



Virtuous Garden

South Korea Pavilion

1 - 25 June

LONDON
DESIGN
BIENNALE
2023

Can we live harmoniously and sustainably in this age of globalisation?

“*Virtuous Garden*” combines tradition and innovation through collaborations with a Korean artisan carpenter, *Geomungo* player & composer, sound designers, film-makers, VFX designers and visionaries, with British collaborators from Vortic (VR) and Creator (Carpentry). This immersive exhibition harmoniously blends past and future traditions using virtual reality and artistic interpretations.

Through the collective expertise of the collaborators, “*Virtuous Garden*” offers a multi-sensory mixed reality experience. It celebrates Korean cultural heritage while pushing the boundaries of storytelling and audience engagement. This ambitious project, orchestrated by humble collaborators, expands cultural and design limits to create a captivating exhibition. Step into this enchanting world and be mesmerised by the fusion of creativity, technology, and the rich cultural tapestry of *Bye-ol-seo(villa) Gardens*.

We invite our audience to observe the real and virtual gardens.

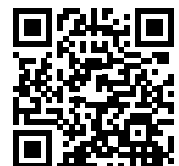
“Just listen to the woods.”

“Hear nature’s melody.”

“Let the serenity speak to you.”



Virtuous Garden
Playlist



H Collaboration
Website

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10 Essential Elements of *Virtuous Garden*

Virtuous Garden is a tribute to *Byeol-seo(villa) Garden*, which has served as a sanctuary to alleviate pressure, withdraw from political life, and contemplate the natural surroundings alongside *Seonbi* (Korean scholars) homes. *Seonbi* integrated *Geomungo* (traditional music instrument), literature and poetry in the gardens since the *Goryeo* (918 A.D- 1392 A.D) and *Joseon* dynasties (1392 A.D - 1897 A.D).

Element 1.

Seonbi (Korean scholar)

Seonbi have been recognised since the *Goryeo* and *Joseon* dynasties. They incorporated various forms of literature and poetry from overseas, developing new philosophical principles to suit the Korean Peninsula - focusing on discussing the similarities and equality between human beings and non-humans.

Taking inspiration from *Pungsu* and other philosophical theories, *Seonbi* found solace in building and residing within *Byeol-seo (villa) Gardens*. One example is *Soswaewon*, constructed by Yang San Bo (1503-1557) in his hometown of Damyang around A.D. 1530. *Soswaewon*, a well-preserved *Byeol-seo(villa) Garden*, holds a wealth of historical archives. Another notable cultural heritage site, *Bangye Yun Woong-Ryeol Villa*, was built in 1906, following the same architectural style after a gap of 400 years.

Drawing on the beauty of nature in *Byeol-seo (villa) Gardens*, *Seonbi* composed poems, articles, and songs to be played on the *Geomungo*, a traditional musical instrument.

Element 2.

Seonbi's Gardens: Byeol-seo (villa)

Seonbi's Gardens served as places to alleviate pressure, withdraw from political life, and contemplate the natural surroundings. Reflecting the unique natural landscapes of the Korean Peninsula, most existing *Byeol-seo(villa)* Gardens are situated on southern slopes, with a river in front and a mountain to the rear. This traditional landscape design embodies the ideal spiritual home based on *Pungsu* principles.

True to the principles of living in harmony with nature and upholding moral values, *Byeol-seo(villa)* Gardens typically refrain from incorporating artificial or man-made embellishments. Elements such as the square lotus pond with a round island at the centre, symbolising 'Round Heaven and Square Earth', *Didimdol* (stepping stones), bamboo forests, and even the names of pavilions all convey the teachings of *Pungsu* and *Confucianism*.

Byeol-seo(villa) Gardens are hidden gems nestled in the mountains, providing a respite from bustling city life and often overlooked by the general public. The historical and cultural significance brought by *Byeol-seo (villa)* is of immeasurable value. Each *Byeol-seo(villa)* Garden serves as a living museum, continuously offering educational insights to society.



Gwangpunggak, Soswaewon

Element 3.

Wood: A Timeless Resource Transformed into *Maru* (wooden podium)

Produced by Gibok Ju (artisan carpenter) and Creator (British partner)

Wood has been a vital natural resource relied upon globally for centuries. In *Bye-ol-seo (villa) Gardens*, the *Maru* area refers to the wooden floor, meticulously crafted using the traditional technique known as *Daemokjang*. This remarkable method allows artisans to create stable floors using hand tools alone, without the need for nails, screws, or glues. The key requirement is that the *Maru* should be raised above the ground in order to minimize humidity levels. A carpenter, in the true sense, breathes new life into a tree after a century-long wait – an art known as Timber-work.

In pursuit of material sustainability, we have minimised waste and extended the lifespan of existing wood resources. By utilising carefully selected reclaimed timbers sourced from Kent, we have fostered a meaningful exchange of Korean wood-making techniques with British craftsmen from Creator, resulting in locally sourced *Maru* floors that embody both history and innovation.

Element 4.

Hanji: Unveiling the Beauty and Versatility of Korean Paper

Hanji, also known as Korean Paper, has a rich history dating back to the 4th century on the Korean Peninsula. Crafted from natural resources such as mulberry bark and lye, *Hanji* production involves a meticulous process that results in exquisite paper artefacts. Renowned for its high-quality finish and an array of vibrant colours, *Hanji* has gained international recognition. Its exceptional durability, with a lifespan of up to 1000 years, has played a vital role in preserving Korea's historical records.

When treated with linseed oil, soya oil, and natural dyes, *Hanji* transforms into *Jangpanji*. This resilient paper is traditionally used to cover wooden floors in *Byeol-seo (villa) Gardens*. Beyond its practical application, *Jangpanji* surpasses expectations, serving as a substitute for leather in crafting small ornaments and room decorations. Indulge in the tactile pleasure and natural aroma of *Jangpanji* as you freely explore this remarkable Korean paper.

Element 5.

Didimdol: Symbolic Stepping Stones

Didimdol, the stepping stones found in front of pavilions, serve a dual purpose in *Byeol-seo(villa) Gardens*. While they provide functional access to the pavilion, aiding ascent and descent, their natural, unpolished appearance signifies respect for nature. Additionally, they bring luck into the inner room. As shoes are not allowed inside pavilions, *Seonbi* would leave their shoes on the *Didimdol* as evidence of their presence, and guests were expected to follow this rule.

In our pavilion, we pay homage to the *Byeol-seo(villa) Garden* by recreating three scaled-down *Didimdol* using ultra-modern 3D scanning and printing techniques. These imperfect replicas serve as display stands for VR headsets at the *Maru* (wooden podium), encapsulating the essence of the garden in this modern setting.

Element 6.

Seokkarae: Rafter Seamlessly Blending Past and Present, Day and Night

Our ancestors held the belief that everything in nature was temporarily borrowed, and in reverence for this notion, they constructed the harmonious *Seokkarae* (rafter) using raw wood exclusively in *Byeol-seo(villa) Gardens*. The *Seokkarae* provides structural support for the pavilion as well as emotional support for those within the space. In our effort to unify and reimagine, we have connected the VR *Seokkarae* with Somerset House’s ceiling, creating a seamless blend of past and present, day and night.

The passage of time poses challenges in preserving cultural heritage in its original state. However, with the aid of technology, we have now reconstructed the essence of *Byeol-seo(villa) Gardens*, drawing from historical records such as 48 *Yeong* poems and *Geomungo* music. By archiving, sharing, and exchanging these treasures, we ensure that the spirits of *Seonbi* and the essence of *Byeol-seo(villa) Gardens* live on in collective memory.

“Look up at the sky!”

Element 7.

Virtual *Virtuous Garden*

VR technology provides an immersive experience in the parallel art world of the *Virtuous Garden*, revealing two distinct environments. In our pavilion, the realms of design and *Virtuous Garden* merge in a captivating mixed reality experience.

The combination of the physical room and virtual environments allows the audience to encounter a unique blend of elements. Keep an eye out for the *Changhoji*, a special Korean paper used for windows, the *Bang* (room), and the *Seokkarae* (rafter), which exclusively appear in the VR *Virtuous Garden*.

While being physically transported to the *Joseon* and *Goryeo* dynasties is impossible, this experience offers the opportunity to be immersed in the lives of *Seonbi* through a virtual reality journey. The VR headset reveals a captivating experience, offering a blend of art and nature that will leave you inspired and engaged.

Element 8.

Geomungo (traditional music instrument) Music

Geomungo music has been passed down since the *Goguryeo* Dynasty and is considered to be ‘The Head of all Music’. The instrument consists of 16 *Gwae* (frets) and six strings made of silk thread, on a paulownia wood resonator. The performer uses their hands and a *Suldae* (a bamboo stick) to hit or pluck the strings.

From closest to the performer’s body, the six strings of the *Geomungo* are called:

Munhyeon (文絃)

Yuhyeon (遊絃)

Daehyeon (大絃)

Gwaesangcheong (棵上淸)

Gwaehacheong (棵下淸)

Muhyeon (武絃)

Seonbi in the *Joseon* Dynasty kept the *Geomungo* by their side all times and played it to re-centre when they were distracted or interrupted. The *Geomungo* was a highly spiritual and symbolic instrument, with the phrase *Muhyeongeum* (無絃琴, ‘stringless *Geomungo*’) meaning: ‘what is important is the heart, not the sound’.

Modern performers and composers have ensured that *Geomungo* music has remained relevant today. Modern society is fast-paced and the spirit and music of *Geomungo* can be used as in the past, a way for us to relax, meditate and re-centre.

Under the Shade of the Paulownia Tree (2022) composed by Jina Chun

Gagok is a form of traditional Korean vocal music. This is composed by borrowing the *Geomungo* accompaniment melody of the *Gagok*. The accompaniment melodies of *Geomungo* are full of the elegance of *Geomungo* music, even without vocals. The musician shows the musical expression of the *Gagok* and broadens the range of expressions of traditional music techniques.

This song allows the listener feel the atmosphere of the *Soswaewon* which was the space of the scholars of the *Joseon* Dynasty.

Mt. Geumgang (1987) composed by In Pyong Chun

This music is a *Geomungo* solo piece composed in the form of *Sanjo*, a traditional musical style, with variations on the theme melody of *Living in the Mt. Geumgang* composed by Hong Nan Pa (1898-1941): a modern Korean musician.

Sanjo is a form of solo music in which four or more movements are arranged in a sequence that changes from slow to fast. It is characterised by various rhythmic changes and musical expressions that reveal the personality of the performer. The song is a good blend of the diverse and rich tones of the *Geomungo*, as well as the traditional and modern playing techniques of the *Geomungo Sanjo*.

Element 9.

The Photomosaic

Virtuous Garden recalls Korean gardens from 500 years ago and the virtual elements of the design bring Korean nature to the heart of London. Imagine a pavilion within a pavilion, a culture within a culture, life within life, human within nature, coexisting, interdependent and collaborating.

Experience the beauty of the digitised *Byeol-seo(villa) Gardens* through a captivating photomosaic generated by Amy Rebecca Tucker from 8000 stunning photos captured by Jiyu Park, Dong Hyun Lee and Cio Park. Each day brings unique moments that can never be replicated, and in today's digital age, we love capturing these memories in pixels.

Zoom in and out pixel by pixel to immerse yourself in the intricate details and untold stories of the gardens. Discover the essence of *Seonbi* spirits hidden within each image. As you explore, a question arises: Can you distinguish between real and virtual gardens among the photographs?

Element 10.

Virtuous Garden in Mixed reality

Inspired by traditional Korean garden design, *Virtuous Garden* invites the audience into a pavilion to listen to *Geomungo* (a traditional Korean instrument) music and natural sounds, watch videos of both virtual and real gardens and contemplate.

Virtuous Garden exists only in our imagination but is represented by the juxtaposition of CGI (computer-generated imagery), virtual and real footage, such as the Bamboo forest and shadow of Bamboo. Overlaid by the historical sounds of the *Geomungo* and echoes from nature itself.

Virtuous Garden is our interpretation of how design can incorporate sustainability, innovation, tradition and modernity. Co-existing to ensure a better world for the future.

“Just listen to the woods.”

“Hear nature’s melody.”

“Let the serenity speak to you.”

Programme

Act 1.

Virtuous Garden:

Bangye Yoon Woong-Ryeol's Villa since 1906

Duration: **12 minutes and 37 seconds**

Geomungo Music: **Mt. Geumgang (1987)**

Player: **Jina Chun**, Composer: **In Pyong Chun**

Video and Sound Designer: **Bruce Bae, Seungmin Bae**

This music is a *Geomungo* solo piece composed in the form of *Sanjo*, a traditional musical style, with variations on the theme melody of *Living in the Mt. Geumgang* composed by Hong Nan-pa (1898-1941), a modern Korean musician.

Act 2.

An Epic of Soswaewon:

Trees, Water and Rocks

Duration: **6 minutes 26 seconds**

Geomungo Music: **Under The Shade of Paulownia (2022)**

Player and Composer: **Jina Chun**

VFX Designers: **Jung Jin Song, Dong Hyun Lee, Cio Park**

Gagok is a form of traditional Korean vocal music. The accompaniment melodies of *Geomungo* are full of the elegance of *Geomungo* music, even without vocals. The musician shows the musical expression of the *Gagok* and broadens the range of expressions of traditional music techniques. This *Geomungo* music allows the listener to feel the atmosphere of the *Soswaewon*, which was the space of the *Seonbi* of the *Joseon* Dynasty.

Act 3.

Virtuous Garden:

Photomosaic

Duration: **2 minutes**

Visual Designers: **Amy Rebecca Tucker, Dong Hyun Lee, Cio Park, Jiyu Park**

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This Pavilion encourages the audience on an Audio Visual journey to *Virtuous Garden*. To reach a broader audience, we use a music streaming service, 3D Scanning, 3D Printing, CGI Render, a Virtual Reality Platform, Video Editing and QR codes in mixed reality between the physical and virtual environments.

Acknowledgement

Sponsors:

Youjin Lee

Alahna jiah Kim

Edwin Kang

Exhibition Assistants:

Daniel Kim

Minkey Koo

Ran Ting He

Mei Yi Hu

Jia Ni Kang

Yi Han Lou

Special Thanks

Liz Chow

Kai Chun Kim

Yoon Hyun Lee

Appendix

Reference: <Building *Hanok*: Components & Techniques>

Maru: Craftsmanship and Construction of Wooden Podiums and Flooring

Maru, the traditional wooden podium and flooring, is meticulously constructed by artisans using hand tools. It involves selecting suitable timbers and preparing them as floor joists (*Gwiteul*) and floor boards (*Cheongpan*). Various types of *Maru* serve different functions and locations, such as large *Marus* in main halls, narrow porches in hallways, and raised floors in pavilions. The ‘checkered’ *Umulmaru*, installed at London Somerset House, is a common design. Visitors can experience *Maru* by interacting with it.

Construction Process:

Floor Joist (*Gwiteul*): Four long floor joists interlock with columns, using ‘*housed joints*’ and ‘*tenon and mortise*’ connections.

Short floor joists have rabbets that match the *tenons* on long floor joists, creating trapezoid spaces for easy assembly.

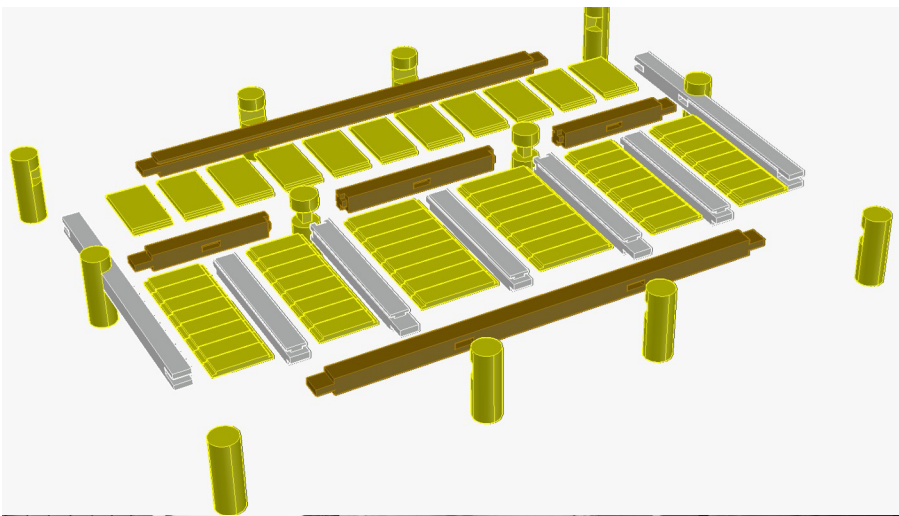
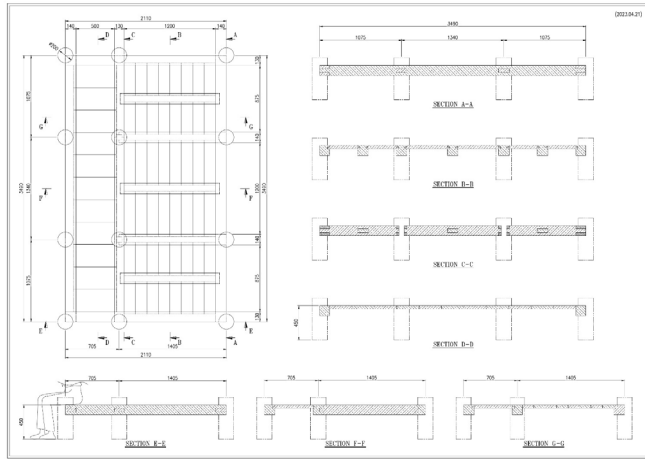
Floorboards (*Cheongpan*) have rabbets on one side and are slightly longer than the gaps between short floor joists. They align on top of short floor joists with numbering and markings.

Assembly:

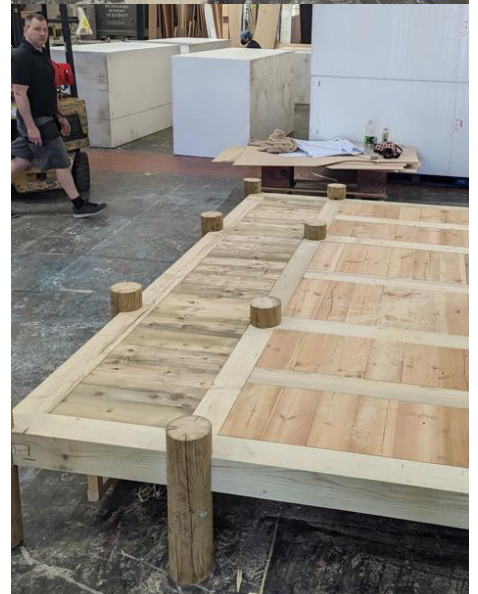
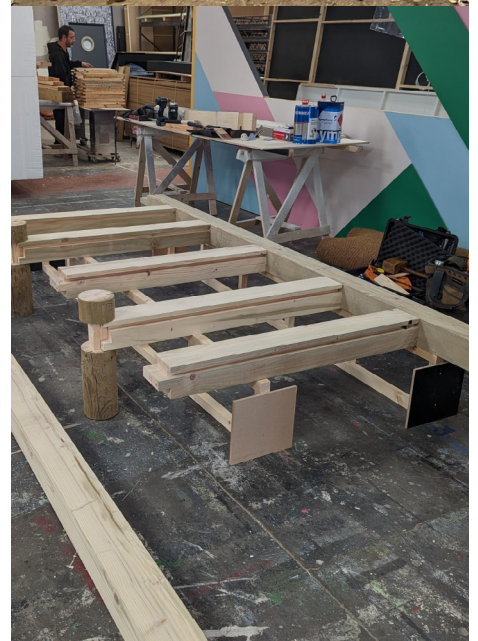
Carpenters arrange the floor joists and floorboards:

1. Long floor joists form the frame.
2. Short floor joists fit between long ones in the purlin (*dori*) direction.
3. The surface is checked for parallel alignment.
4. Interlock components using wedges and a hammer.
5. Insert floorboards sequentially, securing them with wedges.
6. Smooth the *Maru* surface and remove excess joints.

South Korea



United Kingdom



Appendix

Reference: <Korean crafts council>

Hanji: Jangpanji & Changhoji

Hanging *Dobaeji* and *Jangpanji*

Dobaeji was the finishing material for the interior of a *hanok*, put up on all walls and the ceiling, but not on windows, doors and floors. The work comprised of the first, the second and the final hanging. *Chobaeji* for the first hanging had also the function of blocking the dirt of mortar-finished walls. The pillars in rooms and upper, middle and lower crossbars were also hanging with *dobaeji*, so that the cracks on wooden materials due to their contraction were covered and the roof frame and lumbers were concealed. These days cheap *chobaeji* is used for the first hanging, followed by the second and last one with functional *hanji*.

Because *hanji* is a natural material, *dobaeji* or *jangpanji* regulate the room humidity, prevent a rapid change of room temperature, dew formation and outbreak of mold. *Hanji*'s property of absorbing fine dust prevents atopic and bronchial diseases. *Jangpanji* laid in the traditional way leaves a gap between the layers from the second installation helps insulate and make the floor elastic and, above all, beautiful.

Cutting

The first installation must be sturdy, but it is not seen. So cut it into appropriate pieces, disregarding the overlapping parts. In the demonstration it was cut into pieces of 30×40cm. As for the finishing paper, calculate the size of wall and the prepared *hanji* prior to cutting. Over-sized paper is hard to put up neatly. When laying *jangpanji* on the floor, avoid cutting in order not to leave overlapping parts.



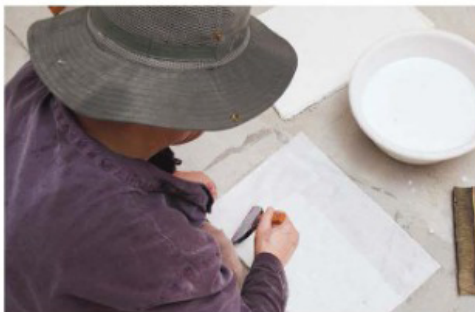
The First Hanging

Apply glue on whole part of *chobaeji*, put it up in the inner corners first and sweep the surface with the glue brush to make it adhere tightly. The first layer makes mortar splinters remain stuck to the wall. Be sure not to leave air pockets. To make the first layer sturdy, make overlapping bands of 5 to 10cm.



The Second Hanging

Wait till the *chobaeji* dries up, and then hang the second layer. To make gaps between the layers, apply glue only on the edges. After finishing the second hang, let the layers dry up thoroughly.



Tip: Advantage of Gaps

Leaving a gap between the layers makes the surface even, and reinforces the insulation effect of the paper.



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Laying Jangpanji

① Sweep the *jangpanji* with a wet cloth to stretch it. A wet piece of *jangpanji* will absorb glue evenly and be strained while drying up. Apply water and glue on the rough back of *jangpanji*. Fold the *jangpanji* pieces in half and pile them. After about five minutes check that they are stretched and soft, and then turn the pile upside down, to use the first water-treated one first.



② Unfold the *jangpanji* pieces to remove the remaining water and glue them one by one. Be sure to leave no edge unglued. Fold the glued pieces in half one more time and pile them. Wait for about five minutes, turn the pile upside down, and then put them up one by one, drying them with a dry cloth. Make the overlapping band of about 5cm. Let the intersections have no irregular overlapping, so that they look good and cause no hindrances.



Credits

Administration:

H Collaboration LTD

Karen Chang: President

Hye Won Chang: Director

Artist:

Jung Jin Song: VFX Director

Visual Design:

Dong Hyun Lee: 3D artist

Cio Park: Video artist

Amy Rebecca Tucker: Technical artist

Video and Sound Design:

Bruce Bae, Seungmin Bae

Music:

Geomungo (traditional Korean instrument)

Jina Chun: Player

In Pyong Chun: Composer

Jeong Myeon Lee: Music recording

Dong Guk Kim, Chan Yong Hwang: Filming

Carpertry:

Gibok Ju: Korean artisan

Creator: British partner

Curators:

Hye Won Chang, Dijun Sha

Special thanks: Vortic



Thank You