The Collection of Chinese and Southeast Asian Jars (martaban, martavanen) at the Princessehof Museum, Leeuwarden, the Netherlands

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Preliminary remarks

Jars. Jars? What could be so interesting, even worth of scientific research, with jars, simple, sturdy storage jars? There is a fascination with ceramic jars. Jars are archetypes. It seems jars always existed, and they are still around today. All cultures know jars. In China, jars appear in the neolithic Yangshao and Banshan cultures of the 3rd and 2nd millennium BC; in Japan, jars were made by master potters to store tea leaves or fresh water for the tea ceremony *chanoyu*; in Egypt, when the internals were removed from the dead for mummification, they were stored and preserved in canopic jars for the afterlife of the owner; the Greeks used jars and vases like amphoras to preserve and travel goods, and the Romans used jars for storing liquids, like olive oil from Spain, and to use them in kitchen and bathroom; the Aztecs collected water in large jars, and in Africa water and beer was stored and transported in jars – the beer pots of the Zulu in South Africa are strong pots; in Southeast Asia, the bodies of the dead were buried in jars or, at a second burial, their bottoms exhumed and put into jars; in the Middle East, beautiful storage jars with turquoise glazes were made in Kashan in the 12th century in central Persia.

Ceramic jars were made in all sizes and all materials: terracotta, stoneware, porcelain. And they were used in many ways: functional, as containers for water, oil, wine, pickled vegetables and meat. Jars were useful in trade, particularly on ships. On many shipwrecks, hundreds of jars were found, as containers for water and food, tee and opium, or to transport smaller objects, as ballast.

To describe jars, a very special terminology developed, using terms normally used for a human body. A jar has a foot, a body, shoulder, neck, ears/loophandles, mouth and lip/rim.

There are anthropomorphic jars in many cultures; with the indigenous cultures on the Indonesian archipelago and the Philippines, jars transformed into fruits and animals and vice versa.

The Princessehof Museum in Leeuwarden, the Netherlands, holds a rich and varied collection of Chinese and Southeast Asian ceramic jars. This study is intended to contribute to our knowledge of jars, and to emphasize the importance of the Princessehof collection in a worldwide context.

The questions asked from the collection are not limited to the research interests of a ceramic historian: questions like how these jars were made, in which kilns – China, Thailand, Vietnam? - at what period. As stated above, jars are telling stories: of their use, functional, in household and trade, and "spiritual", as objects of magic powers.

Not all questions can and will be answered. The study of jars does not seem to be a very important subject in the history of Asian ceramics. Contacts and the exchange of research results with archaeologists and ceramic historians in China and Southeast Asia will be essential in being able to establish a framework for dating, provenance and interpretation.

Terminology: Martaban, martavaan, tempayan, storage jar, jar...

Storage jars made in China or in Southeast Asia are known as martaban jars, or martavaan in Dutch. The name comes from the Arabic pronunciation of a port on the golf of Pegu, now Myanmar (Birma), an important link in the China-India ceramic trade. Goods were transported overland from China to Martaban, and from there they were shipped to West-Asia, India and Africa during the Song (960-1279) and Ming (1368-1644) dynasties.

With the rise of the Thai kingdom of Ayutthaya in the mid- 1300s, the land route also became important. Arab, Indian, and later European merchants stopping at Martaban would demand large amounts of jars in which to store water, alcohol, oil, candied fruit and pickled, opium and other commodities for the next stage of their journey.

One of the first mentions of the term *martaban* is found in the travel records of Ibn Battuta (1304-1368/69), one of the greatest travelers in history. He reports that in 1365 the Indian king Kalikan's daughter presented him with four jars, *martaban* or huge jars, filled with pepper, citron and mango, all prepared with salt, as for a sea voyage." *Martaban* are also mentioned by Portuguese travelers and merchants of the 16th century and Dutch travel accounts, like the books by Jan Huygen van Linschoten (ca. 1564-1611). Storage jars used on ships could have been produced at kilns in southern China, Thailand, Vietnam, Khmer or the local kilns in Birma – but they were all referred to as *martaban*. This was not a problem for the people who used these jars, but for the ceramic historians.

Martaban jars are notoriously difficult to date, because they were made for around thousand years with minor variations. And in most cases, we still do not know exactly, where these jars were made. On some of the martaban inventory cards from the Princessehof collection one could sometimes find such information as "southern China or Vietnam, 13-18th century." Because most of the martaban jars were not produced in the local kilns of Birma, some experts started to replace the term martaban with "storage jar" or simply "jar". However, as this study will show, not all jars were used functionally as storage jars. And to use "jar" would probably be a term too non-specific. The term "large jars" would refer to a certain height; but again it would be difficult to determine where to start: at 40cm? 50 cm? Another term for jars, particularly jars used as ritual jars with the Dayaks on Borneo, is the much too specific tempayan, referring to tempat tape, "place of fermenting (rice wine)". For the present I will use the neutral term "jar", and subsume many sizes, from ca. 30 cm to more than 100 cm high.

Ref.: Nan 2009; Borell 2014

How Old Jars survived – and Became part of the Art Market

How stoneware jars and other antique ceramics found their way into the international art market? Jars, like other antique Asian export ceramics, survived intact in three ways: in gravesites, in sunken ships, and as heirloom pieces.

Gravesites sheltered old jars. Numbers of jars were found in burial sites in Indonesia, Thailand, the Philippines and Vietnam. They were interred to escort the death on their next life. Others, perhaps, were hidden underground to avoid their destruction in troubled times.

However, jars or shards of jars found with excavations are problematic. The location of a site of an excavation, the likely history and the condition during the excavation are essential for identification. Under tropical conditions an excavation often produced little more than ceramic fragments; someone would then propose an approximate date for the shard and, by inference, for the site itself. More often than not, interpretations were more of a guess.

In Indonesia and the Philippines countless excavations had been carried out in the past. A number of these excavations were carefully executed, if not according to scientific standards of today. Where these were private and the excavated material of good quality, the wares were normally purchased by dealers serving the antique market in Hongkong, Singapore and Bangkok.

A wave of pieces from excavated and looted grave sites from all the islands became available after the Second World War.

Shipwrecks having ceramic cargoes including jars have been found from southern China, throughout Southeast Asia to the remains of Dutch ships sunk off South Africa and in the Atlantic.

Shipwrecks are time capsules. Numbers of shipwrecks, their cargoes containing jars, have be salvaged in the last decennia. They date from the Tang-Dynasty (618-907) to VOC ships like the Witte Leeuw (1613). (see 1.D.2)

Many jars survived of the archipelago as heirloom pieces, particularly in the traditional indigenous cultures on the Indonesian archipelago.

In island Southeast Asia, large stoneware jars originally from China, Thailand, Vietnam and Burma, served functionally as containers in the household, but were also valued as heirlooms, particularly on Borneo and Java, where magical qualities were attributed to jars. Jars were highly appreciated and treated with respect.

With the Iban on Borneo, the most valuable jars were equivalent in value to a male slave. If one was smashed by someone who could not replace it, he or she had to become the slave of the owner of the broken jar for life. Even if the jars was replaced, additional compensations usually in the form of pigs and chicken had to be made. Such customary laws made it relatively certain that heirloom jars remained safe.

But the sell-out of ceramic antiques to wealthy towns people and expatriate residents began already during the late 19th century.

Heirloom pieces like stoneware jars were losing their cultural value as Southeast Asian societies were modernizing. Many of them were sold. In the 1960s, poor Indonesian farmers ransacked rural gravesites to make a living. They jabbed metal rods into the ground, and when they heard a tinkle, they dug. In Manila and Jakarta itinerant dealers offered the most affluent buyers the pick of such digs. *Tukang antiek*, itinerant salesmen or – ladies, made house calls, carrying bundles of ceramic that had often been damaged though careless excavations. It was purely the need of cash that drove this kind of business.

Ref.: Harrisson B. 2003

The History of the Princessehof Jar Collection: Nanne Ottema, Anne Tjibbes van der Meulen and the OKS

The Princessehof Museum, Leeuwarden, the Netherlands, owns one of the most important collections of Chinese and Southeast Asian jars worldwide. Other museums with extensive collections are the Sarawak Museum, Kuching, East Malaysia, and the Brunei Museum.



Nanne Ottema

The Princessehof Collection was accumulated in the beginning of the 20th century by the founder of the museum, Nanne Ottema (1874-1955) and his network of friends, particularly Anne Tjibbes van der Meulen (1862-1934), who collected jars in the Middle East and in Indonesia, at that time the Dutch colonies of the Dutch East Indies.

At the time Ottema acquired his first jars it was quite unusual for collectors of Chinese ceramics to pay attention to these rather coarse wares. Ottema's interest was not primarily the aesthetic appeal of the pots, but their function as "handelsartikelen", trade wares.

After the death of Nanne Ottema the OKS (Ottema-Kingma Foundation) continued to acquire jars for the collection.

Ref.: Romijn 1967; Stroeber 2013

Provenances and Colonial Acquisitions

Most of the jars now preserved at the Princessehof Museum, Leeuwarden were collected in the early 20th century in Indonesia, at that time a Dutch colony, the Dutch East Indies.

The most important collectors of Chinese export ceramics and *martaban* jars was Anne Tjibbes van der Meulen (1862-1934). Van der Meulen, like Nanne Ottema, was born in the province of Friesland. He was a very different person from the serious and rich notary Ottema: well traveled, charming, artistic, romantic, he had all the character traits Nanne Ottema, had not. He was a born treasure hunter.



Van der Meulen was trained as a teacher. In 1886 he left for the Dutch East Indies and lived in Semarang, Java. He worked for the colonial administration until 1892, when he returned to Europe, but went back, to live, travel and collect on Java, Sumatra and Celebes.

In his diary he recalls: "I combed the alleys and byways popping into scrap metal and junk shops, and while looking round there I sometimes found peculiar things that surprised me with their beauty. At that time not many people were moved by the beauty of the Indies, and in a sense, I am proud that I quietly went my own way and found beautiful things without any guidance. Without signposts, without support. Yes, I was often on my own. And when I returned home with my new purchases, which made me so happy, I know my friends often thought me silly and foolish. How would they know how much these things were worth to me?

When I was out hunting for them, I wanted to know how and what and where they came from. They became reasons and motivations for study, and thanks to this, I lived a rich life."

When he acquired his first sirih -set, a container for betelnut, he recorded in his diary:

"And that first sirih set: oh, how beautiful it was, but would I afford it? I returned to see it again and again- until finally it was mine. And I was surprised that all these things of beauty had gone undiscovered, and I wondered what kind of

Dutch people had been living in the Indies all that time without anyone ever writing about the subject ...

Word slowly got around in Batavia that I sometimes bought things, and people came to my door with objects. Porcelain, for example..."

It seems it was easy for him to get what he wanted, being remembered as a pleasant personality.

In 1906, he again returned to the Netherlands and set up an "Indian Museum" in Bergum, a small town in Friesland and his birthplace.



The historical photo shows Van der Meulen as the proud collector and museum director among his treasures:

Under the small table, on the right, a jar. This jar, glazed turquoise-green, made in the kilns of Shiwan, Guangdong province, in the 18th century, is preserved as part of the Princessehof collection, (inv.no GAM 937)



However, after a couple of years it appeared that running the museum was beyond his capabilities. In 1910, he sold all the museum objects to Ottema in exchange for a 400 guilder annuity. In 1917 the objects were moved to the newly founded Museum Princessehof in Leeuwarden.

After having sold his collection, Van der Meulen continued travelling and collecting in the Middle East and Indonesia, either for himself or commissioned by Nanne Ottema. He enriched Ottemas collections of ceramics with numbers of interesting pieces, particularly the large jars, *martabans*.

A number of jars were acquired by Van der Meulen on Middle Java, excavated close to the Buddhist temples of Borobudur. They can be dated into the Tang dynasty (618-907) (see 2.A.1.1 and 2.A.1.2). Nanne Ottema particularly appreciated these jars, because of their antiquity.

Years later, in 1932, Ottema asked Hendrik Freerk Tillema (1870-1952) to look for jars. Tillema, born in Echten, Friesland, was a pharmaceutical chemist who had studied in Leiden and Groningen. In 1896, he went to the Dutch Indies and settled in Samarang, Java, where he built up a factory for bottled mineral water.

In 1931-1932 Tillema went to Borneo, as an ethnographer and filmmaker, to study and document the Dajaks. When he was looking for jars, as he reported to Ottema, he could not find "old" Ming-type jars any more, but only the famille –rose types of the 19th century.

Ottema commented: "The future Borneo traveler will probably have not much to say about the holy jars of the Dajaks.

He was wrong. He did not reckon with Barbara and Tom Harrisson (see I.B.I).

Anne Tjibbes van der Meulen and H.F. Tillema were of course not the only Dutch collector in the Dutch Indies at that time, the early 20th century. An important collector of Chinese ceramics found on the archipelago was Egbert Willem van Orsoy de Flines (1886-1964).

Orsoy de Fines was from a ship owners family and was supposed to be a sailor, taking up the family tradition. But he left the ship in Suriname, became a bank employee, and later moved to Ungaran on Java to become a planter. It was on Java that he started to collect porcelain.

His collection grew, and in 1932 he donated it to the Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen (Royal Batavian Society of Arts and Sciences).

He became caretaker of the collection of ceramics in 1932 and worked in this position until he had to leave Indonesia in 1959.

The collection contained several martaban jars mentioned in the small guidebook written by Orsoy de Flines.

In 1962, the Society was handed over to the Indonesian Government and became the Museum Pusat (Central Museum). Orsoy de Flines left Indonesia in 1959 and died in Holland in 1964.

When he left Indonesia he could only bring a few pieces of Chinese ceramics with him. These were auctioned in Amsterdam in 1965. One of the spectacular pieces from his collection is the famous blue and white large dish, now in the collection of the Rijksmuseum Amsterdam (Inv. No. AK-RBK 1965-88). The Princessehof Museum acquired at the auction a few small pieces, but no jars.

Ref.: Ottema 1953; Romijn 1967; Van Orsoy de Flines 1973; Hendriks 2009

Research and Appreciation of Jars in East and West

The collection of large stoneware jars at the Princessehof goes back to Nanne Ottema (1874-1955). He collected practically anything in the domain of applied art, and was especially lucky with Chinese ceramics. Ottema had a genuine interest in Chinese export wares. Very much unlike most of the collectors of his time – the end of the 19th and the first decades of the 20th century, and to this very day. For one thing, he could not afford to buy expensive "imperial" ware. But it seems he really loved the export ceramics which could be found in Indonesia, at this time the Dutch Indies, a Dutch colony.

Ottema dedicated chapter 11 of his *Chinese Ceramiek-Handboek...*, published in 1943, to his collection of *martavans*. He mentions 16th and 17th century Portuguese and Dutch literary sources for *martabans* and highlights the importance of their role as *handelswaren*, trade goods, in trade between China, India, the Middle East and the West.

It seems that Ottema discussed the subject of jars also with other museum curators. The archive of the Princessehof Museum has letters Nanne Ottema changed in 1928 with R. L. Hobson (1871-1942), keeper at the British Museum, and leading authority on Chinese ceramics. Hobson writes: "....I am most interested to learn that you are studying the Chinese pottery and porcelain found in the East Indies. We have some curious pots from Borneo and other places, but we have not got any of the big jars."

The first exhibition exclusively dedicated to *martaban* was organized in the Museum Princessehof, Leeuwarden, in 1964. Commissioned by the OKS, Hessel Miedema (1929-2015), the museum curator, published a small catalogue and introduced for the first time more than eighty jars from the Princessehof collection.

But our knowledge on jars is associated with the pioneering book by Barbara Harrisson, *Pusaka-Heirloom Jars of Borneo*, published in 1986.

Barbara Harrisson, born in Silesia, Germany, happened to go to Borneo with her first husband. There she met the Englishman Tom Harrisson (1911-1976). She divorced and married Tom.



OKS 1984-70; H. 58,5 cm

This large storage jar is very closely connected with Barbara Harrissons life. It was given to her by Lawai Jau, chief of Kenyah, on Sarawak, ca. 1960. He told her that the jar was in his family for 4 to 5 generations. Barbara

took the jar with her to the US, to Cornell, to Perth, Australia, and later to Leeuwarden, the Netherlands. She gave it to the OKS and it is now part of the museum collection.

It has bulbous shoulders, a restricted neck, squarish mouth rim and six handles, modeled as tigers with the Chinese character wang "king" carved on their backs. The body is decorated in relief with tigers among scrolling foliage and relief blossoms. The jar is covered in light brown glaze to the lower body. The base is flat and unglazed.

Jars of this type were probably made in the kilns of Go-sanh in Vietnam. They can tentatively be dated into the 14^{th} to 16^{th} century.

Tom Harrisson was born in Argentina and educated at Harrow School, England. In the course of his life he worked as an ornithologist, explorer, mass observer, journalist, broadcaster, soldier, ethnologist, museum curator, archaeologist, filmmaker, ecologist and writer. During the Second Word War, Harrisson was in the army and eventually attached to a special unit of the allies for a plan to use the native people of Borneo against the Japanese. In 1945, Harrisson was parachuted onto a high plateau occupied by the Kelabit people. After the war he acted from 1947 to 1966 as curator of the Sarawak Museum, Kuching.

Harrisson reports, that during the Japanese occupation he was dropped into the Bornean cult of old stone wares and porcelain. From the Kelabits, he first learned to respect, indeed to love the great export ware jars and other artifacts brought to Borneo centuries ago from China... in many parts to become the principal base line for value judgment, taste and status symbolism. The Kelabits loved above all the jars...

Tom Harrisson published numbers of articles on jars in the Sarawak Museum Journal.

On Borneo, Tom and Barbara Harrisson were working together, building up the Sarawak Museum in Kuching, now Malaysia. In 1966, the couple had to leave Borneo, and together they went to the US, to teach and study at the Cornell University, Ithaca, NY.

When they split, Barbara started her PhD thesis on heirloom jars from Borneo. Most examples she discusses in her book are from the collections of the Sarawak Museum, Kuching, Malaysia, and the Sabah Museum, Brunei. Only a few pieces are from the Princessehof Museum.

Most books published on *martaban* in the last decades focus on private and public collection in island Southeast Asia, particularly Indonesia and the Philippines.

S. Adhyatman and Abu Ridhu had published in 1984 a book on jars, *Tempayan di Indonesia. Martavans in Indonesia*, the objects originating from Indonesian private and museum collections. In her book on *Antique Ceramics found in Indonesia*, which came out in 1990, Adhyatman included numbers of jars.

A Thousand Years of Stoneware Jars in the Philippines, a systematic study of jars from private and museum collections in the Philippines was published by Valdes, Long and Barbosa in 1992.

In 2012, the private collection of jars by the Indonesia collector

Boudi Mranata, Ancient Martavans. A Great Forgotten heritage was published by B. Mranata and H. Susanto.

In China, where most of the jars were made, traditionally there was no interest in either the aesthetic appeal or the use of jars in Chinas maritime trade. Storage jars were regarded as useful vessels for diverse functions, but not worth researching or collecting.

Academic interest in jars started only recently, again not so much with their aesthetic appeal, but with their role in Chinese maritime trade.

In Japan, however, there was traditionally an aesthetic appreciation of "simple" Chinese export ceramics. Many of these pieces found entrance into the repertoire of utensils used at the Japanese tea ceremony *chanoyu*. Storage jars from China or Southeast Asia were used as containers for tea leaves or to store water. The irregular, often mottled glazes of these jars were perfectly in accordance with the Zen-inspired aesthetics of *wabi* and *sabi*, and the "perfection of the imperfection".

Ref.: Miedema 1964; Adhyatman and Ridhu 1984; Harrisson B. 1986; Adhyatman 1990; Valdes, Long and Barbosa 1992; Mranata and Susanto 2012; Stroeber 2013; Cort and Watsky 2014

New Perspectives: The Present Study and the Research Project of the College de France, Paris

The present study will give an interpretation of one of the most important collections of storage jars made in China and Southeast Asia, and preserved at the Princessehof Museum, Leeuwarden, The Netherlands.

These jars, often called martaban, can tell many stories.

They are not only a subject of interest for the ceramic historian, but also for cultural anthropologists.

Jars were and still are most useful to store goods, in the household as well as on ships. They therefore played an important part in trade. Jars are key objects to reconstruct the history of Chinese maritime trade in the last thousand years. They are telling us about the salvage of shipwrecks and aspects of Dutch colonial collecting, and the passion for jars by Friesean collectors.

And jars play their roles in the history of the social and spiritual life in many traditional societies.

Stoneware jars, made in Southern China or Southeast Asia, are an example of ceramic objects which, when transferred into a cultural context different from the place where they were made, can serve different purposes and are appreciated in different ways: a simple Chinese jar could, according to traditional beliefs in Indonesia, develop "magic" powers, and in Japan, become an aesthetically highly appreciated object to be used for the elitist tea ceremony: Japanese connoisseurs appreciated the aesthetic texture of thickly potted stoneware with uneven, mottled glazes.

This study therefore is twofold: it analyses the formation, the technology and typology of the Princessehof collection of stoneware jars, and the role of jars in maritime trade. And it tells the "stories" of jars and their roles in traditional rituals and spiritual life in indigenous societies in Indonesia, particularly on Borneo.

This study aims to contribute to a better understanding of jars. Fortunately, interest in jars is developing in East and West; jars are no longer a neglected part of Asian ceramic history. This study therefore does not stand isolated.

A long term international project on storage jars, organized by the College de France, Paris, is doing research on the excavations of kilns in Southeast Asia and Southern China, trying to locate where jars were made. The results of this research will bring more clarity into the provenance of storage jars and the ancient inner-Asian as well as global trade routes, where jars played an important role: storage jars were excavated in China, Indonesia, the Philippines, Sri Lanka, India, the Middle East, Africa, the Netherlands and London.

Archaeologists and experts on Asian ceramics from China, Japan, France, the US are working together to share the results of their research. The author, representing the collection of jars at the Princessehof museum, is part of the team.

With archaeological excavations and research carried out in this project shards of jars are documented, compared and interpreted. It seems that for the first time, shards of storage jars are taken seriously; with many excavations shards of jars were neglected or simply thrown away.

The Princessehof collection of jars does not have many shards, however, it represents one of the most important reference collections for research. The author was therefore invited to join the research team.

While working on the Princessehof collection of jars two jars with inscriptions, dated in the Tang dynasty (618-907), seemed to be of interest. These inscriptions on Chinese jars were not Chinese, but what else? There was never before paid serious attention to these inscriptions. With the help of a colleague, Roderick Orlina, an epigraphist based on the Philippines and New York, we started to find out about this mystery. The inscriptions are in an old Persian script, Pahelevi. More jars with inscription were found in island Southeast Asia, Sri Lanka and Siraf, Persian Gulf.

An article, written by the author in cooperation with Roderick Orlina, will focus on jars with inscriptions of the type found in the Princessehof collection and present new perspectives on Tang international maritime trade. This paper, presented at the Paris conference in 2015, will be published in spring 2017 in the Bulletin de l' Ecole Française d'Extreme Orient.

Technology: How Jars are Made

Large earthenware or stoneware jars are part of the traditional material culture everywhere, be it Asia, Europe, Africa or America. They were made using local clay and the local potters abilities.

In Asia, it was not only Chinese porcelain, but also the stoneware jars made in the kilns of southern China, which became a trade good, particularly to the archipelago.

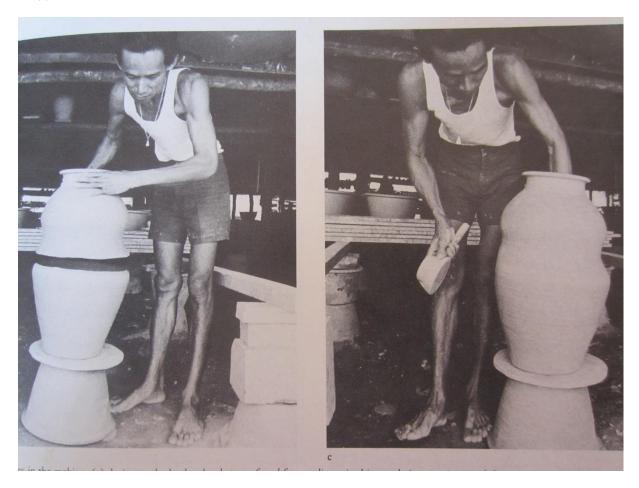
And it was not just the jars; Chinese potters settled in many parts of Southeast Asia, in Thailand, Vietnam and Cambodia, and also on the archipelago, island Southeast Asia.

On Borneo, in the kilns of Kalimantan and Sarawak, traditional Chinese potting techniques are still used.

Ref.: Harrisson B. 1986

Clay, Throwing on the Wheel and Coiling

The clay used for the making of jars varied according to the kilns in southern China and Southeast Asia where jars were made. Generally clay had to be prepared by mining, sifting out impurities and adding water. By wedging and mixing the air bubbles had to be removed, to achieve a uniform consistency. Often rice husks and pulverized vegetable were mixed with the clay to make it less susceptible to cracking during firing. It was then chopped with wire-cutters.



Chinese Potter, Borneo ca. 1970

Many jars are too large to have been thrown on the old style, foot powered potter's wheel. Large jars, when thrown on the wheel, were probably thrown in parts and then joined together.

Height is produced by joining the walls of two parts. Starting at the bottom, the walls are built up to medium height ending at a jars widest circumference. This done, a second jar of the same approximate width is thrown and is started with shoulder and neck. As the next step this jars base is cut off. The lower edge of its walls are then joined with the upper edges of the wall of the first jar, so that they overlap in a seam. This is finally smoothed with wooden beater and pot stones at the leather hard stage, sometimes on the wheel, sometimes with the potter moving around the jar.

Coiling means to build up the jar in a stationary position by shaping walls from the bottom up around a base disc and gaining height by adding coils, one ring being placed upon another, and kneaded together.

By making the clay rings of varying sizes it was possible to create the often so elegant and graceful contours of these large jars. Once the vessel was shaped, it was necessary to pack the clay tightly to make sure a complete fusing between the rings. This was accomplished by the use of mallets. A round stone "anvil" was held against

the inside surface of the jar, while the outer surface was tapped gently with the "paddle", a concave mallet. This action compressed the clay and completely sealed the joints between each ring.

With the technique of coiling even very large jars could be produced. A gigantic Thai water storage jar of more than 100 cm high in the Princessehof collection (Inv. No. NO 1351) was coil- built in stages. Each course could support the weight of a new section.

The base in most cases is simple, flat or concave; there are no carefully cut and trimmed foot rings.

Decorations were applied to the leather hard clay.

Molded or hand formed applications were applied directly onto the jar. Another method forming relief decoration was to hold a molded decoration against the wall of the jar and pressing the wall into the mold from the inside of the jar. Other decorations were stamping and incising.

Because most of the jars are simply made, the number of distinguishing features and peculiar criteria for identification are few compared with those on more elaborate styles and pieces.

Ref.: Harrisson B. 1986

Kilns

A prototype of a kiln where large jars were fired, used in southern China as well as in Southeast Asia, would be of the "dragon kiln" type, *long yao* Chinese, also known as *chang yao* "long kiln". This kiln type consists of a long body built along a hill side. It's simple structure is made up of three parts: the head, the main chambers and the tail. The fire box is situated at the lower end of the kiln. Fire holes are arranged on both sides of the body tunnel for side stoking. At the tail would be a chimney. The kiln mainly uses firewood as fuel, and its sloping shape aids the draught band makes best use of the heat.

In the kiln, the jars could have been set flat on a sandy ground, or spurs were employed in stacking them one atop the other for firing. Jars would be stacked lip to lip, and separated by wedges and clay discs. Widemouthed jars served as saggers for smaller vessels.

The kilns were so loaded that sturdy and rough jars were situated near stoke-holes, while more delicate and decorated jars were placed well away even from the peep-holes. The progress of firing, observed through these holes, the correct time for feeding the fire and letting it die, the loading and unloading of the kiln require long expertise – and it still does.

Most of the kilns were located near ports, to keep the costs of transport low.

Ref.: Harrisson B. 1986; Valdes, Long and Barbosa 1992

Most of the jars are glazed on the outside, the base and the inside left unglazed. But there were exceptions: particularly the group of jars dated into the Tang dynasty (618-907) were also glazed on the interior.

Jars were glazed by pouring the glaze over the outside of the jar and then quickly dipping the inverted jar into a very dilute glaze mixture. This would glaze the inside of the jar to a certain level, and would also produce the often irregular glaze border on the outside.

Another method was to cover the parts not to be glazed with wax, which is burnt off during firing.

The drips running down the jars are a result of too much glaze or too dilute a glaze solution. It cannot be ruled out that some of these effect were done intentionally.

The principal colours for glazes on jars are blue, green, brown and black.

Glaze colours are imparted by metallic oxides, which undergo chemical change during firing.

For blue, cobalt oxide is used in alkaline glazes. Manganese oxide gives a purplish tint. When fired at high temperature, cobalt and manganese oxide tend to give a mottled glaze with splashes or spots of purple, red and pink.

Brownish glazes are produced by the use of iron oxide. The result is a great range of shades and tones of brown, due to the quantity of iron and other variants in the glaze composition.

When the glaze is too dilute, motting appears.

Copper oxide in lead glazes produces blue or green glazes, and under reducing fire red.

Black glazes are the result of a high concentration of colouring oxides, for instance a mixture of copper and manganese oxides.

It should be noted, that colour in ceramics may also be due to the colour of the clay body or the slip. Thus if the clay contains a fairly high content of iron oxide, the brown colour resulting from this will show through a transparent glaze.

As flames envelop the inside of the kiln, all kind of unexpected things can happen. When wood is thrown in through the fuel door, the fire is strengthened and the flames rise. When the fire hits the ceiling of the kiln, small bits of stone and other matter can fall on the pot and adhere to the surface.

Ash gathers at the kilns ceiling, melts and drips down.

With many early jars, particularly the jars dating into the Tang dynasty, ash glaze was used. Ash glazes contain wood ash and potash ash. They are rather accidental, and can be achieved only when the jars were put close to the fire.

Pots placed near the fuel door were covered with ash from the burning firewood. When the kiln reaches high firing temperature, the pots develop a blackened surface color.

Earthenware or stoneware jars were normally fired at a temperature of above 1200 degrees or higher. When the temperature inside the kiln reaches 1250-1300 degrees, the ash falling on the vessel melts with the feldspat particles in the pot's clay and flows in a glossy green to yellowish brown colour, ranging from dark to light in tone.

A number of jars are salt glazed. For this technique, the jars are fired to a maturing temperature when some of the silica in the body is vitreous and readily reactive with salt thrown into the kiln. Water is important in the process, either by wetting the salt or putting water into the atmosphere.

Over firing or under firing are important techniques used by the potter to control the firing process and the glazing. Over firing results in glazes to run. In these cases, the glaze coat may be thinner at the top of the pot and thicker at the bottom.

The run of "natural glaze" runs down, at the end forms a round drop of glaze. In Japan called: *tombo-no- me* "Dragonfly Eye".

During firing, the jars were set flat on a sanded floor or stacked atop of the other. Many jars are blackened around the base where they have been placed on the fire.

Ref.: Wood 1999

The Role of Jars in Inner Asian Trade: Southeast Asia

Chinese ceramics have always been important trade goods in Southeast Asia. "Southeast Asia" is a 20th century term used to identify a geographical area situated east of India and south of China.

It consists of a mainland region corresponding to the present day countries of Burma, Cambodia, Thailand, Laos and Vietnam, and an insular region constituting Brunei, Indonesia, Malaysia, the Philippines and Singapore.

In ancient times, it was called nanyang or nanhai, "Southern Sea", by the Chinese.

The demand of the Indian and Arab, later the European

traders for large jars was met at the port of Martaban with Chinese, Thai, Vietnamese and local jars.

Many martaban stoneware jars, also called dragon jars or pusaka (heirloom) jars, conical shaped and brown glazed, stood in longhouses of the wealthy clans on the archipelago. Thomas Forrest (ca. 1729-1802), an English traveler, visited the longhouse of a chief on the island of Luzon that had "much the appearance of a china shop". With some thirty porcelain jars, ... "displayed on shelves".

Sturdy and handsome, with a thick wall, solid foot, and interior glazing, stoneware *martabans* have been shipped to the archipelago since the Han dynasty (206 BC - 220 AD), after which they were joined by those made of porcelain. They were costly items: the Vereenigde Oostindische Compagnie VOC in the 17^{th} century paid as much as twenty-one guilders (or about five *taels* of silver) for a *martaban* at a time when a blue and white vase went for ten guilders and a humble jug for a small fraction of the coin. Trading in stoneware storage jars was big business.

Ref.: Volker 1954; Gutman 2001; Harrisson B. 2003; Finley 2010

Jars on Shipwrecks: Trade Routes and Dating

Shipwrecks are time-capsules. At least a dozen Southeast Asia wrecks have been investigated and their cargoes salvaged.

It is quite clear, that the shipwreck jar evidence is only a small piece of a puzzle and that more research - not only with underwater finds but also archaeological sites exhibiting comparable wares - should be studied.

Dating only by a "dated" wreck is not reliable. It is not unusual to find objects ascribed to a different period within a cargo.

One of the most spectacular shipwrecks with a large ceramic cargo, including numbers of storage jars, is the Belitung. It was discovered in Indonesia in 1998 and brought the international attention to the "Maritime Silk Road", the maritime trade routes of the late Tang. The wreck was found in shallow water off the western shore of Belitung island, Batu Hitam, in the Java Sea, between Sumatra and Kalimantan. The cargo of this Arab or Persian? - ship was apparently destined for the Middle East, on a through voyage via the Sunda Straits. The cargo consisted mainly of Chinese ceramics, mostly of the Changsha type.

On one of the bowls the date corresponding 826 is written. The Belitung probably sailed not long after, and sank with its treasures.



Tang jar from the Belitung shipwreck

From the Belitung shipwreck hundreds of jars of the Tang olive brown glazed type were recovered. They obviously were used functionally as containers for goods like staranis and small Changsha bowls.

One of the most important wrecks containing jars is the San Diego. It was a Spanish warship that sunk during the battle with the Dutch vessel Mauritius in December 14, 1600, off the waters of Nasugbu, Batangas province Luzon, the Philippines. More than 34 000 various archaeological specimens were retrieved and accessioned that included ceramics, armaments, silver and gold wares, jewelry, wooden objects etc.

The cargo included Chinese porcelain of the Kraak type and blue and white Zhangzhou (Swatow) ware, and more than 750 Chinese, Thai and Burmese jars.

Other shipwrecks on which *martaban*, mostly of Thai, Sawankhalok, origin, were found, are the Koh Khram, dated early 15th century, and the Koh Kradet, dated into the second half 16th century; Thai jars from the Sattahib wreck were found on the Thai coast, and can be dated into the middle of the 17th century.

The Vergulde Draeck, a VOC ship on its way from the Cape of Good Hope to Batavia, sank at the coast of Western Australia in 1656 and the San Antonio da Tanna sank in 1697, off the coast of Kenya.

The Princessehof collection has jars from an important shipwreck, acquired for the collection by the OKS.



Witte Leeuw, 1613

OKS 1977-135; H. 59,0 cm



Witte Leeuw, 1613

OKS 1977-120; H. 59,0 cm

This jar was salvaged from the Witte Leeuw, a VOC ship which sank in 1613. It was auctioned in 1977 in Amsterdam and acquired for the Princessehof by the OKS.

One would think that it was made in a rather short period before, but it also could be in use for a long time. And: there is not only a problem with dating, but also of provenance.

It seems, jars of this type were made over a long period. But where were they made?

The jar, heavily damaged and restored, has a shiny brown glaze, the lower part unglazed. A row of studs between vertical lines are extending down from a band on the shoulder; there are four horizontal lug handles.

Jars of this type are in a number of collections and a good example of how opinions about dating and provenance can differ. Sometimes the provenance is given as Vietnam or Burma; other authors would suggest a Chinese provenance and relate the "leather inspired" glaze and design to the nomad origin of the Manchu, rulers of the Yuan dynasty (1279-1368), therefore dating these jars into the 14th century.

The Hatcher Porcelain Cargoes was discovered in 1983 by Captain Michael Hatcher. On this ship, *martabans* were used as containers for foodstuffs, rice and grain. More than 50 jars were found in the wreck. It shows, that *martaban*, often dated unequivocally Ming (1368-1644), were still in use as late as the 1750's.

This ship probably foundered on its way to Indonesia. It was carrying spices, silks, ceramics and other commodities made for export which would have been traded with the Dutch, whose East India Company VOC had offices in Batavia, modern day Jakarta.

The OKS acquired a number of pieces from the Hatcher Cargo for the Princessehof, but no stoneware jars.

Ref.: Brown 1975; Green 1977; Green, Harper and Prishanchittara 1981; Van der Pijl-Ketel 1982; Sheaf and Kilburn 1988; Desroches, Casal and Goddio 1996; Krahl, Guy, Wilson and Raby 2010; Li 2013

Functional Use of Jars in Everyday Life: Storage of Liquid and Food

Storage jars were made of earthenware or stoneware, mostly of low quality and sold cheap. They were used on ships and at home, for water, fruits, salted meat, ginger, rice, honey, oil, pickles or wine, and they were trade goods. Because of their desired storage function, these jars had to be sturdy and close well. Wooden, leather and ceramic lids were used, held in place by a cord drawn through the ears on the neck.

Peoples of the Indonesian archipelago used their own terra-cotta jugs for holding water, as the porosity of the vessels caused evaporation on the surface, removing heat from the interior and thus cooling the liquid. However, imported jars, *martaban*, proved superior for containing alcoholic liquids made from rice, honey, or sugarcane, as unglazed earthenware could not keep fermented beverages in potable condition for more than a brief time. The jars also kept insects and other vermin from invading large stores of fish sauce, pickled bamboo shoots, rice, dried meat, and lime paste necessary for the common practice of betelnut chewing.

The Use of Jars on Ships

Stoneware storage jars, be they made in China or Southeast Asia, served as containers for all kinds of goods in the maritime trade for centuries. This became evident by the salvaging of many shipwrecks in the last decades: storage jars were found in numbers on the Belitung wreck, which sank in the late Tang dynasty (618-907) around 830, and were still used on the ships of the VOC in the 17th century.

Martabans were packed with a range of products, including salted pork, ginger wine, rice, honey, and sugared citrons. Moreover, since a good number of small porcelains would fit into the massive jars, they made for excellent ballast.

Very special things are said to be transported in *martabans*, like holy water from the Ganges via the Coromandel coast to Southeast Asia. Because of the robust construction of the jars, merchants also deployed them for taking the very heavy metallic mercury, fourteen times heavier than water – a liquid used for making red ink and red lacquer and alchemical products - to China.

In the early 18th century, large jars proved handy for shipping balls of opium, each as big as a person's head, from Bengal to China.

Ref.: Gutman 2001; Finley 2010

Jars for Japan: Their Use in the Tea Ceremony

Japan was an important market for Chinese and Southeast Asian jars. Simple stoneware storage jars were not only used functionally, but highly appreciated aesthetically. Some of the jars even made it to be considered appropriate to be used in the sophisticated ceremonies of drinking tea, *chanoyu*.



A fine example is the Chigusa. This jar was acquired in 1912 by the Freer Gallery in Washington DC. It was probably made in kilns of Guangdong province in Southern Song or Yuan dynasty, mid-13th-mid-14th century.

The jar of about 42 cm height has a mottled amber glaze, four lugs, a cylindrical neck and a rolled lip. Its name *Chigusa* translates "abundance of plants". The poetic name is an indication of the jar's high status in 16th century Japanese tea culture, in which valued Chinese objects were often imbued with elaborate significance through practices such as naming and adorning them with special accoutrements.

This jar probably was shipped to Japan as a container for a commercial product. In Japan, it developed as a distinguished pedigree in the hands of influential tea connoisseurs, collectors and rulers, who used it for storing precious tea and displayed it in their tearooms between the 15th and 20th centuries.

A great deal of the jars value derives from the remarkable documentation and artifacts that accompany it, including inscriptions, letters, ceremonial accessories and storage boxes that narrate the ownership and association over the centuries. Only a few hundred jars with comparable documentation survived in Japan.

It is an example, of how a humble, modest Chinese stoneware storage jar, transferred into the different cultural context of the aesthetics of Japanese tea ceremony, *chanoyu*,, became a highly appreciated and aesthetically valued object of admiration.

Ref.: Li 2013; Cort and Watsky 2014

The Use of Jars in Ritual: The "Magic" Jars on Borneo

Although jars were originally made for rather humble purposes, being designed to contain fresh water on long voyages, or for edible oils, pickles and other foodstuffs, or sometimes as packing containers to protect smaller ceramics or other breakable objects, they were highly valued by the indigenous people in many parts of Southeast Asia, where they became something like a yardstick of wealth.

Among the ceramic wares that were traded to the indigenous peoples of Borneo and other islands of Southeast Asia, jars were most important.

They were used in daily life as storage vessels, keeping water cool and sweet, and to protect food from insects and rats; they were proudly displayed in the family room of the longhouse as symbols of wealth and status.

Some jars were closely associated with myth and the spirit world. They became the abodes of spirits and household gods, and thereby become shrines. Other jars were used to foretell the future. The sounds they emitted when struck summoned certain spirits, who revealed the information desired. There were jars with magical powers and healing properties. Jars were objects to be respected, one had to pay homage like "feeding" them, otherwise bad fortune would come to the owners.

Jars were viewed as having human characteristics, gender for instance. Wide-shouldered jars were regarded as female, jars having a sloping shoulder and a more rounded body as male. The idea of jars being of different sexes, even married to each other, is also found in the Philippines.

A story goes, that on the island of Luzon in the Philippines, famous talking jars owned by tribal chiefs had names of their own. The most famous of these, a jar of the name of Magsawi, was believed to go often on long journeys by itself, and to be married to a female talking jar on the island of llocos Norte by whom it had a child. Sometimes Magsawi went on long journeys to visit his wife, or his child, a small jar in San Quintin, but he always returned home.

Ref.: Gunn 1971

Metamorphosis: The Use of Jars in Burial



On island Southeast Asia, jars often stood as a symbol for metamorphosis, for renewed and recycled life. As rice wine, *borak*, used for ritual and community gathering and festivities, fermented in stoneware jars, as a process of transformation, the flesh of a corpse also decomposed in jars.

Burial was the most important rite, more important than marriage or childbirth. Occasionally, a jar was found standing upside down in the family room. This indicated that an elderly women had reserved it for her funeral. And she did not wish it to be used otherwise, like for fermenting wine. There was primary and secondary burial: a primary burial is the first-time burial of the dead individual in a large jar while in secondary burial only the bones and teeth are interred in the jar.

For the primary burial, a large jar was used to hold the whole corpse. As reported from the Berawan on Borneo, the corpse was first washed, then laid out on the veranda of the longhouse. Before decomposition it had to be placed into a jar. Since the mouth of most jars were too narrow to admit the body, it was necessary to remove the upper part of the jar by carefully cutting around the shoulder. The corpse was packed inside, with knees drawn tightly under the chin in a foetal position. It should be surrounded by the jar like in a womb and the top of the jar was replaced and sealed with resin gum. The coffin jar was then placed whether on the veranda or on a temporary platform on a burial ground.

As decomposition progressed, the fluids were drained off. They left the jar through a small hole specially drilled in the bottom with an attached bamboo tube, to lead the fluid into the ground below.

It was required by custom that a preliminary burial had to take place after a person had died. After an interval, sometimes years, the community planned a big feast for the community, exhuming all which had died since the last rites and feast had taken place. The bones were cleaned and treated, and buried in ossuaries or in jars. The families concerned decided which jars were used for this purpose. Because status was involved, the most valued and precious old jars would be chosen for burial. Jar burial was also practiced with the indigenous people on the small islands around Taiwan.

The Princessehof collection does not have a jar with glued cuts characteristic for primary burial. But the large, ovoid jars dating into the Tang Dynasty (618-907) might have been used as vessels to contain the bones of the ancestors.



NO 1261, H. 70 cm, Collected by Van der Meulen on Java around 1900.

Ref.: Grabowski 1885; Sandin 1969; Beauclair 1970; Harrisson T. 1974; Roth 1992; Barker, Britton and al. 2008; Geiger – Ho 2014

Stories: "Talking Jars"

For many indigenous groups of people in island Southeast Asia the magical qualities of jars included their ability to "talk", to give a clear, ringing sound when struck with the hand or with a wooden stick. Once they had passed this test, the jars, bowls or plates became prized household possessions and heirlooms and were handed down from generation to generation.

Numbers of stories about "talking jars" are preserved and documented in anthropological literature.

A typical story goes, that many years ago, a group of people from Tinguian left their village in the valley early one morning and made their way towards the mountains. They were off on a deer hunt, and each carried his spear and head ax, while one held in leash a string of lean dogs eager for their chase.

Part way up the mountains, the dogs were freed, and the men separated, going different ways in search of game. But before long the sharp barking of a dog called all in his direction, for they believed that he had a deer at bay.

As they approached the spot however, the object did not look like a deer, and as they drew nearer they were surprised to find that it was a large jar. Filled with curiosity they pressed on, but the jar evaded them. Faster and faster they ran, but the object disappearing at times and then coming into view again, always escaped them. On and on they went until at last, tired out, they sat down on a wooded hill to rest and to refresh themselves with betelnut which they took from brass boxes attached to their belts.

As they slowly cut the nuts and wrapped them into lime and leaf ready for chewing, they lacked of nothing but the wonderful jar and the mysterious power it possessed. Then just as they were about to put the tempting morsels into their mouths they stopped, startled by a strange soft voice which seemed to be near them. They turned and listened, but could see no person.

"Find a pig which has no young", said the voice, "and take its blood, for then you will be able to catch the jar.

The men knew then that the mysterious jar belonged to a spirit, so they hastened to do as the voice commanded, and when they had secured the blood the dog again brought the jar to bay. The hunters tried to seize it, but it entered a hole in the ground and disappeared. They followed, and found themselves in a dark cave where it was easy to catch the jar, for there was no outlet save by the hole through which they had entered.

Though that was many years ago, the jar still lived. Even now it talks, but some years ago a crack appeared in its side, and since then its language has not been understood by the Tinguian people.

There is also a story about a talking jar on Borneo. A talking jar was owned by the Sultan of Brunei, said to have the powers of speech and prophecy. He is said to have "howled dolefully" on the night before the death of the Sultan's wife.

Ref.: Gunn 1971

The Role of Jars in Rituals



Jars played an important role in many rituals and ceremonies of the indigenous people on Borneo.

The Kelabit used traditionally certain imported ceramics in their trophy head rite. Small jars were hung up with the severed heads that had been taken from slain enemies, so they would absorb the powerful qualities of the trophies.

Wooden or antler stoppers were carved to seal the jars so that the "spirits" they contained would be preserved.

Such a small jar was considered to be the equivalent of a head, in the same sense that an old jar which was worth a human life could be exchanged for a slave or could be substituted as a victim in the human sacrifice.

The image shows a group of ceramics used for the head hunting ceremonies with the Kelabit. In the foreground a number of jars, probably of Thai origin, are placed, decorated with beads and covered with carved stoppers.

Jars were used on the archipelago in dealing with the spiritual world. They were believed to have special properties for "magic" healing. Sometimes, the water or oil kept in a particular jar was used only for child's sickness. Numbers of jars in the houses of the Melanau have frequently their top part broken or ground down. This is not always due to an accident. The mere fabric of an old pot is believed to have magic powers and, ground into powder, is used as a medicine.

Ref.: Chin 1977; Harrisson T. 1967

"Dragon Jars" - Symbols of High Status

Many jars are decorated with dragons – incised, in applied relief, and other techniques. "Dragon Jars" were considered the most prestigious jars, particularly with the indigenous people on Borneo. In China, the dragon is yang, symbolizing the male element of the cosmic forces yin and yang. The dragon was the symbol of the Chinese emperor, the ruler of the universe.

However, there was a tradition with the indigenous people in Borneo, whereby the realm of the dragon is the underworld, the source of fertility. There the Bornean dragon corresponds to the Indian *makara* emerging from the waters. Dragon jars traditionally were status symbols, presented proudly in the long houses, and they still are.



The image shows a photograph taken in 2014. *Martabasn* decorated with dragons are on display in a Dajak longhouse on Borneo, together with other prestigious objects like a television set.



The photograph, taken around 1945, shows an aristocrat on Borneo with his dragon jars.



OKS 1961-14, H. 70 cm

The Princessehof collection of jars has a very similar "dragon jar", dated to the late Ming (1368-1644) to early Qing (1644-1911) period.

The large jar has an ovoid body and a short neck. It is covered by a shiny deep brown glaze. On the shoulder are eight vertical handles above a band of stylized waves between cords. On the body two horizontal four-clawed dragons in molded and applied relief are chasing a pearl amidst clouds.

The Princessehof collection has a very early type of jar decorated with applied dragons.



OKS 1978-3, H. 59,2 cm

This jar was made in kilns of Guangdong or Fujian in the Song dynasty (970-1279), probably in the kilns of Quanzhou, Fujian, in the IIth or I2th century. It has a flared mouth and four wide vertical lug handles.

On the shoulders are two applied dragons. The lead-green glaze is mostly eroded; there are splashes of ochre and yellow.

Ref.: Kaboy and Moore 1967; Chin 1977; Adhyatman and Ridhu 1984; Harrisson B. 1986; Valdes, Long and Barbosa 1992

The Princessehof Collection: An Important Reference Collection for Chinese and Southeast Asian Jars in the West

Typology: Knowing and Guessing

Already in his *Chinese Ceramiek-Handboek...*, published in 1953, Nanne Ottema gives, in chapter XI, a detailed description of the *martavanen* in his Princessehof collection and suggests four different groups.

As the oldest group he defines the jars, most of them collected by Anne Tjibbes van der Meulen, on Middle Java close to the Buddhist temples of the Borobudur, around 1917. More jars were collected, commissioned by Nanne Ottema, in the same area around 1930 by the collector H. Groeneveld. Quite correctly Ottema dates these jars into the Tang period (618-917) and refers to the reliefs of the Borobudur depicting jars.

As a second group he defines the very large stoneware jars, with dark glazes, without further decorations. Ottema mentions comparable pieces in the Ethnographical Museum in Berlin, Germany, found in Egypt, and one in the Tropenmuseum Amsterdam, found in Aceh. Another comparable piece was excavated in London. Ottema suggests that these jars were made in the southern Chinese province of Fujian and should be dated into the Ming dynasty (1368-1644).

Group three is a group of jars with distinct decoration: a yellow slip decorated, applied relief on a dark, brown glazed ground. Ottema refers to this type as "Soochow tubs", made in kilns in Suzhou, Jiangsu province, and exported from Shanghai. These vessels were used to store water.

Ottema mentions particularly a vessel of more than 100 cm high, in the shape of a gigantic tea caddy, acquired by Van der Meulen in Indonesia in 1917.

The forth group according to Ottema are the pots made in the kilns of Shiwan in the province of Guangdong, southern China. These jars, to be dated in the 18th and 19th century, are of characteristic glazes in bright colours of blue, turquoise, green, white, brown etc. Most of them have applied decorations.

Ref.: Moore 1970; Ottema 1953

Jars made in the Kilns of Southern China

Most of the Chinese jars in the Princessehof collection were made in kilns in the coastal provinces in southern China, particularly in the province of Guangdong. From the Tang dynasty (618-907) onward, Guangzhou (Kanton) was the most important trading port. All in- and outgoing ships had to pass Guangzhou. In 972 a superintendent for Merchant Shipping was created to manage and develop foreign trade.

Kilns situated in the Guangdong province therefore were in a most favored position: their proximity to the foreign markets meant their wares could be offered to lower prices. This development stimulated production in Guangdong; its many hundreds of kilns turned out relatively inexpensive wares for export. Some kilns specialized on producing stoneware jars, like the kilns at Shiwan district, Foshan, where excavations were carried out in 1976, which produced numbers of shards of stoneware jars; one could be dated 1116, which means, that the kilns were active already in the Song dynasty (960-1279).

Improved kiln technology contributed to a boom in ceramic production. Smaller bun-shaped kilns were replaced by long dragon-kilns; sectioned dragon-kilns led to the development of stepped dragon-kilns. In Guangdong, one site had sixty stepped dragon-kilns, with some kilns more than 100 m long.

Kilns were built on hillsides, along riverbanks or coastal areas where there were rich supplies of clay and thick forests which provided wood fuel.

There was much competition. Specialization contributed to faster production and innovation, such as a small test pad, found during excavations in a Song kiln site. This little pieces assisted in controlling the kiln temperature, the reduction flame, and vitrification of glazes.

Ref.: Brown 1989

Jars made in the Tang dynasty, (618-907), and two Tang Jars with Persian Inscriptions



A group of around twenty jars from the Princessehof Museum collection is dated into the 8^{th} to the 10^{th} century, the late Tang dynasty (618-709).

There are two types: one is thickly potted, made of light coloured clay with a chalky texture, of ovoid shape with a short neck. An incised line runs under the thumb-pressed lug-handles sitting on the shoulders. The thin glaze is of a very light yellowish or greenish colour.



L.: GAM 715, H. 23 cm; M.: NO 1433, H. 19 cm; R.: OKS 1981-92, H. 39 cm

These jars seem to be produced not only in southern China in Guangdong province, but also in Vietnam, where they were also discovered in quantities. The period before the 10th century would correspond to a period when Vietnam was occupied by the Chinese.



NO 1378: H. 66 cm

With the second type, probably to be dated somewhat later, the brownish or olive green glaze adheres unevenly to the body, which gives a mottled effect. The lug-handles are smaller and more refined. Jars of this type come in different sizes, from small globular jars to large ovoid jars of more than 70 cm in height. Around the shoulder are four or six horizontal handles. They are sitting on a line probably as a guide to the potters how high to place the handles. Some of the jars have small and short spouts.

It seems that jars of this type were produced in Southern China, in the province of Guangdong. The port of Guangzhou, (Kanton), was the major export port during the Tang dynasty, and played a significant role in producing stoneware jars. Kilns in Guangdong produced jars of various sizes and shapes for packing export goods. Fragments of this type of jars were excavated at the kilns of Chaozhou. These kilns originated in the Tang dynasty and formed an important part of export wares during the Tang and Song (960-1279) dynasties.

The jars of both types are glazed on the exterior and interior in grey green, yellowish brown or green and olive green with a mixture of wood-ash and lime-stone glaze. Most jars have a lobed glaze line, with the lower part of the exterior unglazed. It indicates that both types were dip-glazed. However, all examples are completely glazed in the interior.

Analyses of early Chinese glazes suggest that wood-ash was the favoured flux from about 1500 BC to around 900 AD. From the 10th century onwards, potters in many kilns substituted limestone for wood ash. It seems also likely, that, particularly in kilns in Southern China, mixtures of wood-ash and lime-stone were used, both before and after this time.

Most of these wood-ash – lime-stone glazed jars have a patterned and streaky surface, which can be explained by the relics of fine cracks that developed in the glazes early in the firing, which then became filled with melting glaze as the temperature rose. Lime glazes have low viscosity and are rather fluid. The melting point would be around 1200 Celsius.

Most of the Tang type jars in the Princessehof collection were excavated in the beginning of the 20th century on Central Java near the Borobudur, the important Buddhist centre on Java, and acquired there by Van der Meulen. Many other were acquired later, after the death of Nanne Ottema in 1955 by the OKS.

In the archives of the Princessehof Museum, one of the letters from Van der Meulen, dated 1917, and addressed to Nanne Ottema, is about the circumstances of his acquisitions. It gives a vivid impression on how objects were hunted and "collected" by the Europeans, the Dutch, at that time, in Indonesia, the Dutch Indies.

"Now about Borobudur. I went to Mendut and chatted with the old guard. From him I heard of an old jar, excavated some time ago, not far away. Fortunately I was barefoot, because we had to cross a river. And: the bronze objects were all sold, but: luckily, the pot was still there. An object of 75 cm high, a big thing, the interior glazed, the exterior just part of it glazed.

I think it is quite old, and because I simply love old things, I bought it. I think it could be important for the chronology of our collection. Again: red stoneware, quite heavy, greenish yellowish glaze with irregular spots, six strap handles. Very difficult to take it home! I washed it, and now it is sitting in my study, and I am so very happy with it. And now I think I should have stayed at Borobudur. Who knows what else would have come to light? I was told about another excavated pot, not so beautiful, but from the same period, and I bought this one too."

We are not told by Van der Meulen about the context how these ceramic jars were found. Was there anything inside? We know from other sources, that the jars found near the temples on Java were often found lying lengthwise mouth to mouth and sometimes contained bronze and other metal objects from the Hindu Javanese period. What could be the reason to bury jars filled with metal objects? Was there a ritual function behind it? Were they buried to be saved from an attack, and when?

Up to now there is no research carried out on the possible role of jars in Hinduist or Buddhist ritual in the temples of Borobudur on Java, Angkor Vat in Cambodia and Pagan in Birma. The interpretation of the stone reliefs in these temples might provide further information on why these large ovoid Tang jars, now preserved in the Princessehof collection, were found very close to Borobudur. Further research would be highly appreciated.

The Tang jars in the Princessehof Museum could probably also give information on Tang long-distance trade.

The collection has two jars of the Tang type with inscriptions, never given proper attention before. The following remarks are a tentative interpretation of these inscriptions.



Inscription on jar OKS 1981-92

The stoneware jar of 39 cm high has a light green yellowish glaze. The inscription is below the lip on the shoulder. It was identified by Roderick Orlina as Pahlevi script, a middle Persian script. The lower line seems to contain the Sogdian-derived Persian word for wine, *mul*. The jar with its small size and fluted rim would in fact be suited for pouring wine.

The other jar with an inscription is of the large, ovoid type.



GMP 1981-56; H. 64 cm

It is made of coarse stoneware and has an olive green ash glaze. On the outside the glaze stops shortly above the base; it is glazed inside.

The inscription is below the lip and was incised again when the jar was made, before the application of the glaze.



Inscription on the jar GMP 1981-56

This script was identified as an old Turkic, Manichaean script, and it might represent (y)ag "oil".

Manichaean script, read from right to left, was devised in the 3rd century and was used exclusively by the followers of Manichaeism, a Persian religion, up until the 10th century.

How to relate this epigraphical information on the Princessehof jars to the historical context of Tang international trade in the 9th to 10th century? What was the role "wine" and "oil" could have played in Chinese trade? And what would be the role vessels to transport these liquids would play? Both, the transport of wine and oil, would require vessels glazed inside – like the Tang vessels with the inscription "oil "and "wine".

The author, together with the epigraphist Roderick Orlina, will publish an article next spring in the Bulletin de l' Ecole Française d'Extreme Orient, to argue a new perspective on Tang maritime trade and the role of Persian traders in Tang dynasty (see I.B.2)

Ref.: Krahl, Guy, Wilson and Raby 2010; personal communication with Roderick Orlina

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Jars made in the Song dynasty (960-1279)

It is difficult to date jars into the Song dynasty. When kilns were excavated, the archeologists and ceramic historians focused their attention on sites of *guanyao*, the "official" kilns, where "imperial" wares were made. Kilns, where functional pottery was produced, seemed of no interest.



OKS 1972-21

A jar from the Princessehof collection, which could probably be dated into the Song dynasty, is presented here. The green glazed jar is of the type made in the kilns of Yue, Zhejiang province. Because these kilns produced a wider variety of wares, including high quality wares for the Chinese elite and the court, more is known about theses kilns.

The famous kiln complex of the Yue kilns is situated in the southern Chinese province of Zhejiang. Production started in the Tang dynasty (618-907) and continued into the Song dynasty (960-1279). Characteristic for the products of these kilns were the "Yue greenware", vessels glazed in a number of shades of green, caused by a certain content of iron oxide. Most of the wares were plain, or with applied or incised ornamentation. Yue greenware was much praised by connoisseurs because of the similarity of the glaze color with jade, traditionally highly appreciated. Yue ware bowls were considered first choice for drinking tea from.

The large globular jar has a smooth green glaze. The upper half of the body is decorated with an incised motif of plaintain leaves. On the shoulder four horizontal lug handles. The jar of the Yue-type can be dated into the 10^{th} to 12^{th} century.

Jars made in the Yuan (1279-1368) and Ming (1368-1644) dynasties

During the Yuan dynasty, the rule of the Mongols, enormous numbers of Chinese porcelain, particularly of the blue and white type, were made for export. By "global" trade - on the land routes of Central Asia, and on the sea routes - China was connected with the lands of the Middle East. Great collections of Chinese porcelain were formed by the Timurids, the Persians and the Ottomans. The Topkapi Sarail in Istanbul holds the most important collection of Yuan and Ming blue and white porcelain and celadon wares.

There must have been stoneware storage jars made during the Yuan dynasty, but it seems difficult to date a jar into this short era. There was no change of "style", shape or decoration from Song to Yuan to Ming jars. No excavation of kilns or shipwrecks were found so far, to provide a safe framework for reference.

The jars or groups of jars from the Princessehof collection presented here are therefore rather vaguely dated "Ming"- a long era of more than 300 years.

There is a surprising variety of jars, made in different kilns and in varied styles.



OKS 1971-21; H. 46 cm

The impressive jar could be tentatively dated into the Yuan or early Ming period. It has a bulbous body, with four horizontal handles on the shoulder. The body is covered with a sand coloured glaze and brushed with a band of iron oxide mottled brown glaze around the shoulder, with dripping. Exposed parts show a light buff body. The lazed dripping is reminiscent of modern day pottery.



OKS 1971-019; H. 48 cm

The image shows another jar with a rather early dating, Yuan or early Ming. It has an olive-green glazed with an iron-brown decoration of flowers and leaves between the four horizontal lug-handles. The design is freely drawn and reminds in its vitality of brush strokes found in painting.

The free and spontaneous execution of flowers and leaves could be related to designs on wares made in the kilns of Cizhou, a kiln complex in the province of Hebei, northern China, where during the Song and Yuan dynasties jars with black or brown slip designs on an overall white cream glaze were made. Cizhou wares were one of the most popular and influential stone wares in China. Could this jar been made not in a kiln in southern China, but in the north? Or would this type of jar be an example of the influence of the northern Ciszhou kilns on the kilns in southern China?



Wine jars. L: GAM 718, H. 42 cm; M. GAM 933, H. 44 cm; R. NO 1350, H. 50 cm

A group of jars is glazed in dark brown to blackish iron oxide glazes. The jars have round or ovoid bodies and very small mouths. They were used to store wine. The mouth therefore had to be small and covered with a tightly fitting cover, to prevent the alcohol to evaporate.



The intended content of this jar is written in a fan-shaped cartouche on the shoulder of the jar. The two Chinese characters say: sheng ji "excellent sorghum". Sorghum is a grain traditionally used for the distillation of spirits.

Because this type of rustic and simple jars does not show any distinctive features or "styles" of decoration, it is very difficult to say where and when they were made. These utilitarian vessels were probably made over a long period of time.

Ref.: Harrisson B. 1986

Jars made in the Qing dynasty (1644-1911) and the 20th century

During the long reign of the Qing dynasty, innumerable storage jars were produced in China and Southeast Asia. The Princessehof collection has groups of jars and individual jars from this period.

A distinctive group of jars, represented in the Princessehof collection, was made in the kilns of Shiwan, situated near Foshan, province of Guangdong. Their typical features are glazes in blue, brown, white and "kingfisher-feather" or "blue feather", a bright turquoise.

The kilns of Shiwan were active from the Song-dynasty (960-1279) and flourished particularly during the Ming (1368-1644) and Qing (1644-1911) dynasties. Its products were heavily potted with a darkish grey body and thick lustrous glaze. They included architectural ceramics, bowls, saucer dishes and jars.



NO 1328; H. 62,5 cm



GMP 1960-9; H. 60, 5 cm

The two jars of the *martaban* type are decorated with a combination of auspicious motifs in the molded applique technique. Impressions from the mold were applied onto the surface before the piece was fired and glazed.

On the shoulders are eight lion masks and below, a band of two pairs of confronting, clawed, horned and long whiskered dragons. The lower part has two pairs of smaller dragons facing the clouds and holding the jewel, and the lower bands of the body consist of stylized foaming waves.



NO 1338; H. 61 cm

The jar has an overall petal motif: various designs of butterflies, bat, crane and dragons are positioned between the petals. Six vertical, thumb-pressed lug-handles are sitting on the shoulder. The green and turquoise colours were supplied by copper. This type was made in two types of glazes: turquoise - as in the present example - but also in brown monochrome.



NO 1363; H. 85 cm

The Princessehof collection holds some twenty pieces of wares known as "Guangdong Wares", made in kilns in Guangdong or other kilns in southern China. The vessels have a dark brown glaze and are decorated with yellow slip with flowers and animals. An interesting example is the large lidded jar in the shape of a tea caddy, around 80 cm high, decorated with flowers and landscapes. It was collected by Van der Meulen from a Chinese dealer in Batavia on May 8th 1921.



GMP 1980-1; H. 85 cm

The jar presented here was made in Sarawak in 1979. It has the classical shape and design of a traditional "dragon jar". It has a smooth brown running glaze, and is decorated with applied dragons and clouds.

The jar was made in the kilns of a Chinese potter working in Sarawak, Borneo, specialized in jars. It is said, that the first Chinese potters settling on Borneo came from the southern province of Guangdong in the beginning of the 20^{th} century.

When with the indigenous people on Borneo jars were damaged or broken, the Chinese potters could supply new ones in the traditional style.

This choice of jars are just a few examples of a rich collection of jars made in the 17th to the 20th century. Many more jars wait to be analysed, described and interpreted.

Comparable examples are found in the publications on martaban found in Indonesia and the Philippines.

Ref.: Loscin 1967; Adhyatman and Ridhu 1984; Harrisson B. 1986; Valdes, Long and Barbosa 1992

Two Khmer Jars from Laos / Cambodia from the 12th - 13th century



GMP 1980-71; H. 42,0 cm



GMP 1980-3; H. 64,0 cm

Ceramics made in Cambodia during the Khmer empire (802-1431) are unique in the Asian ceramic tradition and reflect an indigenous culture free of other influences. Unlike other Southeast Asian ceramics, like Thai or Vietnamese wares, these products were made solely for local use and not for export. For the use of the wealthy there was always imported Chinese porcelain and celadon available.

The Khmer capital, Angkor, with its grandiose sandstone temples, formed the center of Khmer culture. A great number of kilns operated around the temple complexes of the Khmer kingdom. Excavations in Cambodia, carried out mostly by French archaeologists starting in the middle of the 20th century, focused on bringing to light the structures of temples; they were not aimed to discover ceramics. It is only recently that research on Khmer ceramics is given proper attention.

Excavations would suggest, that there was a presence of Chinese potters in the late 9th century, introducing a new technology. At 8th century sites in Cambodia, only unglazed earthenware was found; a hundred years later, glazed tiles and glazed stoneware vessels were produced. Once glazed stone wares were introduced, however, further influence from China seems to have been negligible and Khmer potters followed their own tastes and ultimately produced the most un-Chinese looking ceramics in the whole of Southeast Asia, showing both Indian influence and indigenous design.

The two wine jars from the Princessehof collection were probably produced in the 12th to 13th century in kilns of the so-called Angkorean region of Southeast Asia, which at its zenith extended from Cambodia to southern Laos and across the northeaster Thailand.

Jars of this type were used in Laos at festivals or celebratory events, such as the rice harvest. Celebrants sat around the jar drinking a sweet, spicy rice wine *ruon* through carved reeds.

Large brown-glazed jars, with or without a pedestal, were superbly crafted by Khmer potters and the quantity of whole pieces and shards found suggests that the form was one of the main outputs of the kilns. The shapes are coil-built and reflect strong and bold potting. A body that swells from a narrow base is typical. The simplicity of form and decoration and the unpretentiousness of the earthy clay and glaze gives these jars a spirit and beauty that elevates them to a special class of Khmer ceramics.

The profile of the jars is typical for Khmer jars that were probably used for storing liquids such as water or rice wine. The foot is relatively small in proportion to the tall, swelling walls and the gently curved shoulder. The absence of a neck is characteristic. The profile terminates in a thick, flaring mouth rim. The unglazed body near the base indicates that slip was applied and then a dark brown glaze drizzled over the jar.

The smaller jar is of a similar shape. A blackish brown glaze dribbles down the body of the white slip-glazed jar. On both jars the technically flawed but characteristic dark brown glaze has flaked.

On both jars the lightly incised designs of horizontal lines and stylized leaves are visible.

Ref.: Guy 1986; Guy 1987; Brown 1988; Miksic 2009; Rooney 2010

Jars made in Thailand

Ceramic industry in Thailand started differently from Vietnam. The first high fired stone wares were made in northeast Thailand, then a part of the Khmer (Cambodian) empire (802-1431). Starting in the 11th century, Khmer wares showed both Indian influence and indigenous design. Ceramic technology, however, was influenced by the Chinese, as did contemporary Vietnamese ceramics.

In the end of the 13th century Thai king Rama Khan Haeng had asked the Chinese emperor for 500 potters to establish a ceramic center, and potters from Hebei were settled in Sukhotai.

By the 14th century the Thai had eliminated the Khmer and made Ayutthaya their capital. Ayutthaya evolved as an important international trading center.

The kingdom of Ayutthaya existed from 1351 to 1767. Ayutthaya was friendly towards foreign traders, including the <u>Chinese</u>, <u>Vietnamese</u>, <u>Indians</u>, <u>Japanese</u> and <u>Persians</u>, and later the <u>Portuguese</u>, <u>Spaniards</u>, <u>Dutch</u> and <u>French</u>, permitting them to set up villages outside the walls of the capital, also called <u>Ayutthaya</u>.

By 1550, the kingdom's vassals included some city-states in the Malay Peninsula, Sukhothai, and parts of Cambodia.

Sukhothai was another early kingdom in the area around the city in north central Thailand. The Kingdom existed from 1238 until 1583. The Sukhotai kingdom is distinguished by its ceramic creativity. Some wares were produced at kilns close to the city of Sukhotai, but another larger class of wares known as Sawankhalok were produced at kilns centred around the city of Si Satchanalai, north of Bangkok. There was a large export trade in these ceramics. Sri Satchanalai wares were widely traded throughout Southeast Asia, and examples have been found on burial sites at Angkor and throughout the Philippines and Indonesia. It exported also ceramics, made in the numerous kilns, to Southeast Asia and Japan.

Most of the storage jars were made at the kilns of Sri Satchanalai. The kilns produced an astonishing wide variety of wares ranging from large water jars - like the jar preserved at the Princessehof Museum -, architectural ornaments, tiles, dishes and jarlets. Typical is a medium grey, black speckled body.

The body of jars produced in Thailand is coarse, of a greyish brown, with many impurities. On the surface, the body is fired to a gray, orange or orange red. Large jars were hand built in the coiling technique.

The production stopped in 1552, when the Burmese conquered northern Thailand. Potters from this area might be taken to the kilns in Pegu, Birma. Not much is known about what kind of pottery was made there end 16th century.

In Thailand, Burma, and Cambodia kiln sites are continually excavated, but the exact dating of the ovens is not yet fixed.

More information on provenance and dating will be provided with the results of the international research and excavation project organized by the College de France, Paris, which started in 2015. (see 1.B.3)

It might be interesting to note, as Barbara Harrisson refers to in her book on *Pusaka*... published in 1986, that the indigenous people on Borneo had developed connoisseurship with jars and a terminology to refer to different kinds of jars.

A group of jars was called gusi, another group syam jars.

Gusi jars served as the prestigious properties of the chiefs of Sabah and Brunei during the late 19th century.

The supposed Vietnamese origin of gusi may have to do with the sound. In Malaya the word kuchi referred to what is now northern Vietnam. Probably synonymous with the old Vietnamese name Kun Chun, name of the

province of Than Hou, where the production of *gusi* may have been located. Kun Chun is still reflected in the Englisch term *Cochin China*, to distinguish it from the *kuchi* of India. The Japanese term *kochi/kuchi* also referred to ceramics from Cochin China, or what the Japanese believed to be the Cochin China during the Momoyama period.

As the name *martavan* was used west of India for jars generally, so the name *gusi* was apparently used east of it. The name *gusi* was current in Malaya, Java, Sulawesi, the Philippines, and as far east as Bali.

Syam jars referred to jars of Siam, the Thai Sawankhalok type of the 14th and 15th century. It is surprising: how people on Borneo knew where these jars were made or came from?

The Princessehof collection has numbers of jars made in the kilns of Thailand.



NO 1351; H. 98 cm

This large storage jar of a height of more than 100 cm is the biggest in the Princessehof collection. It was made in the kilns of Sri Satchanalai and can tentatively be dated 16th century. This jar was acquired by Anne Tjibbes van der Meulen on Java before 1920.

It is not only an awe-inspiring presence of an archetype jar. To make such an enormous jar must have been a great challenge for the potter. It was probably made in the coiling technique.

Thai kilns also produced jars of unglazed stoneware, or spotted, black and brown glazed vessels. The unglazed jars were decorated with incised, stamped or applied designs.



NO 1342; H. 100,5 cm

The Princessehof collection has a most impressive jar, which was probably made in the kilns of Thailand in the 15th or 16th century. It is unglazed, but polished, with a fine, pinkish-white body. The foot is relatively small, the body in the shape of a wide spindle. The mouth rim is everted, and around the waist are two bands of stamped designs of flower heads.



Left: OKS 1976-168, H. 17,3 cm; middle: GMP 1960-29, H. 21 cm; right: GMP 1967-173, H. 16,0 cm

It seems that one of the most popular export types made in the kilns of Thailand was a type of rather small jars. They are made of rather coarse clay, and glazed on the upper part with a dark brown iron oxide glaze, dripping down. Most of these jars have four vertical lug-handles.

These jars are typical for Thai jars made in the 15th or 16th century in the kilns of Sawankhalok, Sri Satchanalai. Jars of this type were found on the wreck of the Koh Khram, generally dated into the 15th century. They were exported to island Southeast Asia in numbers, and highly appreciated by the indigenous people of Indonesia,

particularly Borneo and Java. Most jars of this type preserved in the Princessehof collection were found in Indonesia.

The historical photograph of a head hunting ceremony with the Kelabits on Borneo (see 1.F.3) shows in the foreground Thai jars of this type.

Ref.: Spinks 1959; Brown 1988; Guy 1988; Miksic 2009

Jars made in Vietnam

The ceramic industry in Vietnam started with the arrival of Chinese potters 3rd century BC; Vietnam had to endure almost 1000 years of Chinese colonial rule. After the northern Vietnamese gained independence in the 11th century, they underwent fundamental changes. The ceramics of the Ly and Tran dynasties (1009-1400) are considered high expressions of indigenous Vietnamese creativity. Starting in the 15th century, kilns in the Red River delta region near Hanoi produced cobalt blue and white stoneware for Japan and island Southeast Asia. In the 16th century, as Chinese kilns regained their dominance, Vietnamese wares lost their vigor.

Jars were made in many kilns over a long period.

Early examples, to be dated into the $5^{th} - 7^{th}$ century, are related to Chinese Yue-type ceramics; a group of jars dated into the 8^{th} and 9^{th} century, the Chinese Tang dynasty (618-907) were made in China and Vietnam in comparable style; a jar from the Princessehof collection (Inv.no. OKS 1981-92, see 2A2) is closely related to a jar excavated at Kinh Mon, Hai Hung province, found filled with Chinese Yuan dynasty (1279-1368) dated Chinese ceramics. The jar can be dated 13^{th} to 14^{th} century.



NO 1837, Acquired by Nanne Ottema in 1943, H. 36, 0 cm

The bulbous jar has a small mouth and an everted lip. It is covered by a dripped glaze in smooth warm brown. On the shoulder are four horizontal rope-like handles, most likely to tie down some type of cover, suggesting that this jar was used for storage.

Shards discovered in 1974 near the kiln site at Go-sanh and in other nearby villages in central Vietnam provide interesting parallels to this jars laze, its reddish body and to the method of incised decoration of free-flowing chrysanthemums beneath the glaze.

Until 1472, Go-sanh and the surrounding area of central Vietnam was ruled by the Champa kingdom, although the kilns at Go-sanh more than likely produced their distinctive products for centuries after the political extinction of the Champa state.

The strategic location of Champa along the Vietnamese coast made it a port-of-call on the trade routes that linked mainland Southeast Asia with Indonesia, China, and the parts of the world from at least the 8th century on. A vessel such as this may have been made to serve as storage jar on the sea trade routes.

This type of jar could also be made in kilns in southern China.

They were excavated at sites at Penny's Bay, Lantau Island, near Hongkong, which is believed to be a 15th to 16th century site.



NO 1656; H. 22,5 cm

Two special jars have an inscription on the base. The image shows one of them. The other one has a slightly darker glaze.

The shape of the jars is similar as those originating in China, with a glossier glaze. They are decorated with a design of incised scales and *naga*-like dragons.

Comparison with ceramics of similar colour and glaze still produced in the Nam Sach county, east of Hanoi, as well as the presence of an extinct Vietnamese script from the same area with very similar letters point to Northern Vietnam as the likely production site. The proximity to Chinese production centers made it a perfect "backup" site where similar wares could be produced during the Ming ban on maritime trade in the 15th and 16th century.

Ref.: Brown 1988; Guy 1997; Miksic 2009; personal communication with Roderick Orlina

Conclusion

This study is an introduction to the collection of jars at the Princessehof Museum, Leeuwarden. Only a rather small choice of jars is presented here. But these examples point to difficult questions when researching jars as a ceramic historian: provenance and dating.

Because most of the jars are simply made, the number of distinguishing features and peculiar criteria for identification are few compared with those on more elaborate style and pieces. When it turned out that a type was suitable for a certain purpose, it was made in numbers over long periods of time.

The situation with jars is therefore very different from stating the provenance and dating of Chinese imperial porcelain, where sometime two decades in a certain era make a dramatic distinction in style.

Still, we want to know where these jars were made, and when. Excavations of kilns, where shards of jars will not be thrown away like in the past, have just started, in China as well as in the jar producing countries of Southeast Asia, Thailand, Vietnam, Cambodia and Myanmar. Much work still has to be done. The small circle of international jar "experts" is exchanging new information, and I am sure there will be a more precise answer to the questions of provenance and dating in the future.

Jars were used on ships, and were exported. Excavations of jars or shards on the archipelago, Sri Lanka, India, the Middle East and Africa point to the maritime trade between East and West for more than one thousand years, and the puzzles allow us to reconstruct ancient trade routes.

Jars always have a symbolic meaning. The unique collection of jars preserved in the Princessehof Museum was mostly collected in the last century in Indonesia. The author therefore tried to present some archival information on how jars were acquired in colonial times, and why they were collected in Friesland, not the most likely place for old Asian jars. It was a group of unusual collectors around Nanne Ottema, founder of the Princessehof Museum.

On the archipelago, particularly with the indigenous cultures on Borneo and Java, jars were considered "magic", and played a rich and important role in these traditional societies. It is therefore not only interesting, but - considering the disintegration of these traditional communities -, to record and document the "meanings" of jars.

We will probably never come to an exact dating of an old jar like "made in the kilns of Shiwan in 1522". But jars are complex beings, and there is so much more to know about jars than an exact date.

This study is a first step for an interpretation of the Princessehof collection of jars. Further research will be needed, to establish the international importance of the collection.

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