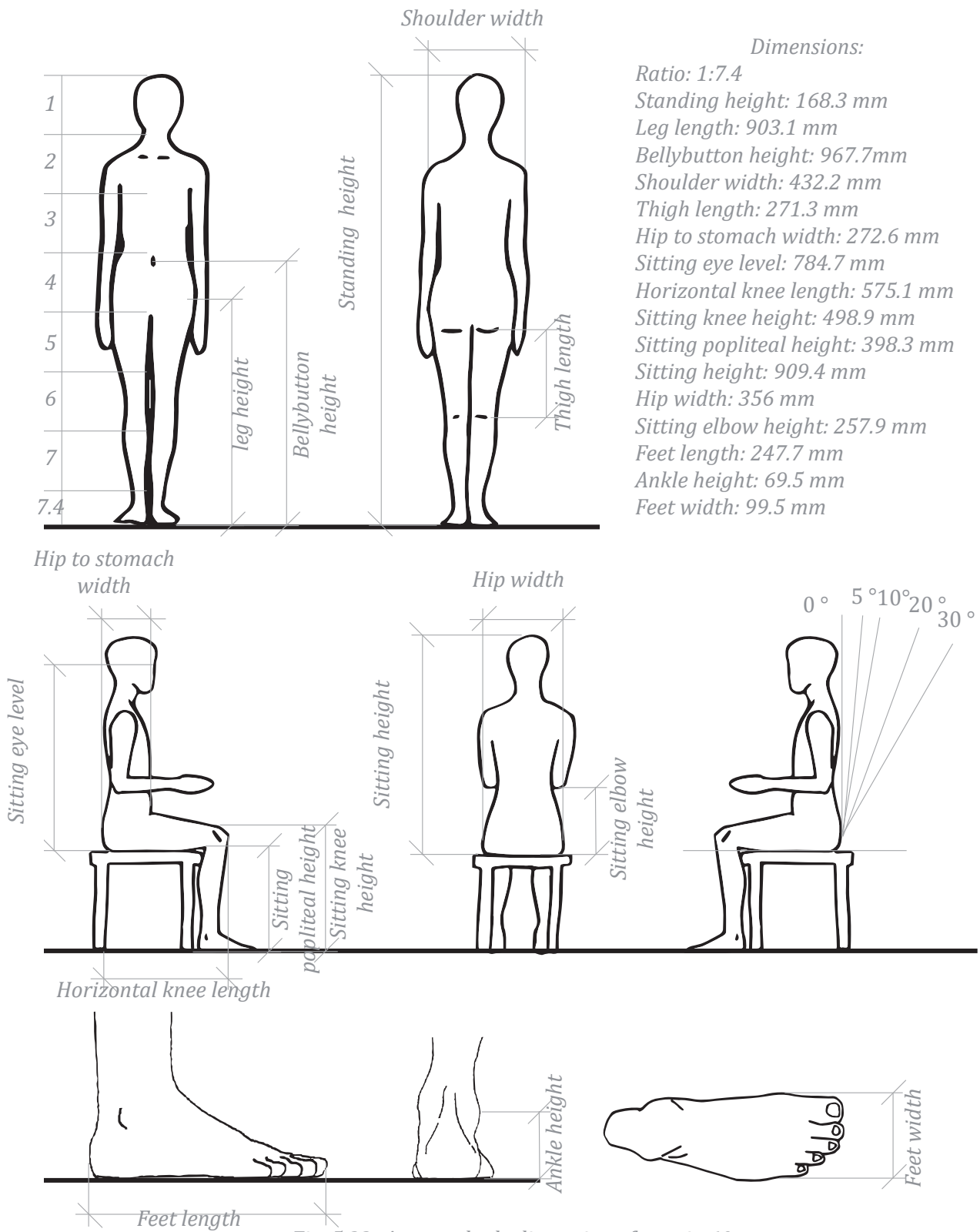


Fig. 5.33 Average body dimension of men in 60s

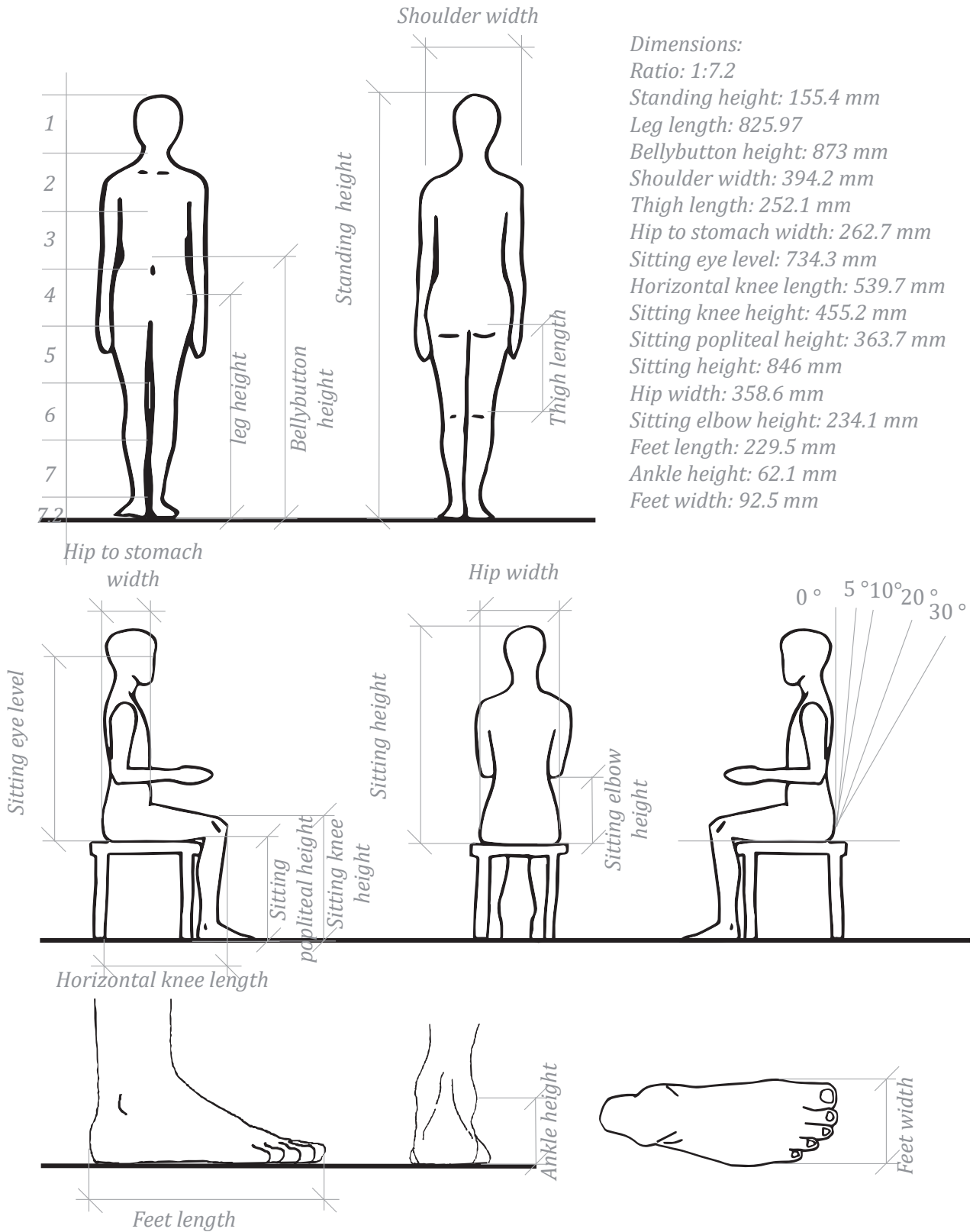


Fig. 5.34 Average body dimension of women in 60s

### Design 1: Street Side + Pedestrian Crossing

Street Side is perhaps the most vibrant site out of all. It is very versatile, such that it can host almost all activities and is purely a space of freedom and socialization. Due to the fact that the street side is a very social zone, it is important for the Shim Teo placed to also accommodate other demographics as well. Pedestrian Crossing also provides opportunities for people waiting for the street sign to socialize. By taking advantage of the naturally occurring zones of the congregation, Shim Teo can draw people together. Programs related to the act of rest and socialization will be prioritized when designing the street side and pedestrian crossing Shim Teo. Due to the linear form of most street side, this new Shim Teo is also linear. Seating blocks of different heights will be arranged in a linear form, with a wheelchair-accessible table in the centre. There is a wooden screen on the side that faces the traffic, which will shield the occupants from the cars without completely obscuring the views in case they have to watch for the traffic light. There is also a shading element in a form of a Jipul mat, which starts on the ground as an ode to the Jipul mat Shim Teo of the past and is draped over the wooden beams connected to the wooden screen. This symbolizes the evolution of Shim Teo throughout the history of Korea. Jipul mat is also a great choice for a shading material, as it is lightweight, water-resistant when weaved properly and sustainable.

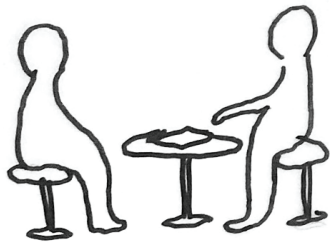




*Flea Market*



*Street Food*



*Boardgame/Socialization*



*Rest*



*Wait for Transportation/  
Event*

*Fig. 5.35 Artifacts and actions of the streetside*

# 수평심터

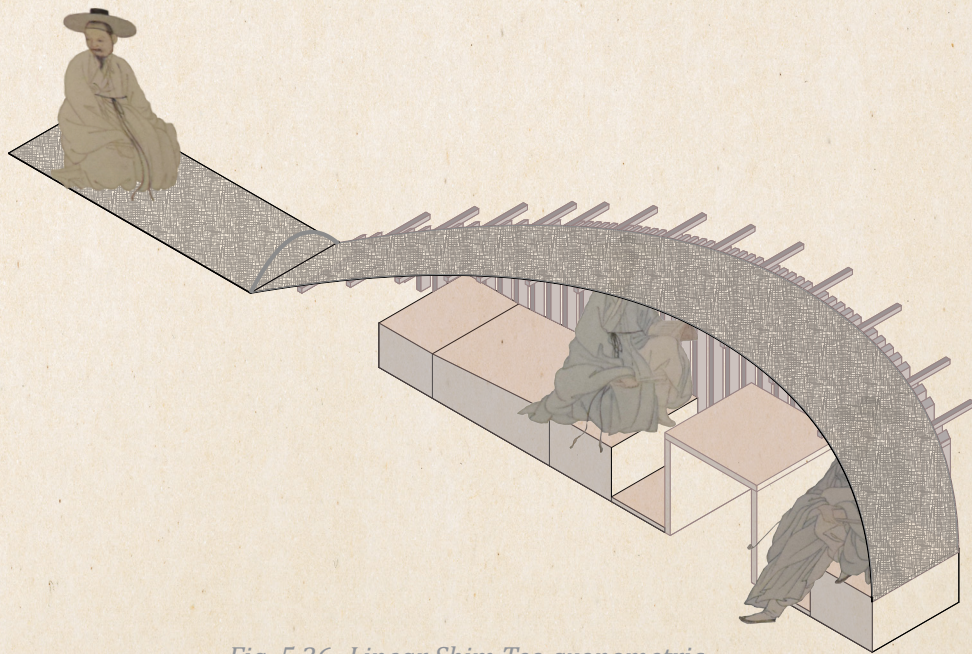
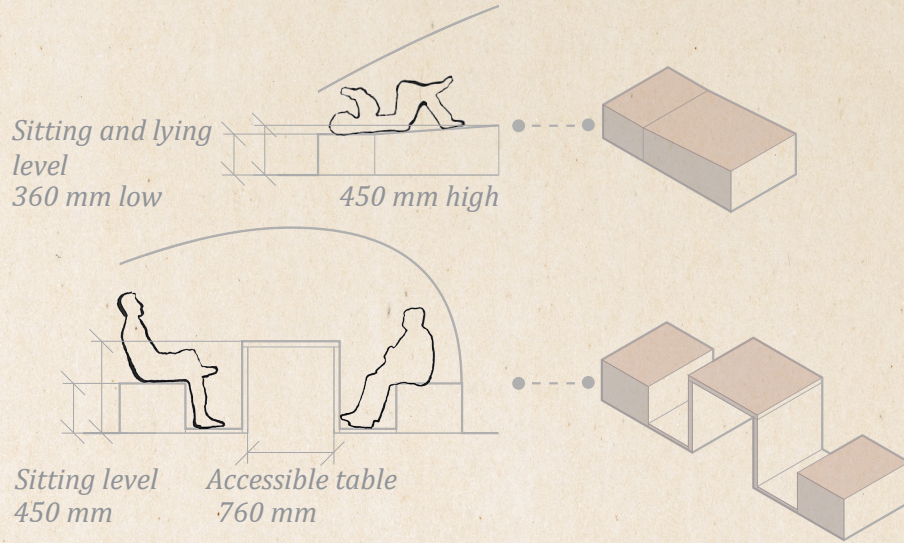


Fig. 5.36 Linear Shim Teo axonometric



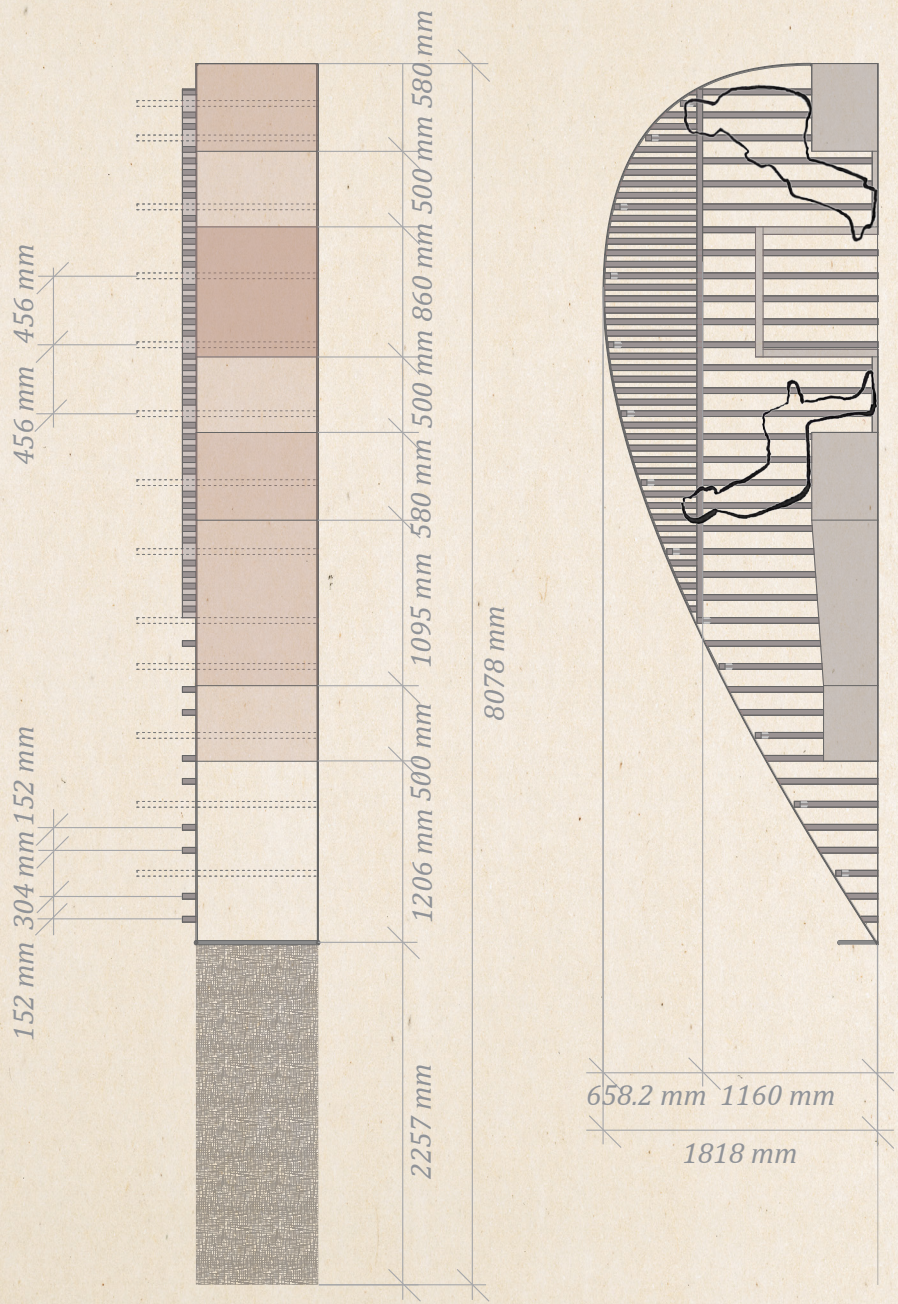


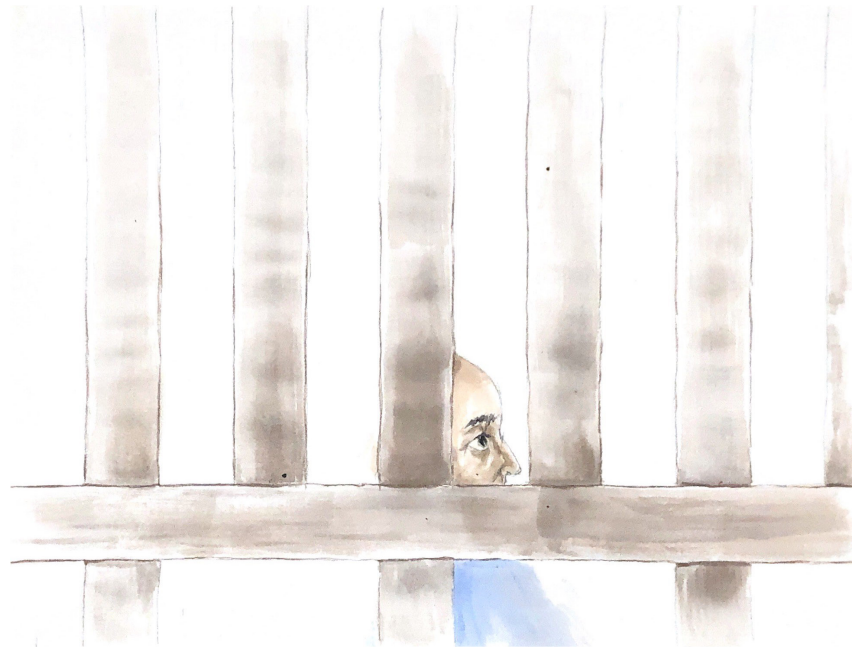
Fig. 5.37 Linear Shim Teo plan and elevation

1m

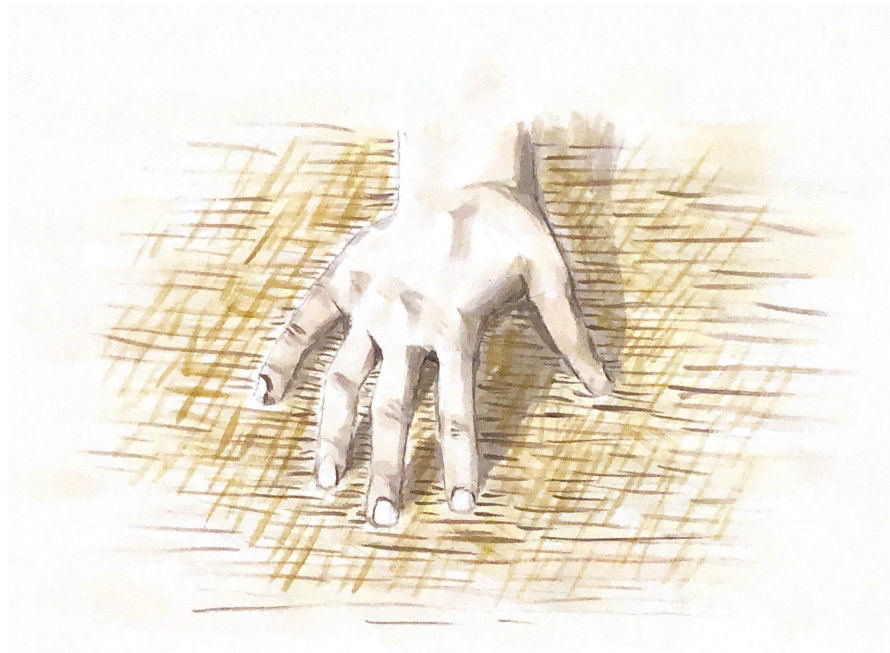


*Fig. 5.38 Linear Shim Teo 1:25 model*





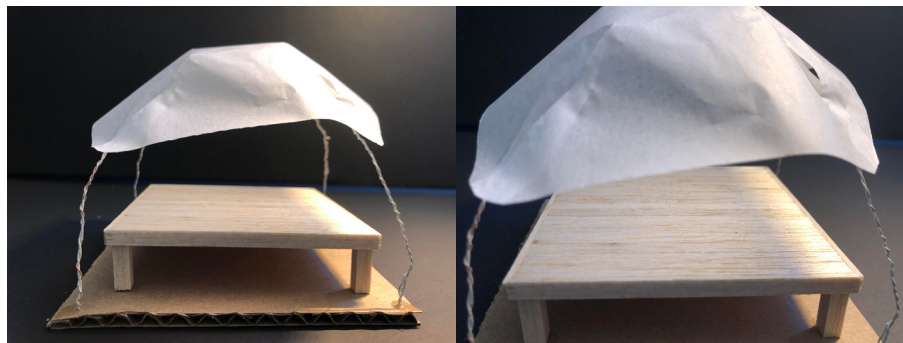
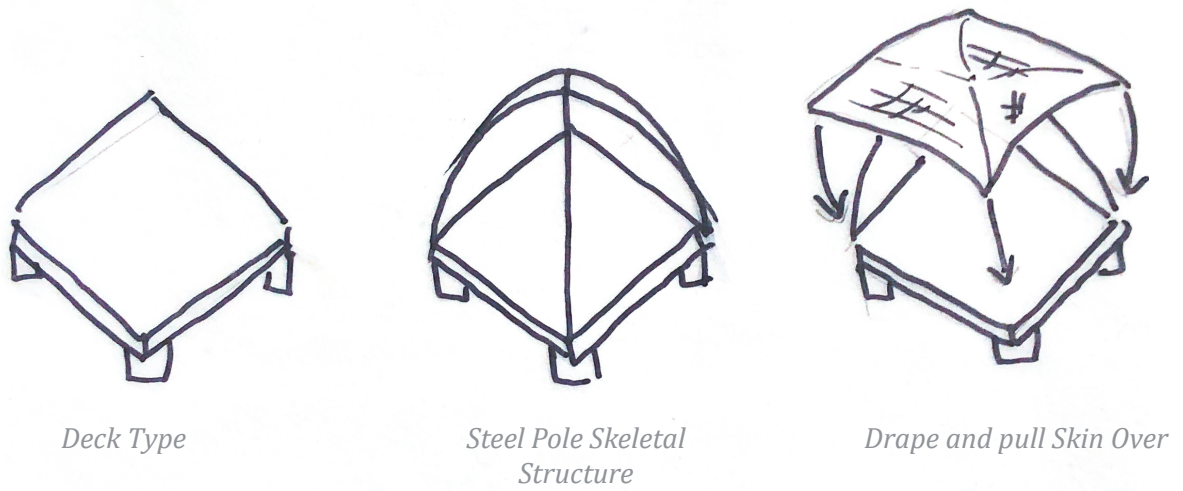
*Fig. 5.39 Eye level sitting down*



*Fig. 5.40 On the mat*

## Design 2: Urban Oasis + Underpass

The final proposed Shim Teo will be designed to directly interact with nature as well as Korean culture. This addition to the traditional deck type will fully embrace the material Jipul, which has followed the history of Korea, from the bronze age to the 21<sup>st</sup> century. The deck type will be fully covered with a layer of skin made from rice straw, to give privacy to the occupants. The skin will be supported and attached to four thin steel poles, similar to tent poles. The skin made from Jipul will be draped over freely, allowing it to provide four openings of different heights. These openings on each side of the deck will provide cross-ventilation, a window to the outside, and will invite people in. The style of weavings used will be the traditional mat weaving, similar to knitting a scarf, as well as weaving of Jipul thatched roof. Tightly weaved Jipul, and the physical properties of Jipul itself, will provide strong water resistance, with lightweight texture and atmosphere. This Shim Teo will push the limit of the material straw and integrate it into a more urban and contemporary context. It is recommended that this Shim Teo will be placed directly in parks, such as at Urban Oasis, for the full experience.



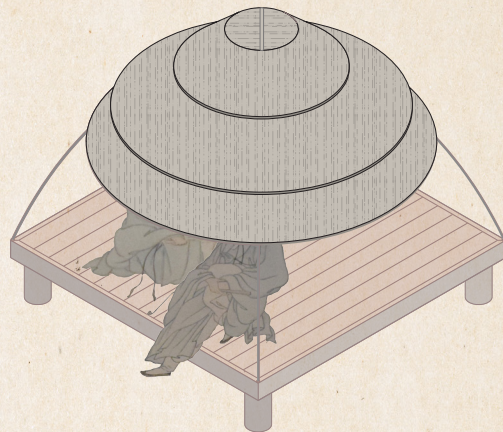
*Fig. 5.41 Design diagrams*



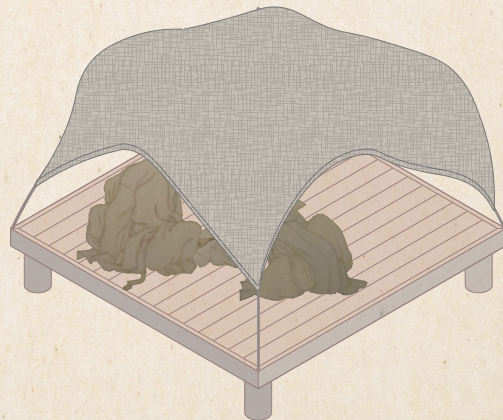
# 정자쉼터



*Jipul thatched roof*



*Jipul mung-suk roof*



*Fig. 5.42 Deck Shim Teo axonometric*



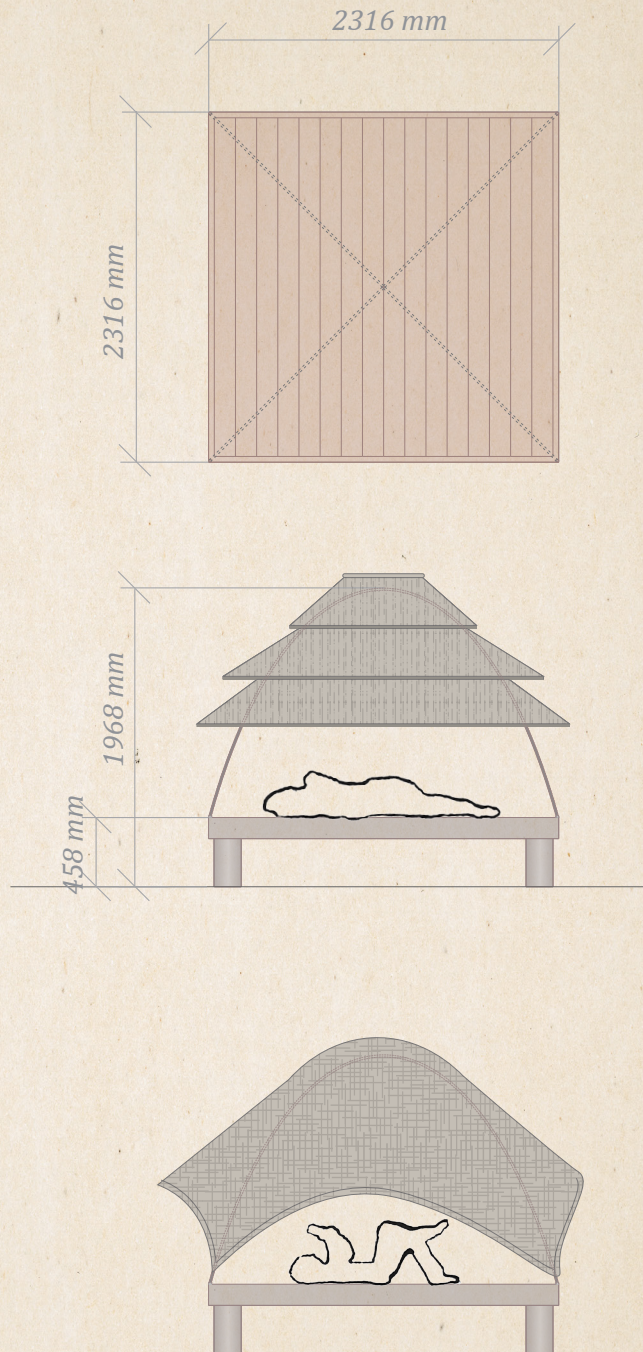


Fig. 5.43 Deck Shim Teo plan and elevations

1m



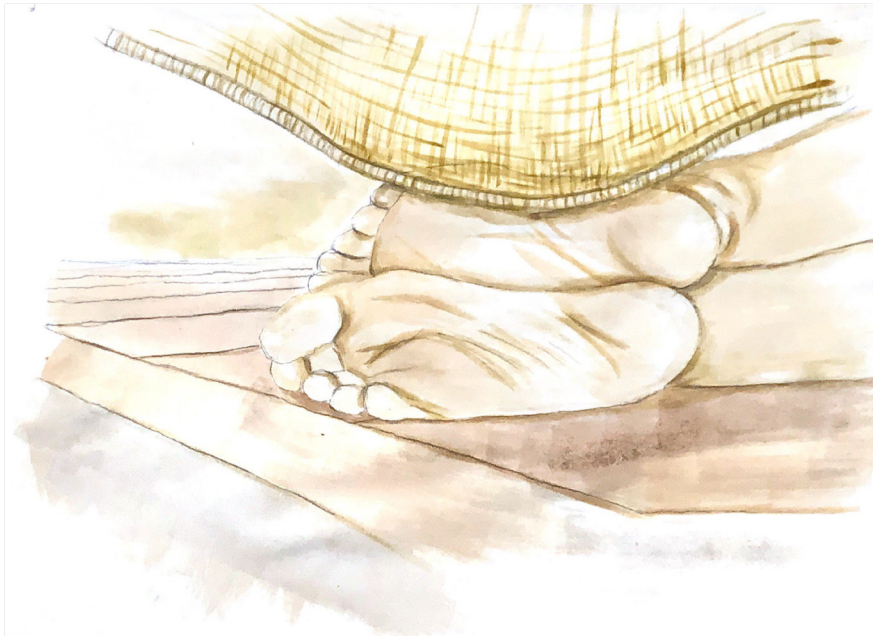


*Fig. 5.44 1:25 Thatched roof model*



*Fig. 5.45 Rectangular roof model*





*Fig. 5.46 Rectangular Jipul weaving pattern*



*Fig. 5.47 Thatched roof Jipul weaving pattern*

### 5.7 Design 3: Urban Oasis+ Pocket+ Square+ Traffic Island

These sites are ideal for conversation and socialization. They are typically large enough to host a congregation and located in already bustling and high-traffic zones. These are the destinations that the elderly seek out when they want to connect with their friends, family, and the rest of society. Providing a socially comfortable place is crucial to the success of the Shim Teos at these sites. Conversations are typically carried out with the participants facing each other, either in linear one-by-one conversation or in a group circular formation. Incorporating an element of 'rest', i.e. a tree, will provide a connection to nature and provide a lush shelter to the users. Trees symbolic of Korean culture and sensitive to seasons such as En-Hang (ginkgo) are recommended as the centrepiece. Surrounding the tree will be a raised platform with circular seaters of different heights wrapping around the platform. These circular seats will give the Shim Teo a theatrical element which will draw people into the Shim Teo and emphasize the Tree as the centrepiece of the Shim Teo. The heights of the platforms will take into consideration the STS principal, for easy transfer from the streets to the Shim Teo. Providing a comfortable space to socialize is also important, and there is a shading element integrated into this Shim Teo. Light PVC fabric will be draped over the wooden roof, supported by four columns placed in the exterior ring of the Shim Teo. There is an opening right above the tree which will allow the tree to branch out and integrate the tree into the Shim Teo even more. The opening, right above the interior ring, will allow the occupants to experience the 24 micro seasons, such as watching the leaves turn yellow during Ipchu, feeling the touch of falling leaves during Sanggang, and feeling the raindrops during Usu.



*Entertainment*



*Rest*



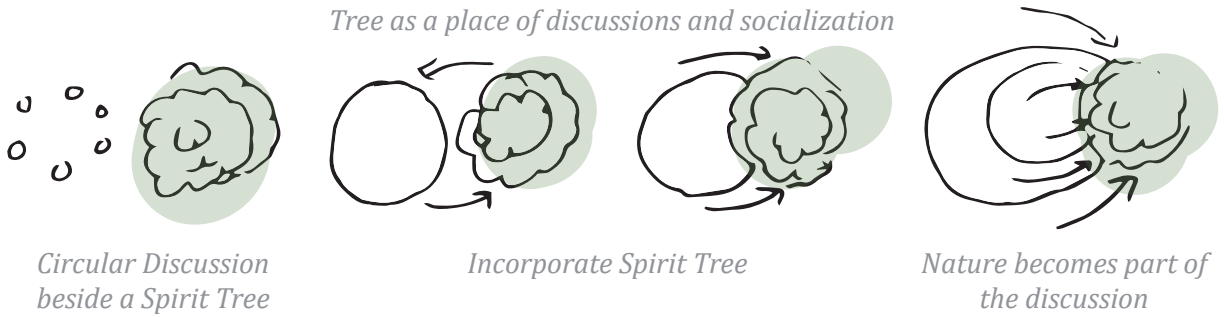
*Conversation*



*Worship*

*Fig. 5.48 Tree as a program diagram*





*Circulation: Tree as a drawing force*



*Circular cut in the ceiling to become a portal of nteraction with the seasons*



*Rain Garden during Usu*

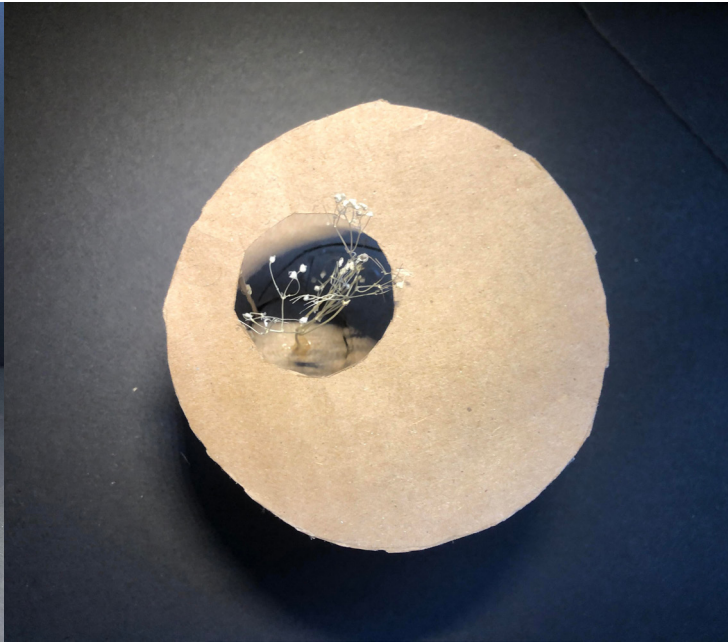


*Fall Foliage during Sanggang*

*Fig. 5.49 Different program diagrams*



Fig. 5.50 Part



*ti model ideas*



# 원형 심토 터

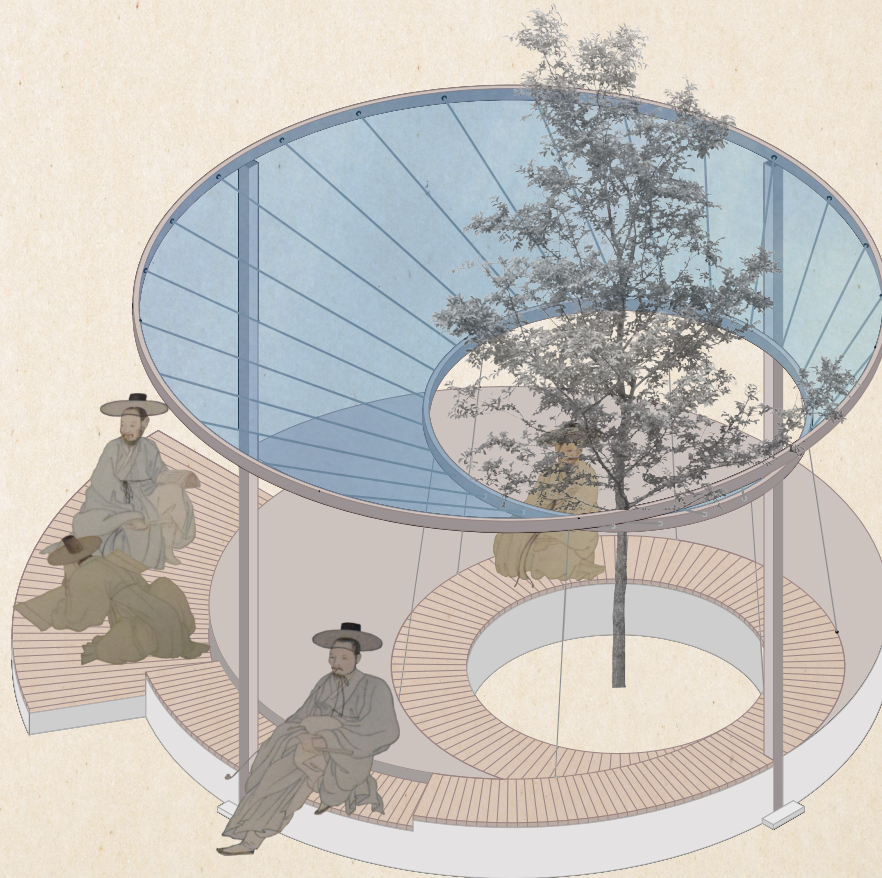
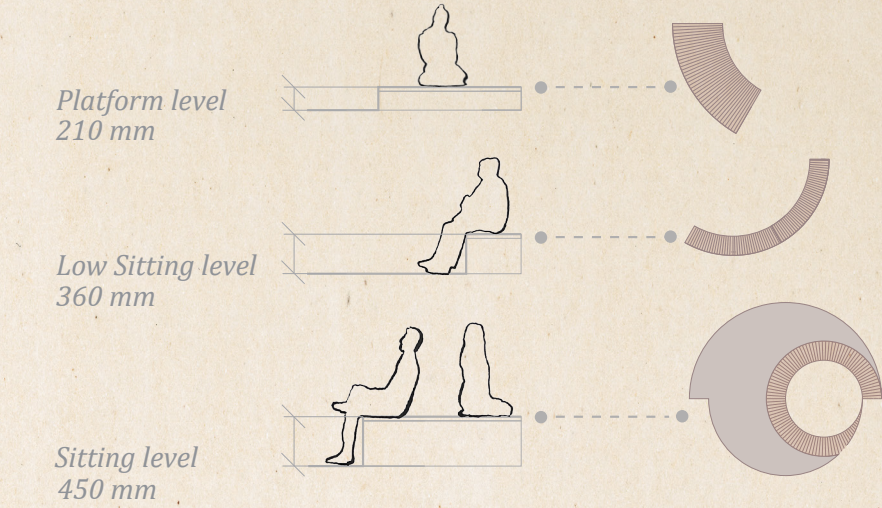


Fig. 5.51 Circular Shim Teo axonometric



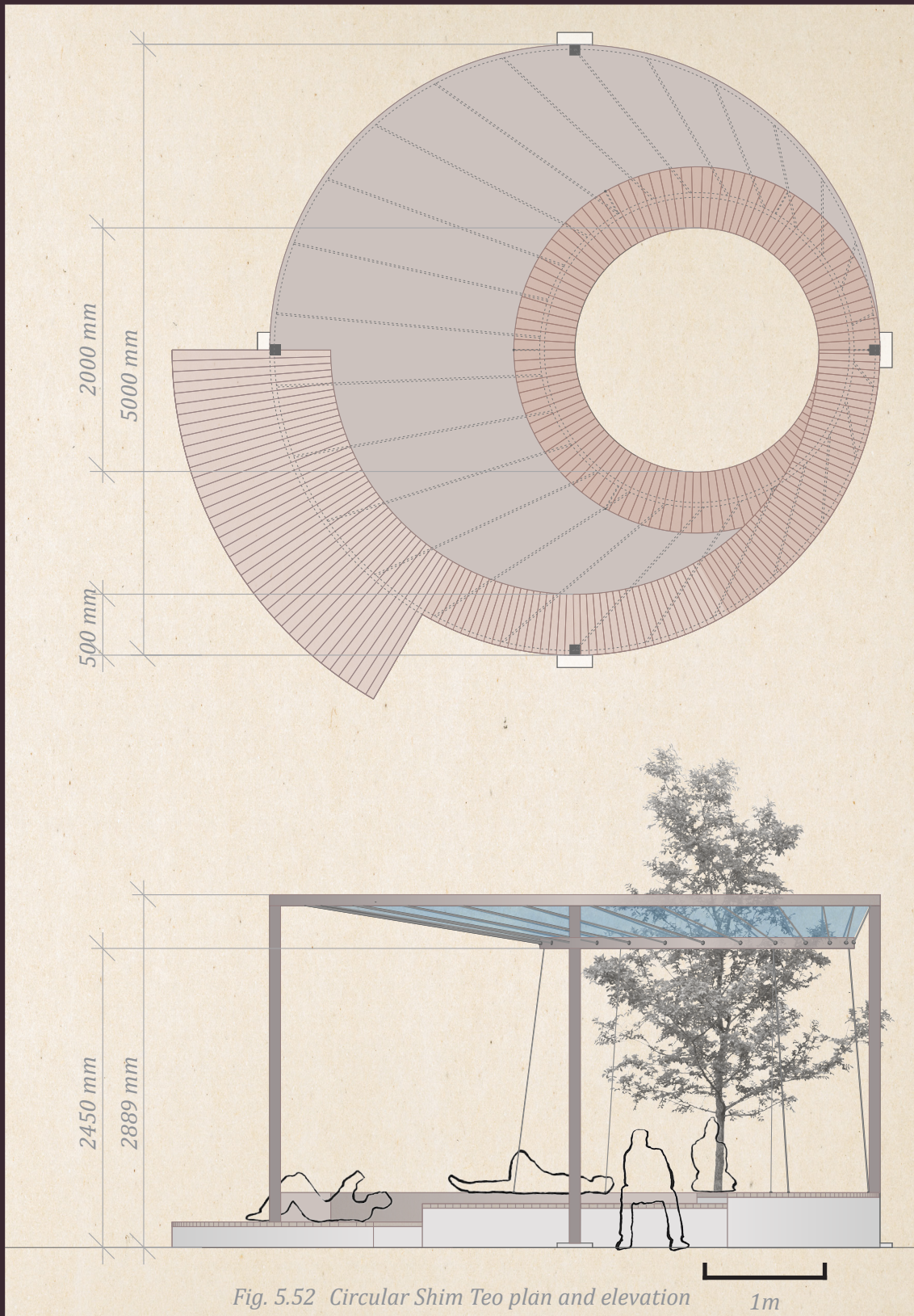
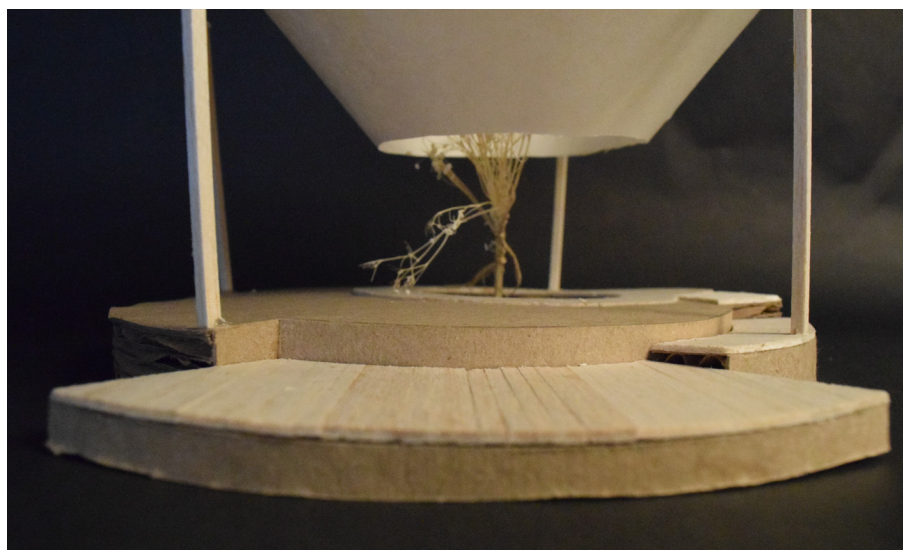
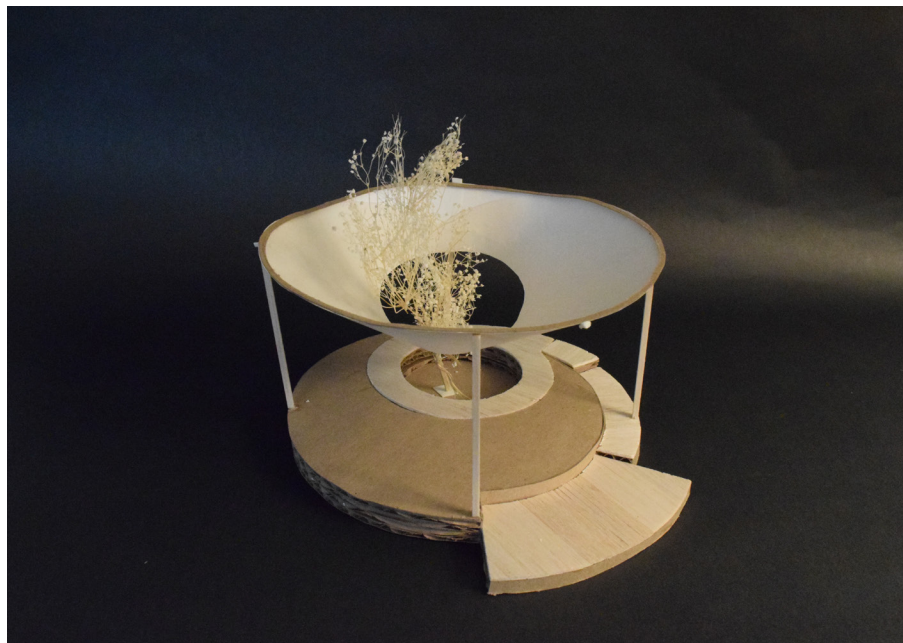


Fig. 5.52 Circular Shim Teo plan and elevation 1m



*Fig. 5.53 Circular Shim Teo 1:25 model*





*Fig. 5.54 Looking up to a ginko tree on Ipchun*

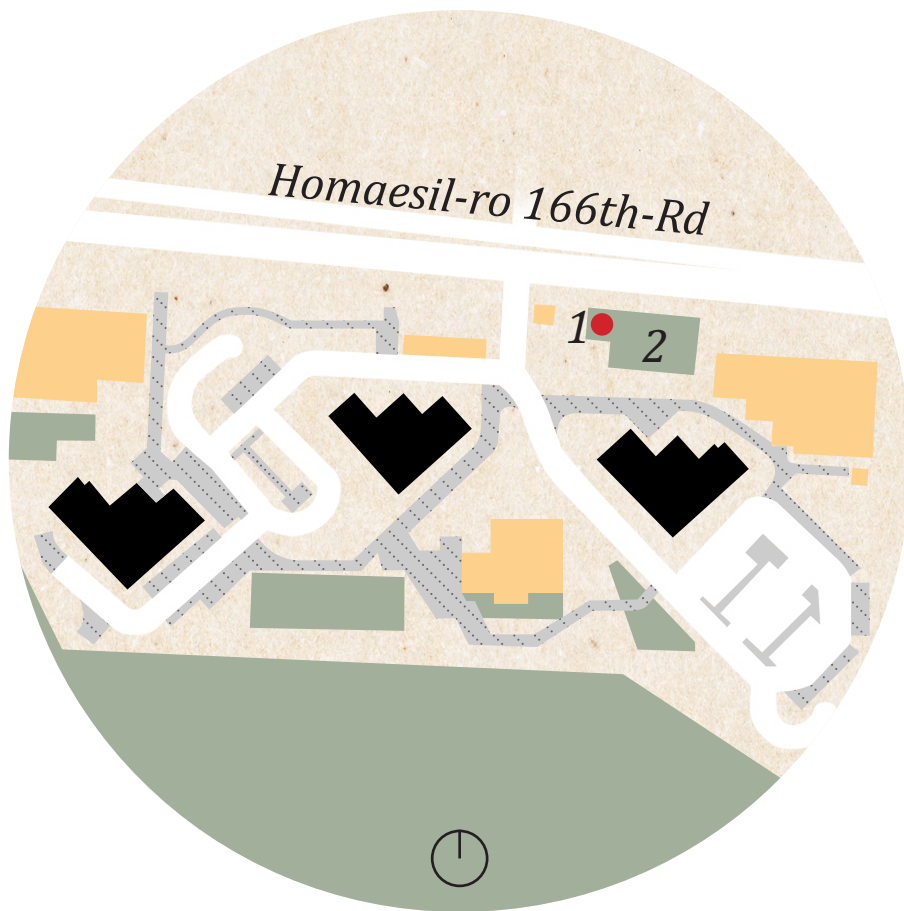


*Fig. 5.55 Lowest platform*





## *Epilogue*



*Legend*

- 1. Circular Shim Teo Location*
- 2. Outdoor Exercise Equipment Zone 3*

*Fig. 5.56 Circular Shim Teo Location at Neungsil Village apartment complex 22*



### Jungbok (July 21<sup>st</sup>)

I wake up from the heat. It is only 5:00 a.m. and the sun is still not fully up, but the humidity makes it hard for me to breathe. I unstick myself off from the bed and turn the fan on. The fan blows hot air.

I skip breakfast. I am too tired to cook and eat.

I decide to head to the circular shim teo, which recently replaced the sheltered bench shim teo, to try to catch some morning breeze outside. Public transit or banks are cooler due to air conditioners, but I don't have the energy to make the trip. I put on my shirt, shorts, and three-line slippers and leave the apartment.

Walking in the heat is painful, and I take a break on an unsheltered



bench on the way to rest my legs. It takes me 3 min, including the break, to reach the shim teo.

I see a couple of people already occupying the shim teo. They're asleep. I can't tell whether they spent the night there or joined in the morning.

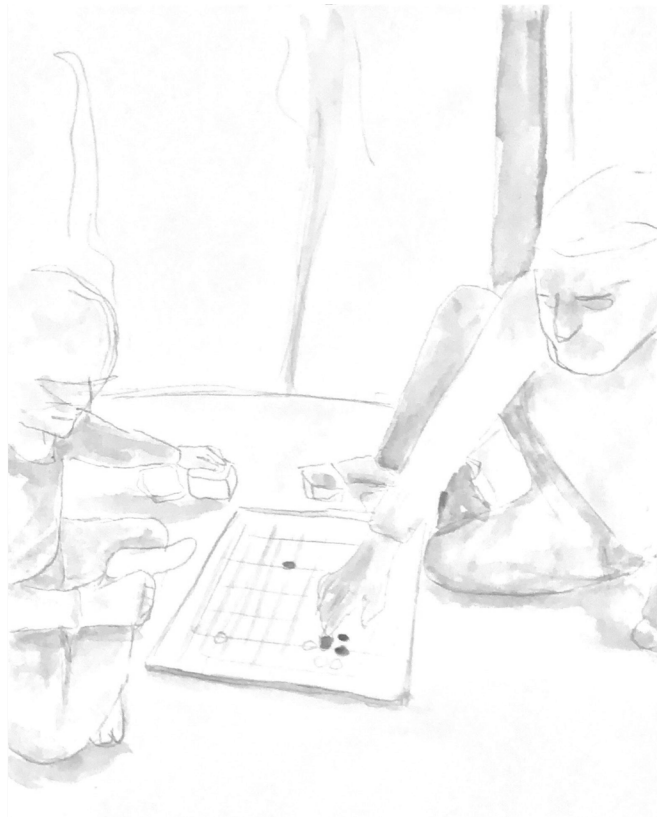
I take off my slippers and climb on to the top platform, in silence.



Everyone is suffering from the heat and are in no condition to make small talk.

As the sun rises, the people on the lower platform that is not sheltered by the roof move on to the upper platform. A woman, worker from the community centre in the apartment complex arrives and starts handing out bottles of frozen barley tea and rice crackers. I eat them for breakfast.

A group of people arrive to the shim teo carrying Janggi and Baduk games. As they set up on the upper platform, I, along with some of the now-awake people on the platform gather around to watch. The matches are \$20 a round since wagering more will be considered as gambling. The match sparks conversations between the people, and I start talking to a man in the 70s about different strategies to play during a Baduk match. The matches and congregation sparks curiosity



of passersby, and some gathers around the shim teo to see the match. A woman in her 70s, witnessing a young curious boy lingering around the shim teo with his parents, decides to teach him how to play Baduk. They play slowly, with the woman explaining the rules.

The match and the conversations make me hungry, and I, with couple of people, head over to the convenience store 3 min away to buy lunch.

We drink cold barely tea while walking. I buy corn porridge, kimbap, hardboiled egg and a cup of ice. We head back to the shim teo to share





our food with the players and the bystanders.

As the sun starts to drop down the horizon, I, along with few other elderly residents, decide to sleep on the shim teo instead of heading back. The sound of cicadas, rustling of leaves and soft snoring of a neighbour help to sleep, as I no longer feel alone.



## *Conclusion*

## 6. Conclusion and an Afterthought

Shim Teo is an artifact of the past that reflects the social values and evolution of public space in Korean society. Studying Shim Teo and the associated cultural history can help better understand the roles and functions of the public space of Korea. The main problem that this thesis addresses is the lack of accessible public space designed for the elderly, a demographic projected to become the majority in the future. It argues that Shim Teo has a high potential to become a micro public space that will connect the elderly to society when understood and designed properly.

Korea's cultural and political history is reflected heavily in its development of public space. The earliest form of public square was a space shared democratically between the villagers, who conducted major tasks at the public square. This blurred line between public and private space seeped into the development of more modern public space such as Shim Teos. The idea of co-existence and co-dependency is different than in the West, where individuality and privacy is prevalent in its public and private space, such as in hostile architecture. This thesis explores different forms of public space in Korea and draws relationships between private and public space of Korea, public space and nature, and Shim Teo and nature.

This thesis explores the elderly and their dependency upon Shim Teo as a place to socialize as the main reason for researching and proposing new Shim Teo designs. The elderly in Korea can be seen as one of the most vulnerable groups of the populace, due to their physical and financial constraints and vulnerability to the technological advances of the society. Understanding their socialization patterns and physical restraints can give an insight into their needs, thus giving information to develop new Shim Teos. Along with this research, the problem of heatwaves affecting Korea's most vulnerable citizens was researched. The elderly is the most vulnerable group during the heatwave, due to their physical limitations and high rate of poverty which make them unable to take active precautions. This research highlights the importance of accessible, comfortable, and sheltered public space, as they are one of the only places that the elderly depend on during the heatwave.

This context research shed insight on the limitations of the current Shim Teos and ideas to develop new Shim Teo designs. The current Shim Teo is seen more as urban furniture to populate empty plot of land or can only accommodate singular dimension of activities. Their forms also don't maximize the benefit of the sites they're placed on. The design proposals for three new Shim Teo types embody the research findings and the earlier investigations for the evolution of public space through various historical artifacts. The designs of the new Shim Teos can be applied to any urban sites in Korea, by themselves or reimaged and rearranged in a different way. The proposed three Shim Teos are precedents to the Shim Teos that are to be built in the future. They highlight the social and urban conditions of different parts of Korea's metropolis while emphasizing the needs of the elderly. They are a guideline which has summarized

the research and field works of this thesis. As past pillars and current wisdom of the society, the elders are crucial members of the society and need to be respected and accommodated. Democratic design practice is not only enjoyed by all the demographics, but also accommodates the most vulnerable.

While visiting Korea for two months in 2020, at the height of the pandemic, I was stunned to see the number of elderly that would populate the closed off Shim Teos in order to socialize with their friends. This made me realize that mental health is as important, if not more, as physical health, and the importance of public space to the vulnerable population. I hope that this thesis can emphasize the massive potential of Shim Teos and bring back the lost cultural practices that make Korean culture what it is today.



## Bibliography

- "2019 Suicide Prevention Paper." Ministry of Health & Welfare Korea Suicide Prevention Center, 2019. [http://www.mohw.go.kr/upload/viewer/skin/doc.html?fn=1560220081482\\_20190611112804.pdf&rs=/upload/viewer/result/202211/](http://www.mohw.go.kr/upload/viewer/skin/doc.html?fn=1560220081482_20190611112804.pdf&rs=/upload/viewer/result/202211/).
- "A Garden of Circles," 2019. <https://stgk.jp/EN/projects/minamimachi-da-the-garden/>.
- Cultural Heritage Administration. "Archaeological Site in Samyang-Dong, Jeju," 2006. [http://english.cha.go.kr/chaen/search/selectGeneralSearchDetail.do;jsessionId=TV1op3qT9QqiTwxFqdWoGU3VU8AEQbY77X8FtSBH3Vo-pC71E4jmmWCTYkRlBgnyY.cha-was01\\_servlet\\_engine4?mn=EN\\_02\\_02&sCcebKdcd=13&ccebAsno=04160000&sCcebCtcd=50&pageIndex=38&region=&ca-nAsset=&ccebPcd1=&searchWrd=&startNum=&endNum=&stCcebAsdt=&enCcebAsdt=&canceled=&ccebKdcd=13&ccebCtcd=](http://english.cha.go.kr/chaen/search/selectGeneralSearchDetail.do;jsessionId=TV1op3qT9QqiTwxFqdWoGU3VU8AEQbY77X8FtSBH3Vo-pC71E4jmmWCTYkRlBgnyY.cha-was01_servlet_engine4?mn=EN_02_02&sCcebKdcd=13&ccebAsno=04160000&sCcebCtcd=50&pageIndex=38&region=&ca-nAsset=&ccebPcd1=&searchWrd=&startNum=&endNum=&stCcebAsdt=&enCcebAsdt=&canceled=&ccebKdcd=13&ccebCtcd=).
- Bae, Do Sick. "Joo Mak." In *Encyclopedia of Korean Culture*, n.d. <http://encykorea.aks.ac.kr/Contents/Item/E0053227>.
- Bae, Sung Ho. "A playground for the elderly should be accessible to those with reduced mobility." *Baek Sae Si Dae*, 2021. <http://www.100ssd.co.kr/news/articleView.html?idxno=80161>.
- Bang, Jun Suk. "Consideration in the 100-Year-Old Age: The Conditions and Responses of the Elderly Living Alone." *The Yakup News*, 2021. <https://www.yakup.com/pharmplus/index.html?nid=3000132547&mode=view&cat=23>.
- Blackler, Alethea, Claire Brophy, Maria O'Reilly, and Marianella Chamorro-Koc. "Seating in Aged Care: Physical Fit, Independence and Comfort." *SAGE Open Medicine* 6 (January 1, 2018): 205031211774492. <https://doi.org/10.1177/2050312117744925>.
- Blakemore, Erin. "How Japan Took Control of Korea." History.com, 2020. <https://www.history.com/news/japan-colonization-korea>.
- "Chun Doo Hwan." In *Britannica*, 2022. <https://www.britannica.com/biography/Chun-Doo-Hwan>.
- Old Painting Room. "Gathering of Scholars," 2012. <https://m.blog.naver.com/dankoon2001/60169133931>.
- Gonzalez, Maria. "Root Bench / Yong Ju Lee Architecture." *Arch Daily*, 2018. <https://www.archdaily.com/906027/root-bench-yong-ju-lee-architecture>.
- Han, Chong Suk. "Kwangju Uprising." In *Britannica*, n.d. <https://www.britannica.com/event/Kwangju-Uprising>.
- Jang, Pil Gu. "Fence." In *Encyclopedia of Korean Folk Culture*, n.d. <https://folken-cy.nfm.go.kr/kr/topic/detail/8290>.



cm for males and 148.9 cm for females.” *Yun Hwap News*, 2012. <https://www.yna.co.kr/view/AKR20120130142300017#:~:text=%EC%84%9C%EC%9A%B8%EB%8C%80%EC%9D%98%EB%8C%80%20%ED%95%B4%EB%B6%80%ED%95%99%EA%B5%90%EC%8B%A4%20%ED%99%A9%EC%98%81%EC%9D%B-C,%EB%B6%84%EC%84%9D%EB%90%90%EB%8B%A4%EA%B3%A0%2031%EC%9D%BC%20%EB%B0%9D%ED%98%94%EB%8B%A4>.

Kim, Hyung Hun. “There Was No Discrimination between Men and Women, and There Was No Discrimination of Class or Race in Respect for the Elderly.” *Media Jeju*, 2015. <https://www.mediajeju.com/news/articleView.html?idxno=178229#:~:text=%ED%8A%B9%ED%9E%88%20%EC%84%B1%EB%A6%AC%ED%95%99%20%EC%82%AC%EA%B3%A0%EA%B0%80%20%EA%B9%8A%EC%9D%B4,%EB%85%B8%EC%9D%B8%20%EA%B3%B5%EA%B2%BD%EC%9D%84%20%EB%A7%90%ED%95%98%EA%B3%A0%20%EC%9E%88%EB%8B%A4.&text=%EC%84%B8%EC%A2%85%2017%EB%85%84%EC%9D%B4%EB%A9%B4%201435,%EB%8-F%8C%EB%B3%B4%EB%9D%BC%EB%A9%B4%EC%84%9C%20%EB%82%B4%EB%A6%B0%20%EB%AA%85%EB%A0%B9%EC%9D%B4%EB%8B%A4.&text=%EC%A1%B0%EC%84%A0%EC%9D%80%2070%EC%84%B8%20%EC%9D%B4%EC%83%81%EC%9D%B4%EB%A9%B4%20%EC%9D%91%EB%8B%B9%20%EB%8C%80%EC%A0%91%EC%9D%84%20%EB%B0%9B%EB%8A%94%20%EA%B5%AC%EC%A1%B0%EC%98%80%EB%8B%A4>.

Kim, yongman. “History of Public Squares.” *Life History of Korea*, 2012. <https://terms.naver.com/entry.naver?docId=3574286&cid=59022&categoryId=59022>.

Lee, In Sook. “Praisal of Old Paintings by Lee In Sook, Yoon Doo Seo’s Mid-day Nap in Summer.” *Maeil News*, 2020. <http://news.imaeil.com/page/view/2020091514190784576>.

Lee, Jung Ewn, Jin Ah Ryu, Tae Jung Hwa, and Da Ewn Oh. “A Study on the Types and Characteristics of Social Service Needs of the Elderly Living Alone.” *Chungnam National University*, 2021. <http://jsscnu.re.kr/xml/29923/29923.pdf>.

Lee, Yong Kwan. “The average life expectancy of the Joseon Dynasty was 35... For Emperor it is 46 years old.” *Mun Hwa News*, 2013. <http://www.munhwa.com/news/view.html?no=2013122601071127163002>.

“Mo Jung.” In *Joseon Dynasty Wiki*, n.d. [http://dh.aks.ac.kr/sillokwiki/index.php/%EB%AA%A8%EC%A0%95\(%E8%8C%85%E4%BA%AD\)#:~:text=](http://dh.aks.ac.kr/sillokwiki/index.php/%EB%AA%A8%EC%A0%95(%E8%8C%85%E4%BA%AD)#:~:text=)