Research Report on a Seated Wooden Avalokiteshvara (duk 953)
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Research Report on a Seated Wooden Avalokiteshvara

This wooden, seated Avalokiteshvara (duk\textsuperscript{1} 953) in the collection of the National Museum of Korea has a slender face, round jaw, and slim body. The bodhisattva is wearing a tall crown; his long hair falls naturally over both shoulders. Seated in the royal-ease pose (yuhuijwa 遊戱坐)—with one leg raised and the other lowered—the figure wears a shawl dramatically draped over the proper right arm.\textsuperscript{2} Although an image of the Buddha is missing from the crown, the unusual posture shows that the subject is the Water-Moon Avalokiteshvara seated on a rocky outcrop on Mount Potalaka as described in the “Entry into the Realm of Reality” chapter of the Flower Garland Sutra.

The wood used to carve the image has been identified as needle fir, a member of the pine family. Further analysis of the wood shows that the sculpture most likely dates between 1220 and 1285, indicating that it was made during the Goryeo 高麗 dynasty (918–1392). As far as we know, this is the only surviving wooden Avalokiteshvara seated in the royal-ease pose from the Goryeo period.

The figure is shown with his head slightly lowered and with a high knot of hair, distinct facial features, and plump cheeks. The waist is relatively slim compared to the upper torso. The large earrings in both ears, the bracelets and armlets, and the jeweled strands adorning the body typify the exquisite characteristics of Goryeo bodhisattva images.

Dedication materials (bokjangmul 腹藏物) were installed in the head and abdomen of the bodhisattva. A woodblock print of the Scripture of the Incantation of Wish Fulfillment (Mahapraptsara Dharana Sutra; Daesugu darani gyeong 大隨求陀羅尼經), which dates to the Goryeo dynasty, was discovered inside the figure’s head. A “throat-bell container” (huryeongtong 喉鈴筒), five treasure bottles (obobyong 五寶瓶), and woodblock-printed sutra pages were subsequently installed in the abdomen during the early Joseon 朝鮮 period (1392–1910).

The Yi Royal Family Museum (Iwanga bangmulgwan 李王家博物館) bought the sculpture from Aoki Bunshichi (靑木文七) on November 18, 1908, for the price of
110 yen. The bodhisattva, published in the section on Buddhist sculpture in the *Photo Album of the Yi Royal Family Museum Collection* (*Riōke hakubutsukan shozōhin shashinchō* 李王家博物館所藏品寫真帖), was identified as a Joseon dynasty Avalokiteshvara. Except for a few lost fingers on the right hand, shown in the dry plate photograph taken during Japanese Occupation (1910–45), the bodhisattva—including the crown—is well preserved and kept in the National Museum of Korea.

—Shin Soyeon
Fig. 1 Seated wooden Avalokiteshvara, Goryeo, H 67.65 cm, purchased in 1908 (duk 953). Photographed during the Japanese Occupation (1910–45)
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Fig. 41 Left side view of the crown of the Avalokiteshvara
Fig. 42 Right side view of the crown of the Avalokiteshvara (3D laser scan)

Fig. 43 Right side view of the crown of the Avalokiteshvara
Measurements and Formal Characteristics

This image of the bodhisattva Avalokiteshvara measures 67.65 cm in total height, 42.51 cm in maximum width, and 35.30 cm at its greatest depth. The height, width, and depth of the bodhisattva's head measure 23.51 cm, 11.36 cm, and 10.82 cm, respectively. The face is 11.51 cm long and 8.95 cm wide, and the shoulders measure 22.28 cm in width. The depth of the chest from front to back is 12.74 cm.

The oval-shaped face, smooth jawline, and prominent facial features are distinctive characteristics of the bodhisattva. The left and right eyes measure 2.50 cm and 2.47 cm, respectively. The width of the nose and mouth are 2.18 cm and 2.08 cm, respectively. The left and right ears measure 8.01 cm and 8.09 cm in length, respectively. The upper eyelid protrudes slightly while the lower eyelid is a bit sunken, and the outer corners of the eyes slant upward. It appears that circular objects, perhaps crystal disks, are inlaid for the eyes; the pupils and the white of the eyes are painted in black and white pigments. Although the bridge of the nose is high and the ridge of the nose is straight, the bulb of the nose takes a rounder shape. The volume of the cheeks is emphasized by the tension around the ends of the mouth and nose. The eyebrows, the mustache above the lips, the green spot below the lips, and the circular beard on the chin all seem to have been painted in green mineral pigments (CuCO₃·Cu(OH)₂), which have copper (Cu) as their principal component. The pigment on the lips, painted in light red, is thought to be minium (yeondan 鉛丹 Pb₃O₄). The crystal urna measures 0.84 cm in diameter. Since a hole passes through its center, the crystal may have been first used as a bead in a necklace before it was reused as the urna for this sculpture.

The hair knot on the top of the head is 9.23 cm tall. The maximum width, when viewed from the front, is 5.12 cm, and the maximum depth is 7.24 cm. The portion of the hair that is hidden when the crown is in place has a smooth surface, while the hair just above the forehead is carefully rendered in detail. The hair, made of pliable material, was painted many times in lacquer. Overall, the hair and the body were painted after white lead (2PbCO₃·Pb(OH)₂) was applied as a base coat.
With respect to ornaments, it is difficult to discern the original form of the two flower-shaped earrings since they are thickly covered in gold. The left earring measures 1.83 cm in width and 2.04 cm in height. The same measurements of the right earring are 1.98 cm and 2.28 cm, respectively. The necklace worn on the chest has a circular ornament at the center and jewel-like adornments on either side. The necklace continues around the back of the bodhisattva. The circular ornaments at the center and left are still intact but portions to the right have been lost. Jewelry at the center and left side of the bodhisattva is rendered in detail and connects to the back of the sculpture. However, jewelry worn on the right side is now lost. A second, much longer strand, which flows from either side of the chest, crosses below the abdomen and extends to adorn the right arm and leg. Some of the ornamentation was lost on the front and proper left knee. These elements might have fallen off because the pliable materials were attached to the body after the carving of the image was complete. The belt ornaments are partially covered by the scarf and skirt, but the ends of the belt on both sides of the waist can be identified. On the belt, circular ornaments surround the central jewel, and the border is decorated with beaded patterns. The bracelets and armlets worn on the wrists and arms have beaded frames just like the belt; the ornaments decorating the center are also identical.
The second and fifth fingers of the right hand and the entire left hand were lost at some point in the past and were restored in 2008. The length of the left arm from the shoulder to the elbow is about 20.68 cm. The height from the shoulder to the seated base measures about 31.17 cm. The left foot is 10.87 cm long and 4.17 cm wide. The pendant left leg measures about 15.08 cm in length. Although the shape of the calf is represented on the back of the left leg, the skirt is not shown. Only the foot is covered in gilding; the rest is painted in lacquer. The maximum width of the opening on the bottom of the sculpture measures 22.84 cm.

—Shin Soyeon
Fig. 51 Measurements (front view)
Fig. 52 Measurements (rear view)
Fig. 53 Measurements (left side view)
Fig. 54 Measurements (right side view)
Fig. 55 Measurements (top view)
Identifying the Wood Species

The wood used to make the sculpture has been identified as needle fir (*pinaceae abies holophylla*), which is a member of the pine family. It is a needle leaf specimen exclusively composed of tracheids, with a conspicuous transition from early wood to late wood. Most of the tracheids were rectangular in shape. Axial resin canals and parenchyma cells were not detected. The tangential section shows that ray cells were all uniseriate (one cell wide), and the ray height ranges from three to six cells. The radial section shows that ray cells were composed only of ray parenchyma cells. The cross-field pit type was taxodioid and three to four appeared together. The end walls of parenchyma cells were nodular. These characteristics allowed us to identify the wood as needle fir from the pine family.

—Yi Yonghee and Park Sujin

Fig. 57 Cross-section of wood sample from Avalokiteshvara I

Fig. 58 Cross-section of wood sample from Avalokiteshvara II
Fig. 59 Tangential section of wood sample from Avalokiteshvara I

Fig. 60 Tangential section of wood sample from Avalokiteshvara II

Fig. 61 Radial section of wood sample from Avalokiteshvara I

Fig. 62 Radial section of wood sample from Avalokiteshvara II
Dating Analysis of the Avalokiteshvara Image

A piece of wood that had come loose from the inner recess of the Avalokiteshvara image was used as a specimen for dating analysis. According to the carbon dating method employed by the Korean Institute of Science and Technology—using Accelerator mass spectrometry (AMS)—the wood dates from 1220 to 1285 CE (95% confidence interval) and from 1250 to 1285 CE (65% confidence interval).

—Shin Soyeon
Construction of the Sculpture

This bodhisattva image was produced using the joined-block technique. A total of fifteen pieces of wood were assembled to produce it. The joints between parts can be identified with a careful visual examination of surface cracks and X-ray imaging. They can be mapped using scale drawings.

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Face</td>
</tr>
<tr>
<td></td>
<td>The separately crafted face was attached to the back of the head with no trace of nails.</td>
</tr>
<tr>
<td>2</td>
<td>Hair knot</td>
</tr>
<tr>
<td></td>
<td>The hair knot was carved separately and inserted into a hole in the top of the head.</td>
</tr>
<tr>
<td>3</td>
<td>Back of head and portion of torso</td>
</tr>
<tr>
<td></td>
<td>A single piece of wood was used for both the back of the head and the central portion of the upper torso.</td>
</tr>
<tr>
<td>4</td>
<td>Right side of torso and portion of lower body</td>
</tr>
<tr>
<td></td>
<td>A piece representing the right side of the torso and a portion of the lower body was joined to the central torso using staples at the chest and back.</td>
</tr>
<tr>
<td>5</td>
<td>Right rear portion of lower body</td>
</tr>
<tr>
<td></td>
<td>The right rear portion of the lower body is a small piece of wood that was joined to the lower portion of the right side of the torso and the right leg with staples.</td>
</tr>
<tr>
<td>6</td>
<td>Right upper arm</td>
</tr>
<tr>
<td></td>
<td>A join line can be seen next to the shawl that drapes over the right shoulder. Bent nails instead of staples were used to attach these pieces.</td>
</tr>
<tr>
<td>7</td>
<td>Right forearm</td>
</tr>
<tr>
<td></td>
<td>The right forearm is joined to the upper arm under the sash that drapes over the right arm. A long nail instead of a staple holds the two parts together.</td>
</tr>
<tr>
<td>8</td>
<td>Right hand</td>
</tr>
<tr>
<td></td>
<td>The right hand was separately sculpted and inserted into the forearm. The second and fifth fingers were lost at some point in the past but were replaced in 2008.</td>
</tr>
<tr>
<td>9</td>
<td>Left side of upper left arm</td>
</tr>
<tr>
<td></td>
<td>The outer face of the left arm was joined to the figure with no trace of nails.</td>
</tr>
<tr>
<td>10</td>
<td>Left forearm</td>
</tr>
<tr>
<td></td>
<td>The left forearm, which is perpendicular to the upper arm, was attached using a staple.</td>
</tr>
</tbody>
</table>
Left hand  The missing left hand was replaced in 2008.

Right leg  The right leg with raised knee was separately sculpted and fixed to the torso using staples.

Left leg  The pendant left leg was joined to the torso with a staple.

Shawl draped on upper right arm  The shawl was made separately, and its front and back elements were glued together.

Shawl draped over right forearm  The shawl was made separately and the bottom portion was fixed to the right side of the right foot with nails.

To summarize, the bodhisattva was produced by joining separate pieces of fir together. The central torso includes the back of the figure's head. The face and hair knot were separately created and attached. Each arm is composed of upper and lower units, and each leg is a separate piece of wood. Staples were most often used to join body parts, but no trace of a nail can be found where the face meets the back of the head or at the upper left arm. Long sharp nails were used to join the unbent arm and leg while staples were used to strengthen the joins involving the bent arm and leg.

—Shin Soyeon
Fig. 63 Front view of the upper body (X-ray)
Fig. 64 Right side view of the upper body (X-ray)
Fig. 65 Front view of the lower body (X-ray)
Fig. 66 Right side view of the lower body (X-ray)
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Fig. 69 Front view showing the assembled parts of the Avalokiteshvara
Fig. 70 Rear view showing the assembled parts of the Avalokiteshvara
Fig. 71 Left side view showing the assembled parts of the Avalokiteshvara
Fig. 72 Right side view showing the assembled parts of the Avalokiteshvara
Fig. 73 Top view showing the assembled parts of the Avalokiteshvara
Fig. 74 Bottom view showing the assembled parts of the Avalokiteshvara
Measurements and Formal Characteristics of the Crown

The crown is 10.55 cm tall at the front and 5.59 cm tall at the back. The maximum width, excluding the ornaments on either side, is 14.02 cm, and the width at the bottom is 12 cm. The maximum width, including the wooden ornaments, measures 24.55 cm.

The crown proper is made of metal, while additional ornaments on either side of the crown are a combination of metal and wood. The front and back portions of the crown are made from different metals. The front sheets of metal as well as the flaming jewel and floral elements attached to the front are all made of copper and covered with gold leaf. The back sheet as well as the flame-shaped ornaments extending on either side of the crown are made of iron and covered with gold leaf.

A total of four sheets of metal were used to make the crown. The three found in front, which vary in width and height, overlap one another; the piece at the back is joined to those at the front. Among the three front sheets, the innermost overlaps the back sheet and is affixed by rings. A long metal strap, which is connected to each of the flame-shaped ornaments on either side of the crown, is fixed to the interior of the back sheet. These straps were attached to the back sheet through holes. When viewed from the interior, they were secured by inserting the right end of the strap into the left end, which was bent upward.

Fig. 75 Interior view of the front of the crown  
Fig. 76 Interior view of the back of the crown
The innermost gilt copper sheet at the front is the largest and measures 10.55 cm in height. The openwork vine scroll pattern only appears on the exposed areas that are visible from the front. No decoration was created in places that are hidden by the middle sheet.

The middle bronze sheet measures 9 cm in height. Unlike the previous one, the edges of this piece are designed like flames, and ornaments resembling small flaming jewels are fixed to the protruding edges with nails or rings. A vine scroll pattern is rendered in openwork, and a wave pattern is incised on the inner portion of the sheet. On the front, ornamental flaming jewels are attached to the sheet with tabs. When viewed from the front, two of these ornamental flaming jewels are on the right and only one is on the left. Elements originally used to secure additional ornaments remain in place. The tabs used to attach these elements were inserted from the exterior of the crown and bent in the interior.

The smallest of the anterior sheets measures 5.29 cm in height and is located at the very front. It is shaped like a mountain with a sharp peak at the center. No pattern is incised at the middle, but lotus flowers and foliage are on either side. In addition, a piece 8.16 cm in length in the form of a flaming jewel is pinned to the center again by bending a tab from the interior of the crown. A scrolling pattern is incised on the lower frame of the crown, and seven flower-shaped gilt copper ornaments are attached to it.
The back sheet made of iron is comparatively small both in length and width. A repoussé technique was used from the interior to create a geometric lotus design in raised dots.

Additional ornaments stretch out from both sides of the crown where the front and back sheets are connected. Elements shaped like flames decorated with repoussé dotted patterns are made of iron. Ornaments resembling fluttering ribbons are made of wood and measure 13.05 cm and 13.29 cm in length on the left and right sides, respectively. To attach the wooden ornaments to the flame-shaped elements, a furrow was cut into the back of the wood so that a metal ornament could be inserted and fixed with two nails. The front face of the wood is painted in gold while the back side is painted red. The flame-shaped ornament on the upper left side is a replacement.

—Shin Soyeon
Fig. 80 Crown with measurements (front view)
Fig. 81 Crown with measurements (right side view)
Conservation Treatment of the Sculpture and Crown

The National Museum of Korea conserved the sculpture in 2008. Both the reattachment of detached elements and the replacement of missing parts were guided by carefully comparing the sculpture to an archival photograph that was taken during the Japanese Occupation (1910–45) (fig. 1).

(1) Condition prior to conservation treatment

1. The entire left hand and the second and fifth fingers of the right hand were lost, and the fourth finger of the right hand was detached.
2. The left foot had separated from the leg at the ankle, and the left arm was loose.
3. Much of the gold leaf had flaked off, revealing numerous visible cracks on the front and back of the sculpture.
4. The right side of the face was scratched.
5. The urna was covered in gold.
6. Flame-shaped ornaments had fallen from the crown. The wooden elements on either side of the crown and the flamed-shaped ornament used to attach the left wooden ornament were missing.

(2) Conservation treatments that were performed

1. The loose right and left arms at the elbows and the detached left foot were fixed with animal glue (agyo 阿膠).
2. The missing left hand and fingers on the right hand were remade with artificial wood (araldite SV427+HV427).
3. The newly made left hand was joined to the wrist with a wooden peg.
4. The broken-off fourth finger was glued to the right hand with a mixture of animal glue and wooden powder. The same method was used to attach the newly made second and fifth fingers of the left hand.
5. The loose area around the unfixed hair knot was filled with a mixture of animal glue and wooden powder to protect the dedication materials installed inside the head.
⑥ The newly made left hand and the restored fingers of the right hand were colored with gold powder and gold acrylic paint to match the surrounding color.

⑦ The gold paint covering the urna was removed to reveal the crystal inset.

⑧ The detached flame-shaped ornaments from the crown were reattached with epoxy resin, and the missing flame-shaped ornament on the left was restored using brass sheet.

⑨ The lost wooden ribbons on either side of the crown were first carved from wood and then attached to the crown with animal glue and colored with acrylic paint.

⑩ The bottom opening of the sculpture (bokjanggong 腹藏孔) was sealed with a pine plank to protect the dedication materials.

—Yi Yonghee

Fig. 82 Condition of the right hand prior to conservation treatment

Fig. 83 Condition of the right hand after conservation treatment
Dedication Materials Found Inside the Sculpture

Three bundles of dedication materials (*bokjangmul* 腹藏物) were found during the investigation of the sculpture. One was discovered in the head and the others were located in the lower body. X-radiographs suggest the dedication materials found inside the head were put in place at the time of production and before the face was fixed to the head. When the investigation was conducted, it was difficult to identify the contents inside the head by looking through a small hole between the head and neck. Furthermore, since the hole into which the topknot was inserted is also very small, there was little possibility that the materials could have been added after the head was assembled.

Since no filler was found inside the sculpture, the dedication materials inside the cavity were probably not in their original location. In fact, it is highly likely that the cavity was previously opened and the contents disturbed after the sculpture was removed from a temple setting and purchased during the Japanese Occupation (1910–45) by the Yi Royal Family Museum (Iwanga bangmulgwan 李王家博物館). The cavity of the sculpture is very small, and the plank that covered the opening in the bottom of the sculpture (*bokjanggong* 腹藏孔) is recently made. No votive inscription was discovered, but the primary dedication materials were placed in a yellow cloth wrapper (*hwangchopokja* 黃稍幅子) and are relatively well preserved.

![Fig. 84 Dedication materials at the time of investigation](image1)

![Fig. 85 Dedication materials from the body cavity (left and center) and head (right)](image2)
Fig. 86 “Throat-bell container” (huryeongtong) and five treasure bottles were found inside a yellow cloth wrapper

Fig. 87 Five treasure bottles and their contents

(1) Dedication materials found inside the head of the bodhisattva

① Portion of the *Mahapratisara Dharani Sutra* (*Daesugu darani gyeong* 大隨求陀羅尼經), 40.4 × 38 cm (*duk* 953-3)

X-radiographs show this woodblock-printed text was installed inside the head of the bodhisattva. A metal object and colored threads were wrapped in it. Transmitted light microscopy has shown that the interval between the chain lines is about 3 cm, and there are thirteen laid lines, produced by the reed mold, identified every 3 cm. The paper can be dated to the Goryeo 高麗 period (918–1392) since the wide laid lines were produced by reeds thicker than those used during the Joseon 朝鮮 period (1392–1910). The paper sheet measures 40.4 cm on the left side, 39.7 cm on the right side, 38.0 cm along the upper edge, and 37.5 cm along the lower one. The height of the woodblock measures 20.5 cm. Alternating columns contain fifteen Siddham or
Chinese characters. Two additional characters, sugu 隨求, are visible at the right-hand edge of the paper; these indicate the title of the sutra. Dharanis from the Mahapralisara Dharani Sutra (Bopyeon gwangmyeong cheongjeong chiseong yeoui boin simmu neungseung daemyeongwang daesugu darani jeong 普遍光明淸淨熾盛如意寶印心無能勝大明王大隨求陀羅尼經 T.1153) are carved both in Chinese and Siddham characters. Subscripts written below several of the main Chinese characters indicate the portion of text, pronunciation, and intonation. The format of this woodblock print, with fifteen characters in each line, is similar to other Buddhist sutras of the Goryeo period, including the Five Great Mantras (Odae jineon 五大眞言) in a private collection, volume 61 of the Canon of the Esoteric Teaching (Milgyo daejang 密敎大藏) in the Horim Museum, and volume 9 of the Canon of the Esoteric Teaching found in the cavity of the seated wooden Buddha Amitabha of Suguksa 守國寺 in Seoul.

② Metal cylinder, height 2.9 cm (duk 953-4)

This metal object was wrapped in the Mahapralisara Dharani Sutra sheet together with bundles of threads and placed at the center of the bodhisattva’s head. Cylindrical in shape, its upper portion is divided into four sections that are bent toward the center. Two holes are on the bottom of the object (not visible in this image). The total height measures 2.9 cm, and the height from the base to the bent portion is 2.4 cm. The diameter of the base is 1.3 cm. According to an analysis of its composition, it is an alloy of silver (Ag) and copper (Cu) in a ratio of 1:1 with a trace amount of lead (Pb). The surface has been gilded.
③ Bundles of colored threads, approximately 11 cm in length (*duk* 953-5, 6, 7, 8)

The four bundles of threads, all identified as silk, were wrapped in the *Mahapraatisara Dharani Sutra* sheet together with the metal object. Bundles of dark reddish brown, off white, and light orange colored threads all measure approximately 11 cm in length; the yellowish green bundle is only about 5.5 cm long.

(2) Yellow cloth wrapper

① Yellow cloth wrapper (*hwangchopokja* 黃絹幅子), 36.8 × 34.5 cm (*duk* 953-9)

Various objects, including the five treasure bottles (*obobyeong* 五寶瓶) and a “throat-bell container” (*huryeongtong* 喉鈴筒), were found in the yellow cloth wrapper that was placed in the abdomen of the bodhisattva. The four directional spells (*sabangju* 四方呪) are written at the center, and the character *jeon* 前, which means “front,” is written off to one side. Stains on the wrapper were caused by the objects it contained.

The textile is a plain weave hemp. It measures 36.8 cm in length and 34.5 cm in width. The right and left edges represent the selvages. It is currently stretched diagonally; the diagonal measures 50.5 cm. The density of the textile is 20 x 15 (warp yarn x weft yarn per sq. cm). The five characters are written in red pigment (HgS).
(3) Five treasure bottles

① Eastern Bottle
①−1. Lacquered wooden bottle H 4.3 cm (duk 953-16)

This bottle’s shape is similar to a prunus vase (maebyeong 梅瓶), which has a wide upper body that curves and becomes narrower toward the foot. The bottle is made of wood and is covered in lacquer colored with a green pigment. Its interior is hollow like a real bottle, and grains were found inside. It measures 4.3 cm in height; the maximum diameter, the diameter of the base, and the neck are 2.0 cm, 1.4 cm, and 1.2 cm, respectively. String made of silk floss is tied around the neck. This bottle and a square mirror were wrapped in a small piece of cloth inscribed with the Siddham character reading hum, one of five characters that constitute the true-mind seed syllables (jinsim jongja 真心種子).
①-2. Square mirror 1.50 x 1.55 cm (duk 953-17)

This square mirror was discovered with the green treasure bottle, both wrapped in a piece of hemp cloth inscribed with the true-mind seed syllable *hum*. Among the mirrors of the five directions (*obanggyeong* 五方鏡), the square one is associated with the east. It measures between 1.50 and 1.55 cm on each side and is 0.76 cm thick. According to an analysis of its composition, it is an alloy of tin (Sn) and lead (Pb) in a ratio of 9:1.

①-3. Hemp cloth wrapper inscribed with the true-mind seed syllable *hum*, 10.3 × 7.1 cm (duk 953-18)

The textile inscribed with the true-mind seed syllable *hum* corresponds to the east. This inner cloth wrapper was paired with an outer cloth wrapper inscribed with a Siddham character reading *am*, one of five characters that constitute the five-wheel seed syllables (*oryun jongja* 五輪種子). Together they wrapped the square mirror and a treasure bottle. Green pigment from the bottle stained the cloth. The textile is a plain weave hemp. Its density is 20 x 20 (warp yarn x weft yarn per sq. cm). The thickness is about 0.28 to 0.34 cm. The character is written in gold powder (Au).
Patterned silk cloth wrapper inscribed with *am*, the five-wheel seed syllable, 7.7 × 7.7 cm (*duk* 953-19)

The textile inscribed with the five-wheel seed syllable *am* written in green pigment corresponds to the east. The dark indigo cloth, which wrapped the eastern bottle and square mirror, is a patterned silk damask. The background of the cloth is five-end, two-step warp satin and the patterned area is five-end, two-step weft satin. The main pattern shows a cluster of four clouds around which are placed treasure motifs, including a wish-fulfilling scepter (*yeoi* 如意), axe-head (*bo* 載), and rhinoceros horn (*seogak* 犀角). In its proper orientation, the diagonal “tail” of each cloud faces to the right. The width of the cloud with and without tails is 5 cm and 3.3 cm, respectively, and the height is 2.7 cm. The thickness of the patterned area measures 0.33 cm, and the background varies between 0.29 and 0.30 cm. The character *am* is written on the inner face of the cloth. Component
analysis identifies the pigment as malachite, which has copper (Cu) as its principal component. The textile was dyed with natural indigo.

Fig. 91 Textile pattern

Fig. 92 Enlarged image of the cloth

①–5. Mineral thought to be pyrite, 1.9 × 1.4 × 1.1 cm (duk 953-20)
Component analysis suggests that this item may be pyrite, which has iron (Fe) and sulfur (S) as its principal components. It was wrapped in a separate piece of paper.

①–6. Paper wrapper for the mineral thought to be pyrite, 6.6 × 6.6 cm (duk 953-21)

①–7. Fragrant rosewood (dalbergiae odoriferae lignum; ganghyang 降香), 1.7 × 1.7 × 1.1 cm (duk 953-22)
This wood is used in traditional Korean medicine. It was wrapped in a separate piece of paper.

①–8. Paper wrapper for the fragrant rosewood (dalbergiae odoriferae lignum; ganghyang 降香), 6.7 × 6.6 cm (duk 953-23)

①–9. Unidentified herb, 1.3 × 1.9 × 0.9 cm (duk 953-24)
It was wrapped in a separate piece of paper.

①–10. Paper wrapper for the unidentified herb, 6.6 × 6.7 cm (duk 953-25)

①–11. Paper wrapper, 18.3 × 19.0 cm (duk 953-26)
This is the outermost wrapper used to bundle the various dedication materials associated with the eastern direction.
② Southern Bottle
②−1. Lacquered wooden bottle, H 4.2 cm (duk 953-27)

This treasure bottle was found together with a triangular mirror and pearls, all of which were wrapped in a piece of cloth inscribed with the true-mind seed syllable darak. The bottle, resembling a prunus vase, is made of wood and painted with lacquer. The overall surface appears red. Grains were found inside the hollow interior of the bottle. It measures 4.2 cm in height and has a maximum diameter of 2.0 cm; the diameter of the base is 1.5 cm and the diameter of the neck is 1.0 cm. Strings made of silk floss are tied around the neck.

②−2. Triangular mirror, each side 1.7 cm (duk 953-28)

Among the mirrors of the five directions, the triangular mirror is associated with the south. Made in the form of an equilateral triangle, it measures from 0.77 cm to 0.84 cm in thickness. Analysis of its composition shows that it was made from an alloy of tin (Sn) and lead (Pb) in a ratio of 9:1, similar to the square mirror.
②–3. Pearls (duk 953-29)

These eight pearls were found together with a treasure bottle and the triangular mirror, all wrapped in the cloth inscribed with the true-mind seed syllable darak. Since each pearl is pierced through the middle, it appears they were intended to be threaded on a wire or string. Analysis shows they are natural pearls. The largest dimension of any pearl is 2.850 mm and smallest is 1.865 mm.

②–4. Hemp cloth wrapper inscribed with the true-mind seed syllable darak, 7.8 × 8.5 cm (duk 953-30)

The textile inscribed with the true-mind seed syllable darak corresponds to the south. It was used to wrap a treasure bottle, triangular mirror, and pearls. This inner cloth wrapper was paired with an outer cloth wrapper inscribed with the five-wheel seed syllable kam. The inner wrapper is a plain weave hemp and measures 7.5 cm on the left side, 7.8 cm on the right side, 8.3 cm along the upper edge, and 8.5 cm along the lower edge. Its density is 20 x 20 (warp yarn x weft yarn per sq. cm). A selvage is on one side. The true-mind character is written in gold powder (Au).
Floral-patterned silk cloth wrapper inscribed with the five-wheel seed syllable *kam*, 11.0 × 7.7 cm (*duk 953-31*)

The five-wheel seed syllable *kam*, which corresponds to the south, is written on the textile in red pigment (HgS). The orientation of the inscribed character is perpendicular to the direction of the weave; it is not written on the patterned surface but on the inner face of the cloth. The cloth is a silk damask with the pattern on its face. It measures 11 cm on the left and right sides, 7.7 cm along the upper edge, and 7.3 cm along the lower edge. Its thickness measures 0.28 cm in the background and 0.35 cm in the patterned areas. The background of the design is warp float face of five-end satin weave with an interruption of two and the patterned area is weft float face of five-end satin weave with an interruption of two. Relatively thicker weft threads are used, and the patterned area looks even more prominent because two thick wefts
were used for each warp. The floral pattern is enriched with treasure motifs, including double lozenges (*bangseung* 方勝), coral (*sanho* 珊瑚), axe-head (*bo* 輪), and rhinoceros horn (*seogak* 犀角).

![Textile pattern](image1)

![Enlarged image of the cloth](image2)

②−6. White radish seeds (*duk* 953-32)
The white radish seeds, which range in size from 1.939 x 2.458 to 2.290 x 3.215 mm, were wrapped in a piece of paper.

②−7. Paper wrapper for white radish seeds, 6.8 x 6.8 cm (*duk* 953-33)

②−8. Ulmi cortex (elm bark) (*duk* 953-34)
The four pieces of bark from elm trees were wrapped in a piece of paper separate from the bottle. The longest piece is 19.238 mm and the smallest is 2.893 x 8.856 mm.

②−9. Paper wrapper for the elm bark, 6.7 x 6.7 cm (*duk* 953-35)

②−10. Paper wrapper, 22.0 x 27.5 cm (*duk* 953-36)
This outer paper wrapper, which was dyed red, contained all the objects associated with the southern direction. It measures 21.9 cm on the left side, 22 cm on the right side, 26.9 cm along the upper edge, and 27.5 cm along the lower edge. The diagonal from the lower left corner to the upper right corner measures 35.4 cm and from the lower right corner to the upper left corner measures 34.3 cm.
②-6 ②-8
②-7 ②-9
②-10
Western Bottle

−1. Lacquered wooden bottle, H 4.3 cm (duk 953-37)

The bottle was found together with a circular mirror, both of which were wrapped in a piece of hemp cloth inscribed with the true-mind seed syllable harik. Like the others, this bottle is made of wood and painted with lacquer. Red pigment remains on the lower part of the body. It measures 4.3 cm in height and 2.0 cm in maximum diameter; the base diameter is 1.3 cm and the neck diameter is 1.1 cm. Strings made of silk floss are tied around the neck, and some rapeseeds remain in the interior.

−2. Circular mirror, D 1.9 cm (duk 953-38)

The circular mirror was discovered with a treasure bottle, both wrapped in a hemp cloth wrapper inscribed with the true-mind seed syllable harik. Among the mirrors of the five directions, it is associated with the west. It measures from 0.72 cm to 0.78 cm in thickness. Like the other mirrors, it is made from a tin (Sn) and lead (Pb) alloy in a ratio of 9:1.
③–3. Hemp cloth wrapper inscribed with the true-mind seed syllable *harik*, 9.2 × 8.9 cm (*duk* 953-39)

The textile, inscribed with the true-mind seed syllable *harik* that corresponds to the west, wrapped a bottle and the circular mirror. This inner cloth wrapper was paired with an outer cloth wrapper inscribed with the five-wheel seed syllable *bam*. The inner wrapper is a plain weave hemp. It measures 9.2 cm on the left side, 8.2 cm on the right side, and 8.9 cm along the lower edge; its thickness is about 0.25 to 0.30 cm. Its density is 20 × 17.5 (warp yarn x weft yarn per sq. cm). A selvage remains on one side. The character is written in gold powder (Au).

Fig. 96 Enlarged image of the cloth
③–4. Cloud-patterned silk cloth wrapper inscribed with the five-wheel seed syllable *bam*, 7.7 × 7.4 cm (*duk* 953-40)

The silk wrapper inscribed with the five-wheel seed syllable *bam*, corresponding to the west, was found outside the hemp wrapper inscribed with the true-mind seed syllable *harik*. It is a silk damask with its pattern on the face of the textile. The background of the design is warp float face of five-end satin weave with an interruption of three and the patterned area is weft float face of five-end satin weave with an interruption of three. The cloud motifs are connected to form an allover matrix. The character *bam* is written in white with a lead-based pigment (Pb). The textile measures 7.6 cm on the left side, 7.7 cm on the right side, 7.4 cm along the upper edge, and 7.4 cm along the lower edge; the thickness ranges from 0.20 to 0.24 cm.

Fig. 97 Textile pattern

Fig. 98 Enlarged image of the cloth
③−5. White lead ore, 1.2 × 2.5 × 0.85 cm (duk 953-41)
Analysis indicates that this ore was chiefly lead (Pb). It was wrapped in a separate piece of paper.

③−6. Paper wrapper for the white lead ore, 6.7 × 6.8 cm (duk 953-42)

③−7. Rice seeds (duk 953-43)
The average size of the seeds is about 3.295 x 7.148 mm. They were wrapped in a separate piece of paper.

③−8. Paper wrapper for the rice seeds (duk 953-44)
The piece of paper measures 6.7 cm on the left side, 6.65 cm on the right side, 6.65 cm along the upper edge, and 6.7 cm along the lower edge.

③−9. Rapeseeds (?) 0.17 × 0.20 cm (left), 0.15 × 0.19 cm (right) (duk 953-45)
The seeds, thought to be rapeseeds, were discovered loose inside the outermost paper wrapper (duk 953-46). Presumably they spilled from the bottle in which they were originally placed. (The rest of the seeds still remains inside the bottle.)

③−10. Paper wrapper, 18.2 × 18.7 cm (duk 953-46)
This outer paper wrapper contained all of the objects associated with the western direction. It measures 18.2 cm in height and 18.7 cm in width.
4 Northern Bottle
4–1. Lacquered wooden bottle, H 4.2 cm (duk 953-47)

The bottle was found together with a crescent-shaped mirror and seeds wrapped in paper inside a hemp cloth wrapper inscribed with the true-mind seed syllable *ak*. (Because standard iconography identifies the northern mirror as semicircular, the mirror will be described as semicircular in subsequent references.) It is made of wood and painted with lacquer. A trace of red pigment is on the lower part of the body. Grains were placed inside the bottle. Strings made of silk floss are tied around the neck, and the mouth of the bottle is sealed. It measures 4.2 cm in height and 1.68 cm in maximum diameter; the diameter at the base is 1.3 cm and the diameter of the neck is 1.0 cm.

4–2. Semicircular mirror, 1.6 × 1.1 cm (duk 953-48)

The semicircular mirror, associated with the north among the mirrors of the five directions, was found together with a treasure bottle inside a cloth wrapper inscribed with the true-mind seed syllable *ak*. It measures 1.6 cm in length, 0.7 cm in central width, and 0.75 cm in thickness. It is made from an alloy of tin (Sn) and lead (Pb) with a ratio of 9:1.
④–3. Hemp cloth wrapper inscribed with the true-mind seed syllable *ak*, 7.9 × 8.9 cm (*duk* 953-49)

The textile, inscribed with the true-mind seed syllable *ak* associated with the north, wrapped a bottle and the semicircular mirror. It was paired with a black outer fabric. The inner wrapper is a plain weave hemp that measures 20 × 17.5 (warp yarn × weft yarn per sq. cm) in density. It measures 7.9 cm on the left side, 7.8 cm on the right side, 8.9 cm along the top edge, and 8.8 cm along the bottom edge. The character is written in gold powder (Au).

Fig. 99 Enlarged image of the cloth
4–4. Unpatterned silk cloth wrapper (*duk* 953-50)

This fragmentary silk cloth wrapper was found outside the piece of hemp inscribed with the true-mind seed syllable *ak*. It was probably inscribed with one of the five-wheel seed syllables, but verification is impossible due to severe deterioration. The cloth is five-end satin weave with an interruption of two. The exact size of the fabric is unknown since its original form is lost.

4–5. Rapeseeds (?) (*duk* 953-51)

These seeds, thought to be rapeseeds, were wrapped in a separate piece of paper. They were found inside the hemp cloth wrapper along with the treasure bottle and the semicircular mirror.

4–6. Paper wrapper for what is thought to be rapeseeds, 6.7 x 6.7 cm (*duk* 953-52)

4–7. Mung beans (*duk* 953-53)

The mung beans range from 2.769 x 3.655 mm to 3.009 x 4.333 mm in size.
④−8. Paper wrapper for the mung beans, 6.65 x 6.65 cm (duk 953-54)

④−9. Unidentified herb (duk 953-55)
Microscopic analysis suggests that this powder may represent the remains of a dried medicinal herb.

④−10. Paper wrapper for the unidentified herb, 6.7 x 6.7 cm (duk 953-56)
Central bottle

⑤−1. Gilt wooden bottle, H 4.3 cm (duk 953-10)

The yellow treasure bottle was wrapped in a piece of hemp cloth inscribed with the true-mind seed syllable bam. Surprisingly, it was not found with a circular mirror, which corresponds to the center. The bottle, made of wood, was painted with lacquer and covered with gold leaf; gold leaf no longer remains on the bottom. The seeds found inside the bottle are thought to be rapeseeds. Strings made of silk floss are tied around the neck, and the mouth of the bottle is sealed. It measures 4.3 cm in height and has a maximum diameter of 2.1 cm; the diameter of the base is 1.5 cm and the diameter of the neck is 1.0 cm.

⑤−2. Hemp cloth wrapper inscribed with the true-mind seed syllable bam, 8.5 × 8.7 cm (duk 953-13)

This textile, which wrapped the yellow treasure bottle and seeds, is inscribed with the true-mind seed syllable bam that corresponds to the center. This inner wrapper was paired with an outer cloth wrapper inscribed with the five-wheel seed syllable kam. The inner wrapper is a plain weave hemp that measures 8.7 cm on the left side, 8.8 cm on the right side, 8.3 cm along the upper edge, and 8.5 cm along the lower edge. The density is 20 x 20 (warp yarn x weft yarn per sq. cm). The character is
written in golden powder (Au).

Fig. 101 Enlarged image of the cloth

⑤–3. Patterned silk cloth wrapper inscribed with the five-wheel seed syllable kam, 11.0 × 10.7 cm (duk 953-14)

The yellow patterned silk was found outside the hemp wrapper inscribed with the true-mind seed syllable bam. The five-wheel seed syllable kam, corresponding to the center, is written on the inner face of the cloth. It is a silk damask with cloud and floral patterns on its face. The background of the design is a warp float face of five-end satin weave with an interruption of two and the patterned area is weft float face of five-end satin weave with an interruption of two. The cloud and flower motifs alternate, and the background contains depictions of treasure motifs, including double lozenges (bangseung 方勝), coral (sanho 珊瑚), axe-head (bo 鳳), coin (jeonbo 錢寶), scrolls (seobo 書寶), and rhinoceros horn (seogak 犀角). The tail of the cloud faces to the upper left, and the cloud motif measures 2.6 cm in height and 2.9 cm in width. The character kam is written on the inner face of the cloth with red pigment (HgS).
⑤−4. Rapeseeds (?) (*duk* 953-11)
The seeds, which range in size from 1.341 x 1.627 mm to 1.985 x 2.566 mm, are thought to be rapeseeds. They were wrapped in a piece of paper.

⑤−5. Paper wrapper for what is thought to be rapeseeds, 6.7 × 6.65 cm (*duk* 953-12)

⑤−6. Hemp cloth wrapper, 20.2 × 20.7 cm (*duk* 953-15)
All the objects associated with the center were contained in a cloth wrapper that is now stained. It is a plain weave hemp that measures 20.2 cm on the left and right sides, 20.7 cm along the upper edge, and 20.5 cm along the lower edge. The density is 20 x 15 (warp yarn x weft yarn per sq. cm). A selvage on one side measures 0.39 cm. The thickness ranges from 0.27 cm to 0.35 cm.
(4) “Throat-bell container”


The “throat-bell container” has a lid with a tubular spout (huhyeol 喉穴) on top; the short tube, wrapped inside and out with five-color threads, pierces the lid. The collar of the lid is designed as an eight-petal lotus. On each petal, thin lines are incised along the edges, and three circles are incised at the center. The lid measures 2.1 cm in height and 2.4 cm in diameter. The diameter of the tubular spout is 0.4 cm, and each of the eight petals measures 0.7 cm in length and 0.8 cm in width. The body of the container measures 3.6 cm in height and 2.1 cm in diameter. According to an analysis of its composition, it is an alloy of tin (Sn) and lead (Pb) in a ratio of 9:1, the same as the mirrors of the five directions found with the treasure bottles. Solder used on the body is made of an alloy of lead (Pb) and tin (Sn) in a ratio of 6:4. The length of the five colored threads was not measured since they are currently bound around the lid.
Fig. 106 The upper portion of the body of “throat-bell container”

Fig. 107 The base of the body of “throat-bell container”

② **Unidentified organic material, 0.21 × 0.21 × 0.096 cm (duk 953-60)**

A piece of green material was found wrapped inside the five-color threads that pass through the tubular spout of the “throat-bell container.” It is probably an organic substance rather than a mineral, because the main element identified by component analysis was chlorine (Cl).

③ **Unidentified medicinal herb, 0.33 × 0.16 cm (duk 953-61)**

An unidentified herb was found with the unidentified organic material inside the five-color threads. Microscopic analysis suggests it is a medicinal herb.
Eight-petal lotus, H 0.7 cm x D 1.7 cm (duk 953-62)

This piece of metal was discovered below the five-color threads in the interior of the “throat bell container.” The lotus blossom is composed of eight petals and a convex central bud. Just like the lotus on the lid, the eight petals here are adorned with lines cut along the edge and circles incised at the center. According to an analysis of its composition, the metal is an alloy of tin (Sn) and lead (Pb) in a ratio of 9:1, the same as the “throat bell container” and the mirrors of the five directions.

Aragonite spheres and pearls for the sarira, 0.46 × 0.56 cm (left) (duk 953-63, 64, 65)

Discovered below the eight-petal lotus, these gems represent the relic, or sarira. Three spherical objects were identified as aragonite (CaCO₃). Duk 953-63 measures 4.608 x 5.634 in size, the two duk 953-64 pieces measure 3.331 x 3.554 mm and 3.092 x 3.112 mm each. Four natural pearls (duk 953-65) were pierced through the middle like those found with the southern treasure bottle. Their specific gravity is 2.8, and SEM-EDS analysis showed their main components are calcium (Ca) and oxygen (O). They measure between 2.433 x 2.201 mm and 2.701 x 2.407 mm. The remains of a string were found in the hole of one of them.
⑥ Paper wrapper for the aragonite and pearls, 6.7 × 6.7 cm (duk 953-66)

⑦ Aragonite “heart jewel” (simju 心珠), D 0.79 cm (duk 953-67)

The “heart jewel,” now split in two, was wrapped in blue silk and placed at the very bottom of the “throat-bell container.” According to an analytical study, it is identified as aragonite. When the two pieces are joined together, they form a sphere.

⑧ Cloud-patterned silk cloth wrapper, 7.7 × 8.2 cm (duk 953-68)

Outer face of cloth

Fig. 108 Textile pattern of the silk wrapper
This piece of cloth wrapped the “heart jewel.” It is a silk damask with patterns on the face of the fabric. The background is warp float face of five-end satin weave with an interruption of two and the patterned area is weft float face of five-end satin weave with an interruption of two. The pattern combines clouds with treasure motifs, including the coin (jeonbo 錢寶) and axe head (bo 斧). The diagonal tails of the clouds face to the upper right. The cloud motif measures 2.6 cm in length and 3.3 cm in width.

(5) Miscellaneous

① Rhubarb (?), 0.67 × 0.69 cm (left), 0.79 × 0.97 cm (right) (duk 953-69)

These two pieces, thought to belong to the medicinal group, were wrapped in a separate piece of paper inside the yellow cloth wrapper. It appears as if they were originally placed together within one of the five treasure bottle bundles but were later removed from their original location.

② Paper wrapper for rhubarb (?), 6.7 × 6.7 cm (duk 953-70)
(6) Woodblock *sutras*

① Two pages from *A Concise Commentary on the Lotus Sutra*, chapter 11, “Sight of a Treasure Stupa,” Joseon period, 15th-century printing from blocks carved in 1399, 28.1 × 33.3 cm (*duk* 953-71), 28.2 × 33.3 cm (*duk* 953-72)
These folded pages, found inside the body of the sculpture, are woodblock prints from the chapter “Sight of a Treasure Stupa” of the seven-volume Concise Commentary on the Lotus Sutra (Myobeop yeonhwa gyeong yohae 妙法蓮華經要解), which was translated by Kumarajiva and annotated by Jiehuan 戒環 in 1126 during the Song 宋 dynasty. The pages found in the sculpture come from an early Joseon woodblock-printed edition with small, fine characters arranged in twenty-four character lines. The paper measures 28.2 cm in height and 33.3 cm in width. The size of the half frame is 20.4 cm by 13.5 cm. These pages were printed from the same blocks as the version dated 1399 (the first year of King Jeongjong 定宗) in the collection of the National Museum of Korea.² Two characters reading beopsa 法四, or volume 4, are printed at the center of the pages. Unlike the first edition of the sutra, which possesses sharply rendered characters, those found here are bold but lack strokes due to the aging of the woodblocks and the loss of detail through reuse. This might not be the first edition, but a later reprint made during the fifteenth century.

² Five-color threads (duk 953-75)

These cotton threads of five colors were placed inside the folded prints of chapter 11, “Sight of a Treasure Stupa,” from A Concise Commentary on the Lotus Sutra.
Two pages from the *Lotus Sutra*, chapter 25, “Universal Gateway of the Bodhisattva Avalokiteshvara,” Joseon period, 15th century, 25 × 30.4 cm (*duk* 953-74), 25 × 30.5 cm (*duk* 953-75)
These two pages, found inside the body of the sculpture, are woodblock prints from the chapter “Universal Gateway of the Bodhisattva Avalokiteshvara” of the *Lotus Sutra*. The pages were folded with five-color threads inside and wrapped with the “Sight of a Treasure Stupa” pages. The Chinese characters bochil 寶七 and bopal 寶八 along the central crease indicate pages within “The Universal Gateway of the Bodhisattva” chapter. These two pages display the verse portion of the chapter that comes at the end. The width of the paper when folded in half is 15.2 cm. The size of the half frame is 19.1 cm by 13.5 cm.

4 Five-color threads (*duk* 953-76)

These five-color cotton threads were placed inside the folded prints of the chapter “Universal Gateway of the Bodhisattva Avalokiteshvara” of the *Lotus Sutra*.

—Shin Soyeon and Park Seungwon
Review of Research Results

This wooden bodhisattva, now in the collection of the National Museum of Korea (duk 953), was published as a sculpture from the Joseon 朝鮮 period (1392–1910) in the Photo Album of the Yi Royal Family Museum Collection (Riōke hakubutsukan shozōhin shashinchō 李王家博物館所蔵品寫眞帖). This attribution remained in place until recent times. Scientific analysis conducted through this research project indicates the wood of the sculpture probably dates to the years between 1220 and 1285 CE. Furthermore, current scholarship on Goryeo 高麗 Buddhist sculpture, including iconography, style, and dedication materials, all suggest it is a work from the thirteenth century during the Goryeo dynasty (918–1392).

This important sculpture reflects the popularity of the Water-Moon Avalokiteshvara seated in the royal-ease pose (yuhuijwa 遊戱坐) during the Goryeo dynasty. This status was based upon the long tradition of worshipping the deity who is known for great compassion and his vow to save all sentient beings. Images of this form of the bodhisattva were influenced by Avalokiteshvara images from the China's Song 宋 dynasty (960–1279). They were first produced in the Goryeo dynasty and continued into the Joseon period. Bodhisattvas seated in royal-ease pose are commonly depicted with the right arm placed on the right knee and the left arm reaching to the side to touch the ground. The bodhisattva in the collection of the National Museum of Korea, however, has the left arm bent in a way that looks as if it is resting upon something. This type of posture originates from Chinese depictions in the Song 宋 and Liao 遼 (907–1125) dynasty of the bodhisattva seated in the royal-ease pose (yunwangjwa 輪王座) with one arm placed on a boulder or sutra desk. The gilt bronze Avalokiteshvara (bon 10328) currently on display at the Chuncheon National Museum is seated in the same manner.

Stylistic features, such as the garment flowing from the back over both shoulders and arms, the rendering of the shawl and the jewelry, strands cascading down to the knees, and the high crown, are clearly influenced by Song and Liao prototypes. This type of dress is often found in sculptures seated in the royal-ease pose (both the yuhuijwa 遊戱坐 and yunwangjwa 輪王座 types). The profusion of jewelry over the entire body appears in bodhisattva images of the Goryeo and continues into the
early Joseon. However, when the decorative motifs of the belt and the bracelets are carefully examined, elements rarely seen among Joseon examples become evident. Thus, the sculpture exemplifies the meticulous and elegant characteristics of Goryeo sculpture.

The representation of the body, the carving techniques, the garments, and the posture of the figure are quite different from the flattened representation of the body and the rigid facial features of Joseon Buddhist sculpture. The body of the bodhisattwa, rendered in a more naturalistic way, shows soft movement. The slim yet rounded face, the straight bridge of the nose, the distinct facial features, the high knot of hair, and the jewelry that crosses the body in the shape of the letter X at the chest and extends down to the legs all follow stylistic features of twelfth-century wooden Avalokiteshvara images from Bongjeongsa 凤停寺 and Bogwangsa 普光寺 in Andong.\textsuperscript{12} Since these two bodhisattvas sit cross legged and are dressed in robes that cover both shoulders, they differ from depictions of Avalokiteshvara dressed in flowing shawls and sitting in the royal-ease pose. The plump rendering of the nose and the corners of the mouth are also found in a seated wooden Amitabha image at Gaeunsa 開運寺, which dates prior to 1274.\textsuperscript{13} Along with the three images mentioned above, contemporaneous sculptures, including the two seated wooden sculptures of Amitabha at Gaesimsa 開心寺 and Cheongryeonsa 靑蓮寺, share the distinctive feature of the neck, which is slightly bent forward. The angle of the bend of Avalokiteshvara's head is quite similar to these other images.

Although this Avalokiteshvara measures only 67.65 cm in height and 42.51 cm in width, it is produced by joining together fifteen pieces of wood which are only 10-15 cm wide. Images created using the joined-block technique can be made in two different ways: several pieces of wood can be joined and then carved, or individual pieces of wood can be carved first and joined later. In the case of this wooden Avalokiteshvara, individual pieces were carved separately and later joined together using staples and nails. These features can be compared with the wooden Avalokiteshvara from Bongjeongsa, which has crystal inlays for eyes, a separately carved piece of wood for the face, a single piece of wood for the central torso and the back of the head, wooden pieces measuring less than 18 cm in width, and a small tab inserted in the wrist to attach the hand.\textsuperscript{14}
Avalokiteshvara’s crown is made from four metal sheets, with gilt bronze used on the front and iron used for the back. Flat metal ornaments with openwork and repoussé decoration attached to the front of the crown are also made of gilt bronze. Although there are very few wooden bodhisattvas with intact crowns, the distinctive characteristics of Goryeo crowns can be identified by comparing the present sculpture with the wooden Avalokiteshvara from the Bogwangsa. The crown of that sculpture was also produced by overlapping bronze sheets with openwork floral and vine scrolls ornamented with flaming jewels. Further, the metal sheet with lotus motifs, a scrolling pattern, and the floral ornaments attached on the lower frame are found in both works and can be considered distinct characteristics of bodhisattva crowns from the Goryeo period.15

The most interesting aspect of this study relates to the dedication materials. It is highly likely that they were disturbed at least once since the sculpture was purchased during the Japanese Occupation (1910–45); also, no dedicatory inscription was found inside the sculpture. The absence of filling materials, used to secure the dedication materials within the sculpture, supports the likelihood of past disturbance. Nevertheless, the remaining objects, such as the five treasure bottles (obobyeong 五寶甁), the textiles used as wrappers for the five bottles, and the “throat-bell container” (huryeongtong 喉鈴筒), are relatively well preserved and help us better understand Goryeo and Joseon practices of installing dedication materials inside a Buddhist image.

The dedication materials can be divided into two groups. One group represents objects installed when the sculpture was produced; the other includes those enshrined after the mid-fifteenth century. The Mahapratisara Dharani Sutra (Daesugu darani gyeong 大隨求陀羅尼經), bundles of colored threads, and the metal cylinder, all found inside the head, remained intact and are thought to have been installed when the image was made. This is confirmed by the paper of the woodblock-printed text, which dates to the Goryeo period. The print, with the dharanis in both Chinese characters and Siddham script, is very similar to volume 61 of the Goryeo Canon of the Esoteric Teaching (Milgyo daejang 密敎大藏) in the collection of the Horim Museum, datable to the mid-thirteenth century, and also volume 9 of the text discovered inside the cavity of a seated wooden Buddha Amitabha at Suguksa 守國寺 in Seoul.16
The metal cylinder found inside the head is thought to have functioned like a “throat-bell” (huryeong 喉鈴), a core element among the dedication materials, although its exact purpose remains unclear. There are Goryeo examples in which a throat-bell wrapped in dharani prints was installed above the chest and around the neck. However, it is no longer found in Joseon examples, and a “throat-bell container” in a cylindrical shape with a tubular spout appears instead.\(^{17}\) Although there is a possibility that the metal object made of silver and copper represents a transitional phase in which a bell-shaped throat-bell acquires a cylindrical form, the fact that it was placed at the center of the head differs from the common practice during the Goryeo period and requires further study.

The dedication materials found inside the body are thought to have been installed in the early Joseon period. The tradition of writing four directional spells (sabangju 四方呪) on a yellow cloth wrapper (hwangchopokja 黃梢幅子) began in the Joseon period. In addition, the various patterns on the textiles used to wrap the dedication materials are exclusive to the early Joseon.\(^{18}\) The tubular spout (huhyeol 喉穴) and the eight-petal lotus (paryeop 八葉) depicted on the lid of the “throat-bell container,” considered standard features of the early Joseon, further suggest a later installation in the fifteenth century.\(^{19}\) Besides the sacred objects, prints of the eleventh and twenty-fifth chapters of the Lotus Sutra, datable to the fifteenth century, were also found inside the sculpture. As all the dedication materials date no later than the mid- to late fifteenth century, no additional installation seems to have been performed afterwards.

Careful analysis, especially a consideration of the shape of the five treasure bottles, may help determine whether all of the dedication materials in the body of the sculpture were installed in the fifteenth century or not. In the Joseon period, the five treasure bottles were customarily made of cloth and were commonly enshrined inside a “throat-bell container” instead of in a wooden or silver bowl, which was the practice during the Goryeo dynasty. The five treasure bottles found inside the Avalokiteshvara in the collection of the National Museum of Korea take the shape of actual bottles, which indicates a relatively early practice. Each bottle, made of wood and covered with lacquer, is similar to a prunus vase (maebyeong 梅甁) in shape; this was a popular ceramic form in the Goryeo and early Joseon periods. Details, such as
the neck and mouth of the ceramic prototypes, are also rendered in these wooden forms. Seeds were placed inside and sealed with silk floss. Thus, they share the same function as actual bottles, which were used to store items used in daily life.

The surface of the bottles was adorned with gold leaf or with colored pigments symbolically associated with the five directions. In the case of the gold and green bottles, their colors and directional associations differ from the Sutras on the Production of Buddhist Images (Josang gyeong 造像經), a ritual text compiled in the Joseon period, but they instead correspond to the contemporary bokjang ritual.

The bottles, accompanied by mirrors of various shapes that also correspond to the five directions, were encased in two different cloth wrappers inscribed with the true-mind seed syllables (jinsim jongja 真心種子) and five-wheel seed syllables (oryun jongja 五輪種子). These five different small bundles were placed inside a yellow cloth wrapper along with various seeds and medicinal herbs, which were enclosed in separate pieces of paper. The colors of the textiles correspond with the colors of the five treasure bottles of the Joseon period.20 It is closely related to the Goryeo tradition in which the true-mind seed syllables and five-wheel seed syllables were written on a bowl. It appears to have been a prototype for installing the five-wheel seed syllables and the true-mind seed syllables in a “throat-bell container,” a ritual step commonly found in Joseon dedication materials and the contemporary bokjang ritual.

While grains, seeds, and medicinal herbs were wrapped in separate pieces of paper and installed with the five treasure bottles, some of the seeds that spilled from the bottles were wrapped in paper and others were not. This may suggest the grains that spilled from the original dedication materials might have been wrapped in paper during a rededication. Elements without wrappers seem to have spilled from the bottles after the rededication was done. Therefore, we cannot rule out the possibility that the original dedication materials might have been reorganized and combined with added materials, such as the “throat–bell container” and the mirrors of the five directions (possessing identical metal alloys), when the bodhisattva was repaired and rededicated in the early Joseon period.

As mentioned earlier, the five treasure bottles and the mirrors of the five directions were wrapped in textiles inscribed with the true-mind seed syllables and five-wheel
seed syllables. The heart jewel (simju 心珠) and “throat-bell container” were bundled separately. This type of installation differs from the early Joseon practice, where the five treasure bottles were placed inside a “throat-bell container,” as demonstrated by instances of the dedication materials found inside a Boy Manjushri at Sangwonsa 上院寺 dated to 1466 and those of twin Vairochana images at Haeinsa 海印寺, which were rededicated in the 1490s. The fact that the five bundles containing the treasure bottles exist separately from the “throat-bell container” recalls the practice described in a passage from the Sutras on the Production of Buddhist Images, which states that a piece of crystal with no hole shall be placed in a sarira reliquary and made into the core by placing it at the center of five treasure bottles.22 This method of installation is quite different from both the Goryeo and Joseon practices where bottles are placed inside a lidded bowl or a “throat-bell container,” respectively. Hence, ideas surrounding the “throat-bell container” may had been in a transitional stage.

This study is significant in that the sculpture has been redated to the Goryeo dynasty. The Mahapratisara Dharani Sutra (Daesugu darani gyeong 大隨求陀羅尼經) found inside the head of the bodhisattva attests to the dharani cult during the Goryeo period. Furthermore, the dedication materials found inside the image's body, including the five treasure bottles and the “throat-bell container,” show changes in the ways of installing dedication materials. Finally, the joined-block technique for constructing the sculpture has been examined, and the wood used for the sculpture has been identified through species identification. The authors hope this report serves as a resource for further research on Buddhist sculpture and dedication materials of the Goryeo and Joseon dynasties.

—Shin Soyeon
Notes

1 "Duk" is an abbreviation of "duksu (德壽)," now romanized deoksu. Objects that were in the collection of the Deoksu Palace Museum prior to its merger with the National Museum of Korea have collection numbers that begin with duk.

2 Throughout this manuscript, directional references are "proper" and represent the point of view of the sculpture.

3 For this image of the sculpture, see Riöke hakubutsukan shozôhin shashincho butsuzô no bu 李王家博物館所藏品寫真帖 仏像ノ部 (Riöshoku, 1929), fig. 51.

4 Because the specimen was very small (measuring less than 3 mm), three sections were sliced using a razor blade. The sliced specimens were dehydrated with ethanol and stained with 1% aqueous safranin solution. The stained specimens were vitrified with xylene, sealed in glass slides using Permount, and made into permanent slides. The finished permanent slides were observed using Leica Leitz Labourlux and features of the cells were photographed.

5 According to XRF analysis, copper (Cu) is the main ingredient of the flaming jewel pinned at the center of the front of the crown, although a small amount of gold (Au) was also detected. It can be identified as gilt copper because copper (Cu), gold (Au), and mercury (Hg) are detected in the gilt layer.

6 Iron (Fe), gold (Au), and tin (Sn) are detected in the gilt iron of the back sheet and in the flame-shaped ornaments above the wooden ribbons on either side of the crown.

7 Mercury (Hg) and lead (Pb) were found in the area painted with red pigments.

8 The Concise Commentary on the Lotus Sutra (Jeung 3456, Treasure no. 1081), dated to the first year of King Jeongjong 定宗 (1399) of the Joseon dynasty, in the collection of the National Museum of Korea, measures 27.2 cm in height and 15.9 cm in width. The printed frame measures about 27 cm in width; the height and width of the half frame measure 19.4 cm to 20.1 cm and 13.3 cm to 13.7 cm. At the end of volume seven is a votive inscription written by Namjae 南在 that records the sutra was carved by monk Haelin 霧隣 and Yi Yang 李穰 in 1399. A seal in volume four reads, Hakjo 學祖. Volumes 1 to 3 and 4 to 7 of the Concise Commentary on the Lotus Sutra (Treasure no. 793), found inside the seated wooden Boy Manjushri at Sangwonsa 上院寺 in Gangwon province, are also printed from the same woodblocks.

Yuhuijwa refers to a seated posture with one leg raised and the other leg pendant. Yunwangjwa is a posture with one leg raised and the other leg bent and tucked against the body. Representative Korean sculptures seated in the yuhuijwa pose include the gilt bronze Water-Moon Avalokiteshvara in the collection of the Dongguk University Museum and the Avalokiteshvara (bongwan 10328) housed in the National Museum of Korea. Illustrative works seated in the yunwangjwa pose include: a gilt bronze bodhisattva from Goseongsa in Gangjin; an Avalokiteshvara in the Hall of Utmost Bliss at Muwisa in Gangjin; a gilt bronze Avalokiteshvara (duk 801) in the National Museum of Korea; a gilt bronze Avalokiteshvara at Daeheungsa in Haenam; a terracotta Buddha at Sudeoksa in Busan; a wooden Avalokiteshvara at Naewonjeongsa in Busan; a gilt bronze Avalokiteshvara in the Leeum, Samsung Museum of Art; and a gilt bronze Avalokiteshvara excavated at Mount Geumgang or the Diamond Mountains and is now in the Joseon Central Historical Museum in Pyeongyang.

See Jeong Eun-u (Jeong Eunwoo), “Goryeo hugi bosalsang yeongu,” 120.


For a discussion of production techniques used to make the seated wooden Avalokiteshvara of Bongjeongsa, see Im Nam-su 金南洙, “X seon tungwa chwaryeong jangchi reul iyonghan mokjo bulsang ui jejak gibeop yeongu X선 루프촬영장치를 이용한 목조불상의 제작기법 연구,” Misulsahak yeongu 美術史學研究 253 (2007): 77–85. For more on the joined-block technique used in the production of wooden images during the Goryeo period, see Im Nam-su 金南洙, “Gaeunsa Myeongbujeon mokjo Amita yeorae jwasang ui jejak gibeop 開運寺冥府殿木造阿彌陀如來坐像의 제작기법,” Misul jaryo 美術資料 78 (2009): 192–203.

For a discussion of the form and production techniques of crowns datable to the mid-Goryeo period, see Jeong Eun-u (Jeong Eunwoo), “Songdae Bulgyo jogak ui Goryeo yeup gwa seontaek,” 56–57, and Choe Seong-eun (Choe Song Eun), Goryeo sidae, 320–21.

The Canon of the Esoteric Teaching is a compilation of dharanis, and the publication of volume 61...
in the collection of the Horim Museum is thought to date between 1259 and 1265. See Bak
Gwang-heon (Park Gwang-hun) 박광헌, “Goryeobon Milgyo daejang gwon 61 e gwanhan seojjeok
For a discussion of the Canon of the Esoteric Teaching found among the dedication
materials yielded by the Buddha Amitabha at Suguksa, see Nam Gwon
-hui (Nam Kwon-Hee) 남권희, “Goryeo
sidae Milgyo daejang gwon 9 e gwanhan seojjeok yeongu 高麗時代 『密敎大藏』 卷9의 書誌의

17 In the case of the seated gilt bronze Buddha at Munsusa, the "throat
bell" was wrapped with four sheets of dharanis. See Gang In
-gu 姜仁求, “Seosan Munsusa geumdong yeorae jwasang
bokjang yumul 瑞山文殊寺 金銅如來坐像腹藏遺物,” Misul jaryo 美術資料 18 (1975): 9; Yi Yong
-ung 이용웅, "Bulsang bongan uisik ui jeongsu, bokjang
불상봉안의식의 精髄, 腹藏," in Bulbokjang uisik
hyeonhwang josa bogoseo 불복장의식 実相조사보고서 (Seoul: Daehan Bulgyo Jogyejong
chongmuwon munhwabu · Bulgyo munhwajae yeonguso, 2012), 20–21.

18 The yellow cloth wrapper from the Goryeo period are rarely inscribed with directions. On the
contrary, cardinal directions were typically inscribed on the surface of the yellow cloth wrapper
with ink or red pigment in the Joseon period. See Yi Seon-yong (Lee Seonyong) 이선용, "Bulbokjangmul guseong hyeongsik e gwanhan yeongu 佛腹藏物

19 In the early Joseon period, the lids of "throat-bell containers" were shaped like an eight
petal lotus, as is the case with the "throat-bell container" found in the wooden Boy Manjushri from
Sangwonsa dated 1466. However, the eight-petal lotus lids disappeared later and replaced with a
separate item made of a metal sheet representing an eight-petal lotus. The eight-petal lotus
sheets were placed above the five treasure bottles inside the "throat-bell containers". See Yi Seon-
yong (Lee Seonyong), "Bulpokjangmul guseong hyeongsik e gwanhan yeongu," 88–90.

20 See the footnote 1 on page 73 of the “Bulbokjang uisik seolhaeng sarye 불복장의식 선행 사례” in
Bulbokjang uisik hyeonhwang josa bogoseo 불복장의식 현황조사보고서 (Seoul: Daehan Bulgyo
Jogyejong chongmuwon munhwabu · Bulgyo munhwajae yeonguso, 2012).

21 See Daejeokgwangjeon · Beopbojeon Birojanabul bokjang yumul josa bogoseo 大皆光殿 · 法寶殿 비로자나불
복장유물 조사보고서 (Haeinsa · Munhwajae cheong, 2008); Son Yeong-mun 손영문,
"Haeinsa Beopbojeon mit Daejeokgwangjeon mokjo Birojana bulsang ui yeongu

22 Seated wooden Buddhas of the Three Ages at Donghwasa 梧華寺, dated to 1727, and a banner
painting (gwaebul 挂佛) at Seonamsa 仙巖寺, dated to 1753, represent examples in which the five
treasure bottles and a container considered to be a sarira reliquary were installed as dedication
materials. However, they differ because they were all placed inside a "throat-bell container." Kim
Mi-gyeong 김미경, "Palgongsan Donghwasa mokjo samsebul jwasang ui bokjangmul geomto 八空
山 梧華寺 木造三佛坐像의 腹藏物 討論," Bulbog misul sahab 佛教美術史學 3 (2005): 273; Yi Seon-