

Article

Navigating Voyages in Real and Religious Life: The Big-Dipper Belief and Shipbuilding in Premodern China

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Abstract: Sailors in premodern China performed various types of rituals to pray for safe voyages. This article investigates a unique seven-dot image discovered from shipwrecks dated to thirteenth- and fourteenth-century China. Comparing the seven-dot image with the Big-Dipper image in premodern navigation maps, this article demonstrates that the seven-dot image represents the Big Dipper. The Big Dipper in premodern China was both an essential, practical guidance in maritime voyages and a religious symbol that the faithful believed could prolong the human's lifespan and command the element of water. The dual function of the Big Dipper endowed the Big-Dipper images in ships with a dual meaning and made it particularly auspicious. The Big Dipper's practical function prompted the carvers to present the image accurately, making it distinctive from other Big-Dipper images in the religious context.

Keywords: the Big Dipper; shipbuilding; folk belief; folk rituals; premodern China

In 1976, a shipwreck dated to 1323 was excavated to the southwest of the Korean peninsula. Named after the region where it was found—Sinan—the shipwreck contained more than twenty thousand Chinese ceramics, 28 tons of coins, and even Japanese wooden slippers and Korean spoons (Choi 1990, p. 83; Yoon 1989, pp. 90–91). The Sinan shipwreck, which sank on its route from Ningbo in southeastern China to Japan, provides valuable information on East Asian maritime trade such as the popular cargo and organizations of long-distance trade (Murai 2005, pp. 113–43). Besides the precious objects recovered from the shipwreck, the ship itself also has much to tell about the East Asian maritime world, especially people's religious life.

A particularly intriguing part in this shipwreck is an image of seven dots carved into the joint of the keel—the most important beam of the vessel's hull. Located in an invisible place, those seven dots apparently had no practical function, nor were they for decorative purposes. Then, for what reasons did people make efforts to carve this image in such a place?

Comparing this seven-dot image with another well-known seven-dot image—the image of the Big Dipper—this article demonstrates that the seven-dot image on the Sinan shipwreck and similar images on other shipwrecks represent the Big Dipper¹. This article further explores the meaning of the Big Dipper in navigation and religious contexts and argues that not only the practical function but also the religious symbolization of the Big Dipper made it a very auspicious and favorable motif in the rituals of shipbuilding.

¹ The Big Dipper is an asterism of seven stars forming a scoop-like shape. This asterism is usually called The Big Dipper or Plough in English. Its name is Beidou 北斗—literally the Northern Dipper—in Chinese.

1. The Big Dipper in Ships

The seven-dot image so far has been found in at least two shipwrecks: the Sinan shipwreck and a shipwreck discovered in the Quanzhou Bay in southeastern China. Excavated in 1974, the Quanzhou Bay shipwreck was dated to the late thirteenth century, making it a contemporary to the Sinan shipwreck (Fujiangsheng quanzhou haiwai jiaotongshi bowuguan 福建省泉州海外交通史博物館 1987, p. 53).

The structures of those two shipwrecks were almost identical. The Sinan shipwreck has a length of 27.5 m and a width of 10.5 m while the Quanzhou Bay shipwreck is 26.5 m long and 9.5 m wide. Both of them have a V-shape bottom and the most critical point for this article—seven dots carved into the joint of the keel. Both shipwrecks show features of the “Fu ship” (Fuchuan 福船). As a matter of fact, the high similarities between the Sinan shipwreck and the shipwreck in Quanzhou Bay have been used as key evidence in demonstrating that the Sinan shipwreck was originally built in Quanzhou (Xi 1994, pp. 55–74).

The seven-dot image appeared in a slightly different way on the two shipwrecks. In the Quanzhou Bay shipwreck, the seven dots circled around a larger hole (Figures 1 and 2), while in the Sinan shipwreck, the seven dots and the larger hole were carved separately in different joints of the keel (Figure 3).

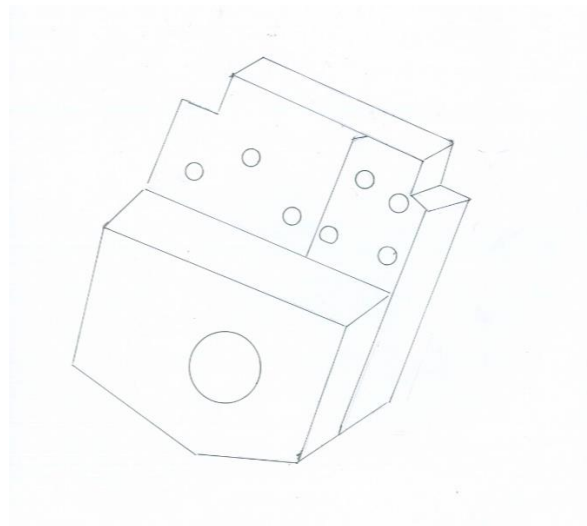


Figure 1. Line drawing of the keel joint with the carved seven dots of the Quanzhou Bay shipwreck.

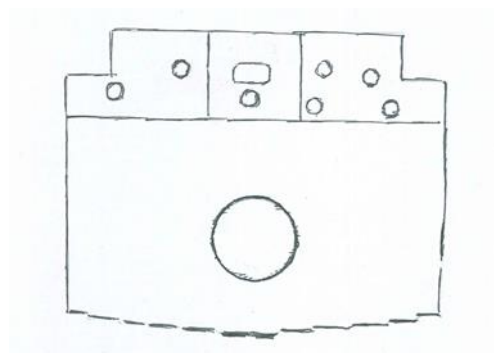


Figure 2. Line drawing of the cross-section of the keel joint of the Quanzhou Bay shipwreck. Line drawings based on (Fujiangsheng quanzhou haiwai jiaotongshi bowuguan 福建省泉州海外交通史博物館 1987, p. 16). Courtesy of Mr. Eason Y. Wang.

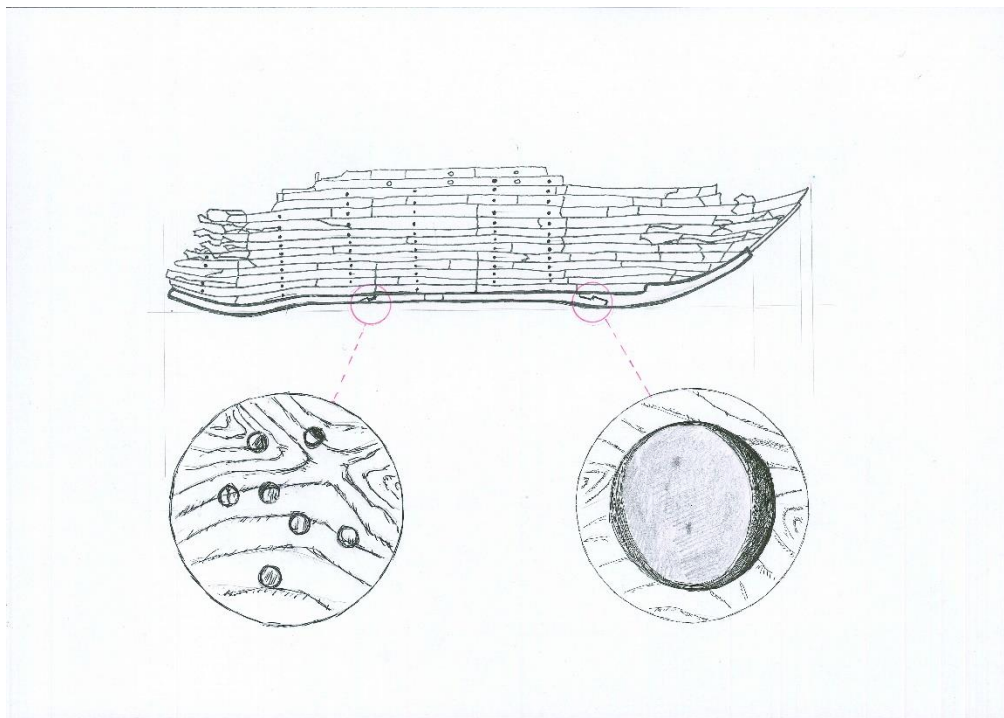


Figure 3. Line drawing of the carved seven-dots image in the Sinan shipwreck. Line drawing based on (National Research Institute of Maritime Cultural Heritage 2016, p. 64). Courtesy of Mr. Eason Y. Wang.

There have been two major views regarding the meaning of the seven dots: one is that the seven dots symbolize the seven islands (Qizhou 七洲) in the South China sea, and the other view, which is also a more widely accepted view, maintains that the seven dots represent the Big Dipper (National Research Institute of Maritime Cultural Heritage 2016, pp. 64–65). The former explanation claims that the seven islands in the South China sea were a particularly dangerous place for ships, and carving the image of seven islands could add protection and help the vessel pass that region safely. Those seven islands can be identified in navigation maps. According to *The Navigation Maps of Zheng He's Expedition* (Zheng He hanghai tu 鄭和航海圖)—a seventeenth-century navigation manual—the seven islands were very close to the east coastline of modern Hainan Island, and they were labeled as “Qizhou” (七洲 seven islands). (Figure 4).

This “seven islands” theory may not be the most appropriate explanation for the seven-dot image for the following reasons. First, the seven islands were not even on the route of the Sinan shipwreck, since the Sinan shipwreck traded in East Asia while the seven islands are located on the sea routes to Southeast Asia. Although it is possible that the Sinan shipwreck intended to trade in a large region as some scholars suggest (Kubo 2008, pp. 142–54), or people did not take the future route into consideration when they were building the ship, the image of the seven dots would still lose some power if it could not be applied to all the conditions. Moreover, according to the navigation map, the seven islands were not very close to the sea route, and compared to other islands nearby, they did not seem to be more threatening. Last but not least, the images carved in the ships did not resemble the shape of those seven islands on maps even in a remote way. The similarity is a crucial factor in establishing connections between images, while the seven dots in the ships and the seven islands in maps clearly did not have any.

The theory that the seven dots represented the Big Dipper, contrary to the seven islands interpretation, could gain much support from the resemblance between the images. The seven dots in the shipwreck in Quanzhou Bay were delicately arranged according to the Big Dipper's shape. Both the scoop and the handle are quite discernable, and even the curve is also in a similar angle.

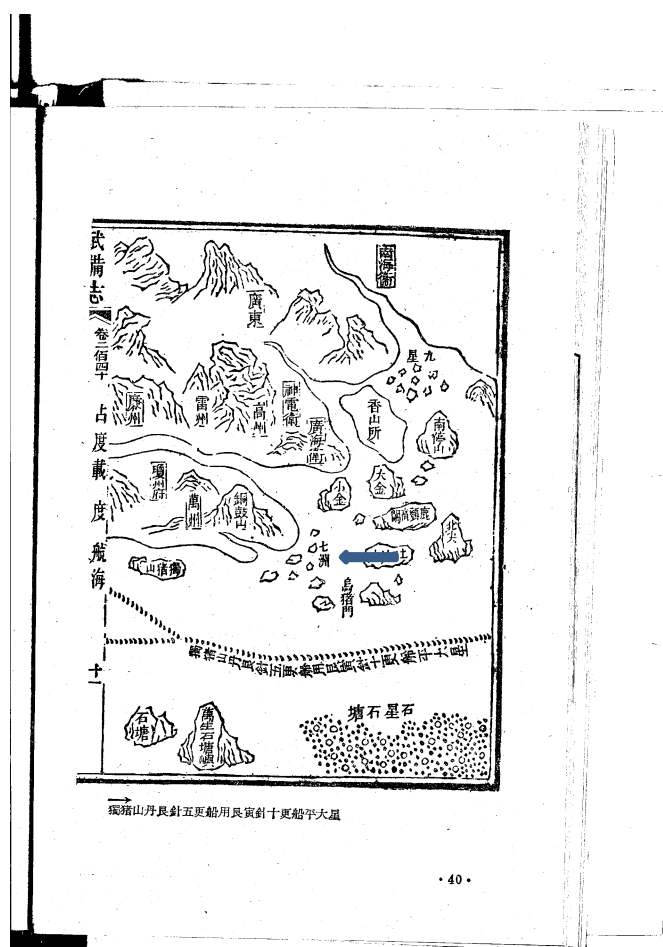


Figure 4. “Qizhou” (Seven Islands) in navigation maps. *Zheng He hanghai tu* (*The Navigation Maps of Zheng He’s Expedition*), p. 40.

In addition, as we see in both images, a larger hole was found in both shipwrecks, which fits the Big Dipper theory too. The larger hole in the whole image can be interpreted as representing the moon. Additionally, neither the carved dots nor the hole was empty—coins were found in the seven dots, and a mirror was recovered from the larger hole.

The excavated coins further strengthened the connection between the seven dots and the Big Dipper. Carving a hole in the keel and filling it with coins was a more common practice, which can be seen in other shipwrecks, and the hole is usually called the “hole for ensuring longevity” (*baoshoukong* 保壽孔). Shipwrecks dated to a later period contained coins that bear the motif of the Black Warrior (*xuanwu* 玄武) or even coins with the Big Dipper (Fu 2003, p. 39). The Black Warrior, which is comprised of a turtle and a snake, represents the north in the traditional Chinese geomancy—the direction that the Big Dipper indicates. The coins with special motifs have only been recovered from the single hole carved in ship keels, and none were found in the Sinan and Quanzhou Bay shipwrecks. Perhaps, to simplify the shipbuilding procedures, the function of the carved seven dots was transferred to the specially made coins, which bore the image related with the Big Dipper.

2. The Big Dipper in Navigation Maps

The Big Dipper was probably the most important part of navigation maps. The significance of the Big Dipper to sailors who took long-distance voyages has long been acknowledged.

As early as the second century B.C., Chinese people had already begun to use the Big Dipper to identify directions in voyages: “when the people on ship cannot tell the east or the west, they only

need to find the Big Dipper and the Pole Star, and then they will understand" (*Huainan zi*, p. 776). In the fourth century, Ge Hong 葛洪, a famous Daoist, wrote: "Those who are sailing in the enormous sea have to rely on the Big Dipper and the Pole Star to find their way back" (*Baopuzi waipian*, p. 61). When the famous Buddhist monk Faxian 法顯 recorded his journey from China to India and Sri Lanka in the fifth century, he recalled: "The sea is so vast that it does not have any boundaries, so one cannot tell where the east is and where the west is. They can only depend on the sun, the moon, and the stars to tell the direction of their voyages. If it is cloudy or raining, the ship may be blown away by the wind and lose its direction . . . Only until it clears up can people tell the direction again and continue their journeys" (*Foguoji zhuyi*, p. 141). Faxian's account not only depicted people's dependence on the celestial observation during sea voyages at that time but also revealed the immediate dangers once they lost the sight of those stars.

With the navigation technologies developing, by the early twelfth century, people could use the compass as an auxiliary to identify directions. However, it is evident that the celestial observation was still preferred. The importance of the Big Dipper was emphasized repeatedly. Learning from his father's tenure as an official in the busy international port Guangzhou in southern China from 1099 to 1102, Zhu Yu 朱彧 gave an account of the navigators at that time: "when the navigators need to figure out the geographical circumstance, they observe stars during the night, watch the sun during the day time, and use the compass if it is cloudy" (*Pingzhou ketan*, p. 26). Xu Jing 徐兢, who went to the Korean peninsula as an ambassador by the sea route in 1124, also recorded: "when people are sailing on the sea, they cannot stop [during the night], so they have to keep going by observing the stars and the Big Dipper. If it is cloudy, they use compass to tell the north and the south" (*Xuanhe fengshi gaoli tujing*, p. 72).

The Big Dipper performed two significant functions in sea voyages. First, sailors used the Big Dipper to tell the direction. The Big Dipper itself was an indication of course and can also guide people to locate another important star—the Pole Star. The Pole Star frequently appeared in historical records, and it formed one line with the first two stars of the Big Dipper. Therefore, if one connected the first two stars of the Big Dipper and extended the line, one could find the Pole Star easily—the distance between the Pole Star and the first star of the Big Dipper is about five times that between the first and the second stars of the Big Dipper.

Moreover, sailors also used the Big Dipper and the Pole Star to calculate the latitude and obtain more precise information on their location. The tools that sailors in premodern times used to calculate the latitude were designed to measure the relative distance between the Big Dipper and the horizontal line or that between the Pole Star and the horizontal line. During his journey from Quanzhou to Persia, Marco Polo recorded the Pole Star position whenever it was visible, together with the height between the star and the horizontal line. One bamboo ruler was excavated from the section of stern rudder in the site of the Quanzhou Bay shipwreck (Han 1987). Considering that the section of the stern rudder was the workplace of navigators, and the scale of this ruler was different from that of ordinary rulers, this ruler was likely for measuring the height of stars, which was recorded in historical texts as a "ruler for measuring the celestial realm" (*liangtian chi* 量天尺). The ruler also demonstrates that the documented historical methods were indeed put into practice.

Therefore, it is not surprising that the Big Dipper took up a prominent place in navigation maps. *The Navigation Maps of Zheng He* included four maps in total to explain how the celestial observation can give directions for sea voyages, and every map placed the Big Dipper in a very conspicuous position (Figures 5 and 6). Furthermore, the short passage of instruction on each map always started with the relative location of the Big Dipper, which once again confirmed that the height of the Big Dipper and the Pole Star was the upmost crucial information in navigation. These instructions also suggest that when people were using those maps, they were supposed to first locate the position of the Big Dipper.

The Big-Dipper images on navigation maps were usually carefully drawn to present the Big Dipper as accurately as possible. Sometimes, the images were rotated to a certain angle to present the real situation that sailors would see. It is important to note that the seven-dot image on the shipwrecks bears a high resemblance to the Big Dipper image on the navigation maps. The Big Dipper

images in a religious context, as the following section will show, were different and contained their own characteristics.

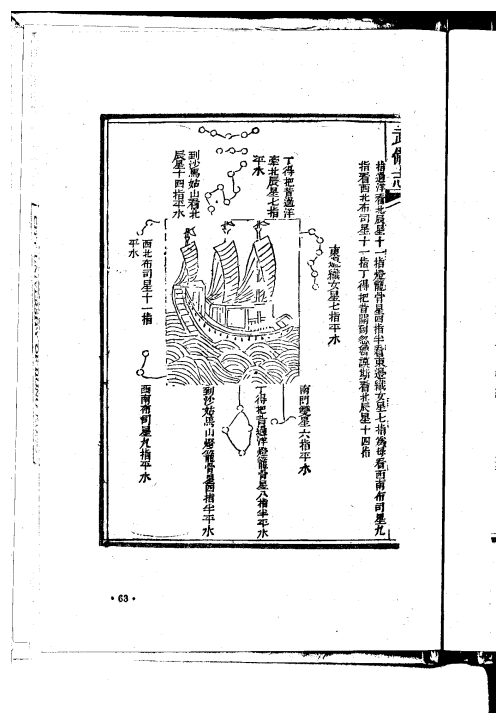


Figure 5. Big Dipper in the navigation maps. *Zhenghe hanghai tu* (The Navigation Maps of Zheng He's Expedition), p. 63.

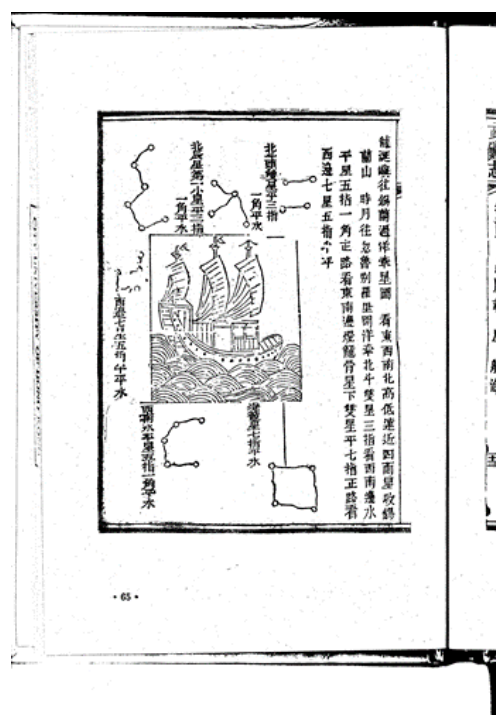


Figure 6. Bigger Dipper in the navigation maps. *Zhenghe hanghai tu* (The Navigation Maps of Zheng He's Expedition), p. 65.

3. The Big Dipper in the Religious Context

The Big Dipper was a prevalent theme in a religious context. Many believed that the Big Dipper was the superintendent of human destiny, who was able to ensure the prolongation and preservation of the lives of the faithful (Mollier 2008, pp. 134–35). Worship of the Big Dipper has a long tradition in Daoism. Probably around the eighth century, during the reign of Emperor Xuanzong (r. 712–756) of the Tang dynasty, Buddhism absorbed the Big Dipper into its texts (Mollier 2008, p. 145). The images of the Big Dipper in the Daoist context and those in Buddhist context were not much different. Still, the discrepancy between the images in the religious context and those in ships or navigation maps is too distinctive to overlook.

In Daoism, the visualization of stars was a way to “enable the adept to integrate self and Dao, body and cosmos on a higher level” (Huang 2012, p. 38). Shih-shan Susan Huang divides the images of the visualization of stars into four subcategories: narrative illustrations of the adept’s journeys to the Big Dipper, imaginary star maps, stars in the human body, and star divinities as iconic form. She emphasizes particularly that “the common ground for these images highlights the role of the Big Dipper, one of the most important constellations in Chinese visual culture” (Huang 2012, p. 38).

The Big-Dipper images in navigation maps and those in the religious context are different in two significant aspects. First, the Big Dipper images in the religious context were sometimes comprised of nine stars instead of seven, while the nine-star image was never seen in navigation maps or ships. The nine-star Big-Dipper image existed as early as 1116 and kept appearing in Daoist images afterward. The eighth star, the Fu star, is the companion of the sixth star, and the ninth star, the Bi star, is near the handle of the Dipper. While the Fu star is discernible under very particular conditions—on specific days with a very clear sky—the Bi star is entirely invisible. A well-accepted belief among the adepts says: “those who manage to glimpse these two stars are rewarded with a prolongation of three hundred years of life for the eighth and six hundred years for the hidden ninth star” (Mollier 2008, p. 162). For Daoism, the goal was to conceive the essence of the stars, so people were rewarded with more credit if they managed to see things essentially invisible. People clearly understood that the eighth and ninth stars were different from the original seven ones. For example, in thirteenth-century paintings of the Big Dipper deities, there are seven deities dressed in white and another two dressed in red robes (Huang 2012, p. 48). The sharp contrast in color drew a clear boundary between those two groups. Some images consist of eight stars—including the theoretically visible star but not the completely invisible one. The nine or eight star images were not exclusive to Daoism: in the most popular sutra related to the worship of the Big Dipper—*Sutra on Prolonging Life through Worship of the Seven Stars of the Big Dipper, Preached by the Buddha* (Foshuo beidou qixing yanming jing 佛說北斗七星延命經)—an illustration shows the Big Dipper made up of eight stars and their corresponding deities (Figure 7).

Second, the Big-Dipper images in the religious context varied significantly from each other. Differing from the almost identical images in navigation maps, the Big Dipper was depicted in vastly different ways and sometimes even took up multiple shapes in one image. The Big Dipper was often drawn in a very abstract and stiff way. For example, in Figure 7, the seven stars simply aligned in two parallel lines. Furthermore, the shape of the Big Dipper could be altered for practical reasons. To acquire longevity, the adepts needed to practice certain rituals, some of which symbolized ascension in heaven. One practice was “lying down in the Dipper”. The practitioner must stretch out on a map of the constellation: the head was placed on the axis of the third star, with the feet on the eighth and ninth stars, the left hand touching the second star and the right hand touching the fourth (Mollier 2008, p. 163). To make this ritual practice possible for practitioners, the manual instructions changed the image of the Big Dipper significantly to accommodate body limitations.

In the religious context, the utmost importance of the Big-Dipper image lies in its essence, so neither the Daoists nor the Buddhists showed much concern about the accuracy of the images. The images were frequently presented in an abstract way, and the variations were entirely acceptable, if not preferable.

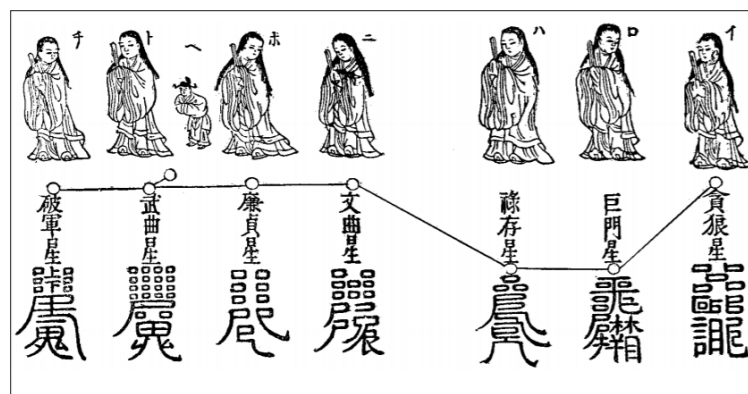


Figure 7. Illustration of the Big Dipper deities, from the *Sutra on Prolonging Life through Worship of the Seven Stars of the Big Dipper*. Taishō shinshū daizōkyō (The Taishō Tripiṭaka), Vol. 21, No. 1307.

The power of the image in the religious context also came from the position that it was placed on and the essence of the represented, instead of merely the image itself. The image of the Big Dipper has also been recovered from ritual sites. The most notable example is the case of the Dharma Gate monastery (famensi 法門寺) in Shaanxi, China. In the 1980s, four Buddha finger relics were excavated from the underground crypt of the Dharma Gate monastery; three of them are shadow relics, and the last one is believed to be the genuine relic. The Big Dipper image was carved in the first shadow relic's inner face, a place not easy to see (Li 2003, p. 25). The whole crypt was a ritual site arranged according to the ritual of the Seven Stars of the Big Dipper *homa* in Tantrism *mandala* (Liang 1993, pp. 55–61). Vajrabodhi (known as Jingangzhi 金剛智, 669–741)—a celebrated monk in the Tang dynasty—promoted the Tantric practice of the Big Dipper. In his *Ritual Procedures for Invoking the Seven Stars of the Great Dipper* (Beidou qixing niansong yigui 北斗七星念誦儀軌), he advocated the ritual not only as an individual discipline but also as a collective ceremony (Mollier 2008, p. 146). Under the influence of the famous monk Yixing, who was much devoted to the Big Dipper belief, the Tang emperor Xuanzong facilitated the spread of the Big Dipper ritual and probably also adopted it into the state ceremony. The whole ritual at the Dharma Gate Monastery was centered on the Big Dipper image, praying for the peace and well-being of the nation. The image itself, however, remained in a hidden place to exert its power, just as the seven dots in the keel of ships.

4. Rituals in Shipbuilding

Carving the Big-Dipper image into the ship frame was among many rituals that were performed in the process of shipbuilding. The location at which to carve the image of the Big Dipper, just as the place of the image of the Big Dipper in a state ritual site, was also carefully chosen.

As mentioned above, the seven dots representing the Big Dipper were found in the keel joint, which was the most important part of a ship hull. For the Fu ships, the keel was probably even more important. The shell of Fu ships was unique: a Fu-ship had a V-shaped bottom instead of a flat bottom (Figure 8). This design allowed the Fu ships to hold more cargo and still make turns quickly, but at the same time, the V-shaped bottom also made the Fu ship vulnerable when sailing in shallow water since a larger portion of the ship hull was underwater. Located at the very bottom and lacking other protection, the keel became extremely important for the Fu ships. Once the keel was damaged, the whole boat would be in a critical condition. Thus, it is only natural that people preferred to add extra protection to the keel. Meanwhile, to have the Big-Dipper image hidden in the keel joint was probably also a way to protect the image, since the image was not exposed to potential damage. Placing the image at the most critical position of a ship might also further strengthen the power of the image, similar to carving the Big-Dipper image on the sacred Buddha relic.

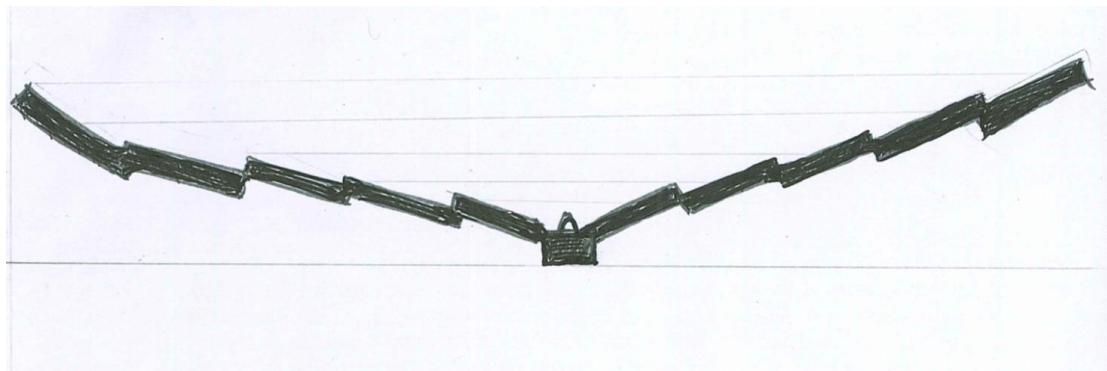


Figure 8. The cross-section plan of the Quanzhou Bay shipwreck.

Moreover, the keel also, to a large extent, determined the whole structure of the ship. Shipbuilders needed to decide the length of the keel and its radians as the first step of building a ship, and only after that could other beams and boards be put in place. Therefore, building the keel was the initial stage in building a Fu ship, and connecting different parts of the keel together became the very beginning of the whole process of shipbuilding. Given the location of the Big-Dipper image, carving and sealing this image into the most crucial component of the ship must have been the very first thing that people did when they began building the ship, an activity that symbolized the start of shipbuilding. Some rituals were probably performed accompanying this procedure.

As early as the Han dynasty (202 BC–220 AD), people already intentionally chose an auspicious day to start building a ship. In the Ming dynasty (1368–1644), in both official and private shipbuilding factories, installing a keel was always accompanied by a grand sacrifice. In the official shipbuilding factory in Fuzhou, where Fu ships were manufactured, people usually offered two pigs and two sheep at the sacrifice, and the local officials also attended the ceremony (Chen 1991, p. 163).

The Big Dipper was not the only image that had been applied to shipbuilding. Especially after the Ming dynasty, various images had been added to different parts of ships and assumed different responsibilities. For example, some drawings show that a lion's head was portrayed on the head of ships, which was intriguing since people were more inclined to connect vessels with the image of dragons instead of lions. After all, it was dragons that possessed the ability to manage the water currents, and lions lived on the land. The connection between the lion and the water was later revealed by a type of flag—the “Mazu 媽祖 flag”, which depicted a lion squat next to the Chinese sea goddess Mazu. The lion was Mazu's herald (Yamagata 2004, p. 182). Starting from the Song dynasty (960–1276), the Mazu belief was especially popular in the Fujian province, where many temples were established to worship Mazu. The Song court even bestowed official titles to the goddess Mazu multiple times, recognizing her power of protecting the ships on the sea (Huang 2017, p. 405). It was interesting that the shipbuilders chose to keep only the image of the lion and skip the image of Mazu, and another set of images actually show a similar pattern.

That set of images on ships was related to the story of the “Eight Immortals” (*Baxian* 八仙), which told how the Eight Immortals competed with each other and crossed the sea relying on different tools they brought—none of which were regular tools for sea-crossing. This story became quite popular in the Ming dynasty, which probably contributed to the use of the images. The “Eight Immortals,” interestingly, did not appear in the images—only the tools they used did. The tools included a sword, a flute, a lotus, a fan, a cucurbit, a basket of flowers, a fish-shape wooden knocker, and a yin-yang plank (Yamagata 2004, p. 186). By drawing those magic tools on ships, people were probably expressing their wishes that the ships would be just like those tools, carrying the passengers cross the sea safely and smoothly as if the passengers were the immortals.

The image of the Big Dipper, compared to other images applied to shipbuilding, appeared earlier in the course of history and was carved in a more important and secure place. The unique position of

the Big Dipper in shipbuilding was likely because of its dual meaning: the Big Dipper possessed both a practical function and powerful religious meaning related to sea voyages, which is rare among the popular images used in shipbuilding.

In terms of the practical function, people's fear about losing sight of the Big Dipper was evident in the abovementioned texts, so perhaps carving the image of the Big Dipper into the ship frame could relieve their anxiety to some extent since the Big Dipper would be accompanying them all the time during the voyage. Probably because the Big Dipper had a practical function, the images of the Big Dipper that were recovered from shipwrecks were relatively accurate, especially if we compare them with the images in the religious context. Sailors needed to rely on the shape of the Big Dipper to guide their voyages and figure out their ship's location. Since navigation required high accuracy, even though the shipbuilders were only carving a symbol for protection and good luck, everyone would try to be serious and careful instead of risking people's life to carve a misshaped and misleading Big Dipper.

The religious meaning of the Big Dipper, as shown above, has mostly been related to the longevity of human beings. The lives of the faithful would be prolonged, as indicated in the sutras on the belief of the Big Dipper. This single point was already appealing to the sailors, whose profession was high-risk in the premodern era. However, the Big Dipper pertained to a more specific and more direct religious connection to sea voyages that has not yet drawn much scholarly attention. In the Five Phases theory that prevailed across social strata in traditional China, every direction was related with a color and a natural element: the east was related to blue and wood, the west with white and metal, the middle with yellow and earth, and the south with red and fire, while the north was related with black and the most critical element for sailing—water. In particular, considering that coins with the Black Warrior motif—the direction symbol of the north—have been excavated from shipwrecks, it is undoubted that shipbuilders did apply the Five Phases theory to their work. Therefore, the connection between water and the Big Dipper undoubtedly made the Big Dipper a powerful image in shipbuilding.

5. Conclusions

For centuries in the premodern era, maritime travelers relied on both technologies and their belief to survive perilous sea voyages. Xu Jing, the twelfth-century ambassador to the Korean peninsula, besides telling us the importance of observing stars, also recorded his awe of the vast sea in a genuine tone: "Drifting among the various perils of the sea in a vessel that is no more than a leaf, it is only thanks to the blessings of the imperial ancestors and the earth gods that the gods of the waves could be pacified and a crossing achieved. Otherwise, how could it be achieved by mere human power!" (Vermeersch 2016, p. 233).

The dual function of the Big Dipper was well-recognized in traditional China. For example, the famous Daoist Ge Hong, whose words on the importance of the Big Dipper in sailing have been quoted earlier, was from a lineage worshipping the Big Dipper (Mollier 2008, p. 144). His great-granduncle Ge Xuan 葛玄 was believed to have invented many important rituals to instruct the adepts to worship the Big Dipper, as an image entitled "Sir Immortal Ge's Method of Honoring the Great Big Dipper" in the Dunhuang manuscript depicted.

In sum, the Big Dipper in premodern China was both an essential, practical guidance in maritime voyages and a religious symbol that the faithful believed could prolong the human's lifespan and command the element of water. The dual function of the Big Dipper endowed the Big-Dipper images in ships with a dual meaning and made it particularly auspicious. The Big Dipper's practical function prompted the carvers to present the image accurately, making it distinctive from other Big-Dipper images in the religious context.

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