Localities


Angkor
Straits of
Melaka
Java
Indian Ocean

7 Chinese Ceramics on the Maritime Silk Road

The Importance of Context

John N. Miksic

Abstract
Archaeologists are just beginning to exploit the potential of Chinese ceramics to reconstruct patterns of trade. This chapter summarizes data showing the fluctuation in the quantity of Chinese ceramics exported to the region over this period. It also explores the connection between Chinese ceramics and Southeast Asia's sociocultural evolution during this period, including the influence of the China trade on Southeast Asian urbanization and relations between ports and their hinterlands. It has been suggested that ports in Southeast Asia dominated their hinterlands, but this chapter will argue that hinterland dwellers as well as inhabitants of offshore islands exerted a significant degree of political and economic autonomy until the colonial period.

Keywords: Tang, Song, Yuan; Ming, porcelain, stoneware

Introduction

For many years, the study of Chinese ceramics exported to Southeast Asia during the Song to Ming Dynasties (960–1643 CE) was the domain of art historians. Archaeologists are now beginning to exploit the potential of this material to reconstruct patterns of trade. This chapter has three main aims. The first aim is to summarize data available to describe the fluctuation in the amount of Chinese ceramics exported to the region over this period of almost seven hundred years, with reference to the cultural and historical geography particular to Southeast Asia. The second aim is theoretical:

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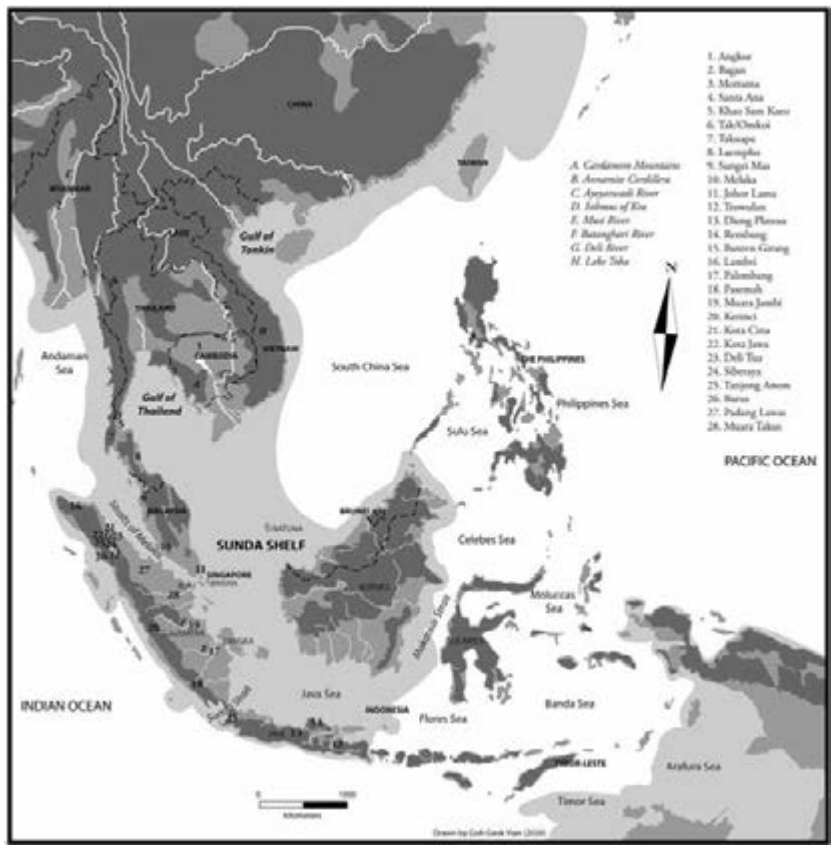
to explore the potential (and limitations) of these data to shed light on Southeast Asia's sociocultural evolution during this period, including the influence of the China trade on Southeast Asian urbanization and relations between ports and their hinterlands. It has been suggested that ports in Southeast Asia dominated their hinterlands, but this chapter will argue that hinterland dwellers as well as inhabitants of offshore islands exerted a significant degree of political and economic autonomy until the colonial period. The third aim is methodological: to emphasize the importance of differentiating between the archaeological contexts in which Chinese ceramics are found.

Southeast Asian Geography and History

The special relationships among people living in different topographic zones along Asia's south coast adds a level of complexity to the analysis of the Maritime Silk Road (MSR). We can distinguish four ecological zones in Southeast Asia, each of which participated in the MSR, but in different ways. These are: (1) the coastal zone, where water is salty and not potable; (2) deltas and estuaries, in which a mixture of fresh and brackish tidal water may extend inland for one hundred kilometers or more; (3) plains with streams of fresh water navigable for boats of moderate size (up to about five tons); and (4) highlands, where water courses are passable only by rafts or canoes or not passable at all. The relationship between the societies inhabiting these four zones has so far been explained only in general terms, marked by dubious assumptions of dominance/subordination. The distribution of economic and political power among these zones has major implications for interpreting the significance of the distribution of early Chinese ceramics beyond China. Our knowledge of this distribution is based on data that is incomplete, but it suffices to show why the relative quantities of Chinese ceramics in the different zones is *not* directly correlated with the political or economic power between these zones.

No ports in ancient Southeast Asia lay directly on the seacoast due to the gentle east-west slope of the Sunda Shelf. Most important ancient ports were located at the inland apexes of deltas. Since the mouths of the distributaries that cross the deltas all look alike from the sea, local knowledge is necessary to discern which mouth leads to the main port. Tidal fluctuations and tidal bores also require precise knowledge of the times when it is possible to sail upstream. Foreign sailors could not be expected to possess this information, so Southeast Asian sailors had a major advantage in the form

Figure 7.1 Map of Southeast Asia



Credit: Geok Yian Goh

of vast experience in navigating the complicated route between the Indian Ocean and the South China Sea. Premodern ports seldom built large forts, temples, or palaces, preferring to invest in other structures of perishable materials, and sought to retain autonomy from hinterland empires by forming networks for the exchange of goods and ideas with other ports (Fox 1971). Water-borne trade had quite different effects on societies along Asia's south coast compared to the influence of overland trade routes on in central Asia. A record from the Liu Song Dynasty, which ruled southern China in the fifth century, shows that China already preferred the Maritime Silk Road to the Central Asian route:

> When the two Han dynasties had sent expeditions these [overland] routes had been found to be particularly difficult and merchandise, on which

> [China] depended, had come from Tongking; it had sailed on the waves of the sea … Precious things come from the mountain and the sea by this way. There are articles such as rhinoceros' horn and kingfisher feathers and rarities such as serpent pearls and asbestos; there are thousands of varieties, all of which the rulers eagerly coveted. Therefore ships came in a continuous stream, and merchants and envoys jostled with each other. (quoted in Wolters 1967, 77)

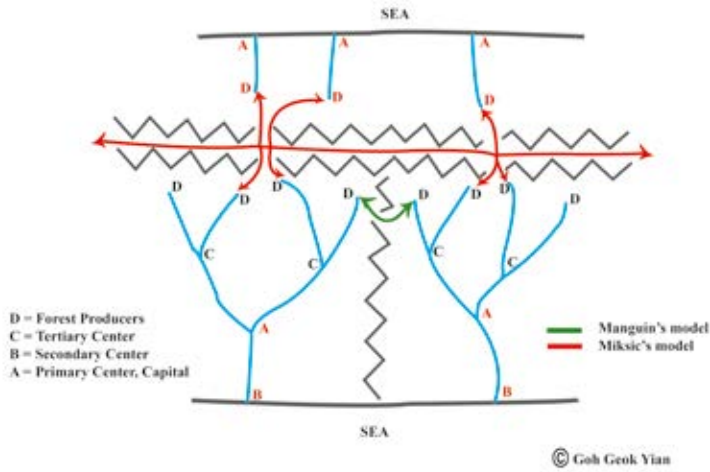
The coasts of the South China Sea were unified by maritime trade around 400 BCE (Bellina 2017). Overland trade between the regions of northeast India and Bangladesh may have begun around that time, along with the expansion of that network to incorporate shipping across the Bay of Bengal to southern India and Southeast Asia. For the last fourteen hundred years, a series of major ports linking the South China Sea and Indian Ocean has existed near the northern and southern entrances to the Straits of Melaka, the main route between the two bodies of water.

Ports and Hinterlands

Seaports are complicated places to study because human activities such as loading and unloading ships, and natural factors such as waves, currents, and tides, disturb the soil and deposit important items in the mud or under water, making it difficult to recover artifacts or understand their contexts. These factors have deterred archaeological research on these sites in comparison with hinterland routes and sites. Anthropologist Frederick Dunn (1975) published a diagram depicting the geographical pattern of extraction of resources from the highlands of the southern Malay Peninsula. Two years later, archaeologist Bennet Bronson (1977) published a similar model that he proposed as a spatial system that defined the relationship between port-kingdoms in Southeast Asia, their hinterlands, and China.

The Bronson model equates political economic systems with a hierarchy in which local capitals are found at river mouths, while secondary and tertiary levels of political authority are at the inland junctions of tributaries that are in turn dominated by an overseas superpower. This model has become widely popular among historians and archaeologists of early Southeast Asia. I have argued elsewhere (Miksic 1985, 2009b) that the Bronson model (also called the Upstream/Downstream model) as well as Dunn's special case study are identical to the dendritic model devised by locational geographers (Haggett 1966), which became influential in anthropology and archaeology in the 1970s (e.g., Smith 1974). I also have shown why the dendritic model

Figure 7.2 Sumatran trade model



Credit: John N. Miksic/Geok Yian Goh

is not applicable to precolonial Southeast Asia, although it did come into existence during the period of European imperialism. The Bronson model is an example of geographic determinism. The relationships between the altitudinal zones in Sumatra and the other islands in the vast Southeast Asian archipelago, the courts and cities in China and India, and the network of ports that connected them, were much more sophisticated, complex, and heterarchical than the Bronson model implies. I have created a model that delineates the complex web of relationships between ports, hinterland plains, uplands, and overseas trading partners.

"The sea unites, the land divides" is an old cliché in Southeast Asian studies. The dichotomy that this phrase implies may be true in ethnographic and linguistic terms (highlands are much more diverse than lowlands in these dimensions), but it masks a pattern of upland-lowland interaction that made it possible for this diversity to evolve and for the lowlands to begin to prosper. Much of Southeast Asian cultural evolution can be seen as a result of symbiotic relations (rather than domination/subordination) between societies located in estuaries and those in the highlands. Of the four zones defined above, the highlands and the estuaries have been the most prominent in Southeast Asian history. These two zones formed spheres of interaction, both economic and ritual. In the precolonial period, relations between the deltaic fringes, the uplands,

and the offshore islands were characterized by reciprocity rather than market exchange or forced extraction (as documented, for example, in *piagem* documents found in south Sumatra; Miksic 1985, 444–446). In the colonial era, this framework was destabilized by European weaponry and a great increase in the volume of trade. Estuarine ports, at the direct or indirect urging of Europeans, began to subjugate highland groups to extract trade commodities by force.

The region termed Zomia includes northern mainland Southeast Asia, southwest China, northeast India, and northeast Bangladesh (van Schendel 2002). It covers 2.5 million square kilometers, or about as large as Europe. Anthropologist James Scott acknowledges, even celebrates, the fact that, contrary to the implications of Bronson's model, lowland polities still have difficulty subjugating areas above an elevation of three hundred meters, but he observes that commerce is not fazed by the same obstacle: "peripheral peoples had always been firmly linked economically to the lowlands and to world trade" (Scott 2009, 4). He emphasizes that "it is impossible to provide a satisfactory account of the valley states without understanding the central role played by Zomia in their formation and collapse" (16).

Numerous overland routes existed in premodern Southeast Asia, but only the Angkorian road system has been well documented. For example, Hendrickson (2017), Tran (2013), and Jindasu (2019) have studied the extension of this route across the Annamite Cordillera into Vietnam. It is commonly assumed that overland routes were less important than riverine transport. Research, however, shows that overland transport played a more important role than hitherto recognized in highland societies, and that highlanders were able to negotiate their relationships with lowland ports and overseas markets from a position of equality. Major religious centers in the Sumatran highlands in the eleventh through fourteenth centuries were located at important junctions where highland routes crossed rivers (Miksic 1985).

Chinese Ceramics as a Source of Data

Ancient Chinese ceramics are some of the most useful markers of nodes and routes because they are almost indestructible and can be precisely dated. Chinese ceramics were correlated in some cases with high status, but this is not always true. In Cambodia, archaeological research on the Angkor period (tenth through fourteenth centuries) has unearthed few Chinese ceramics, and these have mainly been found in elite residential areas and temples. In island Southeast Asia, all strata of society owned Chinese wares

(Miksic 2013a). In eighteenth-century Mexico, Chinese porcelain was no more expensive than European mayòlica and locally made pottery (Gasco 1992, 69–71; Skowronek 2016, 66–68). Chinese nobles during the Imperial period did not consider ceramics as suitably distinguished gifts for visiting embassies (Wong 1979). The distribution of Chinese ceramics should thus be considered an independent rather than dependent variable in the search for proxies for dominant/subordinate relationships between nodes of trade and settlement. As will be described below, Chinese ceramics played different roles in societies inhabiting different elevation zones in Southeast Asia, so the quantity and quality of Chinese ceramics in different sites cannot be used as the sole criterion to reconstruct political or economic hierarchies.

Much more Chinese porcelain and stoneware is found in insular Southeast Asia than on the mainland. The largest concentrations of Chinese wares have been found along the Straits of Melaka and in Java, with other significant sites in Sulawesi, Borneo, the Riau Archipelago, and the Philippines. Possible variables responsible for this situation include different levels of demand caused by local social and cultural preferences; different buying power due to the variable occurrence of natural products sought by China; differences in accessibility and cultural attitudes toward Chinese ceramics; and the importance of trade as an occupational specialization. Chinese ceramics first reached Southeast Asia around 200 BCE (Peronnet and Srikanlaya 2017) but did not become a major export commodity until a millennium later (Flecker 2001). The reasons why this change occurred are obscure. Possible factors include technological changes to ceramic production in China, such as more aesthetically pleasing products, much larger kilns, and efficient production processes, and the general growth in trade with Southeast Asia that took place during the Tang Dynasty. Possibly a synergistic feedback loop occurred between increasing imports from Southeast Asia and the Indian Ocean and changes in Chinese society, spurred in part by the gradual incorporation of southern China into the empire. The study of the interaction among these variables will require much research, but so far little documentation for them exists.

Exchanges between China and foreign countries before the Southern Song Dynasty (1126–1279 CE) took place in the framework of "tributary trade," whereby the Chinese court accepted tribute and reciprocated by giving presents to foreign envoys. Ceramics are not listed among Chinese diplomatic gifts (Bielenstein 2005), with one exception noted by Wong (1979). Foreign envoys, however, were sometimes permitted to trade privately with designated Chinese during their missions. The products exchanged in this way are not recorded. Early Chinese ceramics may have reached

Southeast Asia through this channel. Additionally, the tributary system was manipulated by foreign rulers whom the Chinese treated as vassals for their own internal political reasons (Zhang and Saxer 2017, 18).

Trade in Chinese ceramics arose in the late Tang Dynasty (618–907 CE), increased rapidly during the Song Dynasty (960–1279 CE) and Yuan Dynasty (1279–1367 CE), declined in the early Ming Dynasty (1368–1643 CE) due to imperial trade policy, and almost completely ceased between 1430 and 1488. China gradually reopened its ports to foreign trade after 1488, and eventually removed most restrictions in 1567. The rise and fall in Chinese trade during the Ming Dynasty had only minor effects on Southeast Asia's economy. Southeast Asia also imported large quantities of textiles from the lands bordering the Indian Ocean, but they did not survive in archaeological sites. Our picture of international trade in early Southeast Asia is thus possibly biased by the durability of Chinese exports. A large proportion of Chinese exports consisted of other commodities besides ceramics, including textiles (silk), metals (iron, bronze, and silver, both as raw material and finished products), and consumables (including wine and spices such as star anise). Many of the Chinese ceramics found in Southeast Asia were not the commodities themselves; they were the containers for the commodities being exported.

Early Phase: Tang Dynasty (618–906 CE)

Tang Dynasty sherds have been found as far west of China as the Persian Gulf. They have also been recovered in Sri Lanka and South India, and in great quantities at port sites at the north and south ends of the Straits of Melaka. Chinese ceramics of the Tang to Ming Dynasties are also widespread in Thailand (Matsong 2019; Srisuchat 1994). For example, Tang objects were found buried around Buddhist complexes in Thailand as well as in Java, Indonesia. Even so, no statistical information and few data on their contexts have yet been published. Fragments of ninth-century Changsha bowls litter the beaches on both sides of the Isthmus of Kra, southern Thailand, possibly marking two termini of a transpeninsular route that avoided the Straits of Melaka. Unfortunately, sites of this period, such as Takuapa, Thung Tuk, and Laem Pho, have been severely looted, so that no statistical information is available (Ho Chuimei 1994).

On the northwest coast of peninsular Malaysia, major sites include Sungai Mas and Sungai Batu in Kedah (Jacq-Hergoualc'h 2002; Nik Hassan Shuhaimi 2011). Inscriptions from the fifth century, statuary and ruined brick sanctuaries, and ceramics from the Tang Dynasty have been found,

Figure 7.3 Road to Dieng Plateau

Credit: John N. Miksic

but again no comprehensive report of these imported ceramics has yet been published.

An early survey found Tang Dynasty sherds widely distributed over twenty-five hundred square kilometers[2] in the north-central coastal plain of Java (Van Orsoy de Flines 1941–1947). This is the only published large-scale survey of the distribution of Chinese ceramics anywhere in Southeast Asia. An excavation on the Dieng Plateau in central Java's hinterland in 2010 recovered Chinese and Persian ceramics in association with Hindu temples of the eighth and ninth centuries (Team Proyek Dieng 2010; Figure 1.3). Tang ceramics have also been discovered near ninth-century religious sites in the Yogyakarta area (*Idem*), but no large-scale surveys have been conducted in the hinterland. Van Orsoy de Flines (1941–1947) also found surface scatters of pottery from the Song Dynasty at more than twenty sites in the north coastal residency of Rembang and at over a hundred sites in seven neighboring regencies.[1]

1 A residency is a Dutch colonial term. It is approximately equal in size and position in the administrative hierarchy to a county in the United States; the analogous unit in independent Indonesia is *kabupaten,* which can be translated as "regency."

Since no significant habitation sites or ports of the Tang period have yet been identified in Java, it is impossible to delve further into this problem by simply correlating the distribution of Chinese ceramics with local communication networks or status. The broad distribution of Tang ceramics in the north-central coastal area suggests that they were generally available there, but whether they were reserved for the elite in the hinterland cannot be determined.

The largest single collection of Tang ceramics has been found on a shipwreck in western Indonesia, at Belitung Island. Over fifty-five thousand ceramics were recovered, along with other Chinese artifacts. The ship itself was of Arabo-Persian origin. The ultimate destination of the cargo is still a subject of discussion, but there is good reason to believe that it was on its way to Java. China and Java exchanged numerous missions in the early ninth century, and the place where the ship sank is at the western edge of the Java Sea, which is the main route to Java (Hsieh 2010; Miksic 2013b).

Middle Phase: Song and Yuan Dynasties (960–1367 CE)

By the early twelfth century, the Chinese tributary system had declined in importance (Wolters 1975, 1) as China's government gradually became more tolerant of private commerce, but the volume of Chinese ceramics exported to Southeast Asia increased greatly during this period. By the fourteenth century, Chinese began to form permanent settlements in the region. The impact of these changes on Southeast Asia is not yet well understood. Chinese ceramics are one of the most common sources of data relevant to this study, but without contextual information such as find spots, no inferences can be drawn from them. The Song Dynasty fell in 1279 and was replaced by the Yuan Dynasty, but this transition was not accompanied by any major stylistic change in ceramics. However, a major new type of ware appeared around 1328: white pottery decorated with cobalt-blue designs. Most early examples of this pottery were shipped to Southeast Asia, and the Song–Yuan era can be considered the First Peak Period of porcelain in Southeast Asia. Data from shipwrecks indicate that the number of Chinese ceramics exported to Java exceeded the number of the island's inhabitants during this period (Liebner 2014, 309–311). This ended in 1352 when the Jingezhen kiln complex was destroyed during the civil war that ended with the victory of the Ming in 1368.

Mainland Southeast Asia: Chinese Ceramics at Angkor and Bagan

The empires of Angkor in Cambodia and Bagan in Myanmar are roughly contemporaneous with the early period of major Chinese ceramic exports during the Song and Yuan Dynasties. Earlier scholars overestimated the quantity of Chinese ceramics in the Angkor region (Cremin 2006). For example, the only Chinese reference to a diplomatic gift of porcelain during the Song Dynasty concerned a gift to royalty in Srivijaya (Sumatra) in 963 CE (Wong 1979), making it likely that Chinese porcelain reached Angkor through informal channels. The distribution of Chinese ceramics within the Greater Angkor area is consistent with the conclusion that Chinese ceramics were restricted to the elite. For example, at the Royal Palace, imported wares—mainly Chinese—comprised about 10 percent of the ceramic assemblage (Dupoizat 1999). Approximately 5 percent of these were excavated in the 1990s by Japanese archaeologists, who date the sherds to the period between the late thirteenth and late fourteenth centuries (Nakagawa 2000, 361). The Japanese Team for Safeguarding Angkor, during restoration of the Prasat Suor Prat complex (a series of towers near the Royal Palace), found a large quantity of Chinese and other ceramics; the results of their analysis (which have not been published) would add much to our knowledge of Chinese ceramics at Angkor (Cheng et al., 2005). Compared to the findings at the Royal Palace, the Prasat Suor Prat assemblage includes coarser wares and blue and white wares of the Yuan and Ming Dynasties. They indicate the existence of a different social milieu than that of the royal complex that existed nearby during the eleventh and twelfth centuries, due to the use of a wider variety of Chinese wares at Prasat Suor Prat. Quite possibly, as Dupoizat (1999) suggested, the Khmer royalty of the eleventh and twelfth centuries was interested in only specific types of Chinese ceramics, perhaps because they were used in rituals, the nature of which is as yet unknown.

Just outside the north gate to the enclosure where the palace probably stood, Chinese wares comprised less than 3 percent of a sample of almost sixty-five hundred sherds (Cremin 2006). The colors and shapes of the Chinese ceramics at Angkor are limited, suggesting a process of local selection. The discovery of fifteenth-century Chinese and Thai ceramics at jar burial sites in the Cardamom Mountains in southwest Cambodia suggests that by then Angkor's highly centralized economy had broken down (Beavan et al., 2012).

China's relationship with Bagan, Angkor's contemporary in the Ayeyarwadi Valley, was probably similar to its relationship with Angkor. Like

Angkor, Bagan sent few missions to China. Few Chinese sherds have been recovered from archaeological research at Bagan's palace complex.

Straits of Melaka

The shores of the Straits of Melaka[2] and the Java Sea have yielded huge quantities of Chinese sherds at sites where monuments are small in scale or nonexistent and where trade and manufacturing apparently formed major activities. Large portions of the coasts on both sides of the Straits of Melaka are peat swamps, and tides affect rivers up to one hundred kilometers upstream. Large swathes of the coastal plains are uninhabitable due to lack of fresh water. Some traditional settlements were built in the lower courses of major rivers such as the Musi and Batanghari, but larger habitation sites were usually located at the inland apexes of river deltas, where fresh water and dry land a few meters above sea level are found. This eliminates the central pillar of the Bronson model, which requires that the largest cities be located at river mouths. Early ports such as Muara Jambi and Palembang, in southeast Sumatra, were located at the inland apexes of deltas. Their placement in early settlement networks more closely fulfills the requirements of central-place systems (Miksic 1984, 2009b).[3]

The greatest concentration of ports both ancient and modern in the Asian maritime network is found in and near the Straits of Melaka. Over the last two millennia, major ports have always existed at the northern and southern entrances to the Straits. This is partly due to the monsoon winds, which enable ships leaving the Straits to reach India or China in one season but not to make the complete journey from India to China. It is also partly due to the provision on the surrounding land and sea of many commodities that were highly sought after throughout Asia. This ensured that major ports would emerge along this waterway, which still carries a large proportion of the world's shipping. The possible locations of these ports have also been partly determined by environmental factors, including sources of potable water, and partly by the navigability of the rivers on which they are located. Several major rivers in the region are unsuitable because of sandbars at the rivers' mouths or because of tidal bores, which are standing waves caused by the interaction of tides and river currents.

2 The Philippines and Brunei have also yielded abundant Chinese ceramics from this period. Archaeological and historical documentation of these discoveries is, however, not as plentiful as that for the Straits of Melaka and Java.

3 The term "central place" in economic geography refers to a regular pattern of geographical distribution of markets typical of modern societies (Haggett 1966, 119–125).

Southern Sumatra, Srivijaya, and Muara Jambi

Sumatra's earliest center of complex society evolved in the Pasemah highlands at the Musi River's headwaters rather than in the Palembang lowlands. When Chinese ceramics began to be exported to Southeast Asia, the region's greatest trading kingdom was Srivijaya, the capital of which lay ninety kilometers up the Musi River at Palembang. Archaeological research in the city has yielded Chinese ceramics of the ninth through fourteenth centuries. The Museum Badaruddin site alone yielded fifty-five thousand artifacts weighing over eight hundred kilograms, 40 percent of which belong to the Srivijayan period (seventh through eleventh centuries); imported ceramics (mainly Chinese) comprised 18 percent of this assemblage (Eka Asih Putrina Taim 1992; Manguin 1987, 1992). The data support the hypothesis that Palembang was a major trading partner of China and of West Asia during the Tang through Ming Dynasties. No major surveys have been conducted in the rest of the Musi basin, so Palembang's relationship to the regional settlement pattern cannot yet be ascertained. It may well have resembled the administrative hierarchy that prevailed in the early twentieth century, which fulfills criteria for a central-place system (Miksic 1985).

Palembang's major competitor for the position of southern node of the Straits of Melaka maritime network was located at Muara Jambi, ninety kilometers up the Batanghari. As in the Musi watershed, a center of sophisticated art evolved in late prehistory in the Batanghari highland at Kerinci. Chinese wares in Muara Jambi span the early eleventh through the thirteenth centuries. Surveys along the river have yielded Chinese ceramics dating from the Five Dynasties (907–960 CE) through the Yuan period (Abu Ridho 1995; Edwards McKinnon 1982). Muara Jambi was probably the largest port along the Straits of Melaka in the eleventh to thirteenth centuries, though this is difficult to prove since Muara Jambi was abandoned in the fourteenth century. Meanwhile, Palembang continued to be densely inhabited; ancient ruins in Palembang are known to have been destroyed during the Dutch colonial era (Bosch 1930). Population in lowland Sumatra has always been sparser than in Java due to the swampy landscape. Nevertheless, Jambi data demonstrate that Chinese ceramics of the Song period were distributed over much of the island, even reaching the hinterland, where is where most of the population resided until the twentieth century.

Zhu Yu in the early 1100s described Chinese merchants going abroad, taking mainly pottery, "the small pieces packed in the larger, till there is not a crevice left" (quoted in Hirth and Rockhill 1911, 31). A century later, however, Zhao Rugua recorded that trade in Chinese ceramics was mainly

Figure 7.4 Musi River at Palembang, South Sumatra

Credit: John N. Miksic

in the hands of foreign merchants. He reported that Chinese ceramics were exported to north Vietnam, Cambodia, south Sumatra, the northern Malay Peninsula, the Philippines, south India, and even Zanzibar. He noted that different colors of porcelain were popular in different markets. This was apparently important information, indicating that the Chinese traders and ceramic producers had to adapt to the tastes of local markets.

Northern Sumatra

In northeast Sumatra, where the coastal plain is narrower than further south, a site known as Kota Cina ("Chinese Stockade") lies at the inner fringe of the delta formed by the Deli River, which flows from the highlands near Lake Toba. The river's hinterland provided important exports in demand in medieval China. Archaeological excavations in the 1970s discovered large quantities of Chinese ceramics, coins, and gold artifacts dating from 1080 to 1260 CE (Edwards McKinnon 1984; Miksic 1979, Figure 1.5).

Kota Cina is one of the more mysterious sites of the eleventh to thirteenth centuries. The presence of large quantities of Chinese ceramics and other artifacts, and the very name of the site, suggest that Chinese may have lived

Figure 7.5 Laying out excavation site at Kota Cina, northeast Sumatra

Credit: John N. Miksic

there, but no Chinese references to it have been traced. The site is important because it is the largest port contemporaneous with the Song Dynasty yet discovered in Southeast Asia.

Approximately contemporary with Kota Cina was Barus, on Sumatra's northwest coast, which is first mentioned in Arab sources of the ninth century. The site was famous for camphor. Barus has yielded the most West Asian artifacts yet found at any Southeast Asian site. Chinese artifacts found at Barus include ceramics from the late tenth century until the early twelfth century, similar to types found at Fustat (Old Cairo) in Egypt (Dupoizat 1999, 155). Pengkalan Bujang, in Kedah, which is on the opposite shore of the Straits of Melaka from Kota Cina, was also a major importer of Song Dynasty pottery (Lamb 1961). No quantitative or qualitative analyses of this material have yet been published.

In the fourteenth century, the headwaters of the upper Batanghari (several hundred kilometers inland from Muara Jambi) and fertile valleys (one hundred kilometers further north), supported a polity with sophisticated sculpture, abundant inscriptional remains, and access to resources such as gold, incense, and ivory. These were avidly sought after by people living in the ports at the edges of the lowland deltas (Dobbin 1983). This access is why the Majapahit kingdom of East Java invaded at least twice in the thirteenth and fourteenth centuries. Yuan Dynasty ceramics have been found at several

sites in the upper Batanghari basin, proving that the inhabitants there were linked to the long-distance maritime trade routes of that era (Miksic and Goh 2017: 485-486).

Singapore and the Riau Archipelago

Singapore, the largest known port of the fourteenth century, is located in the Straits of Melaka. Singapore is also the oldest site where both archaeological and written evidence for a Chinese community in Southeast Asia have been found. In 1320 the Yuan Dynasty sent envoys to Longya men ("Dragon's Tooth Strait"), a rocky outcrop now equated with the western end of Keppel Harbor in Singapore. In 1325 Longya men sent a mission to China (Hsü Yün-Ts'iao 1972). The first Chinese trader to write about Southeast Asia, Wang Dayuan, published *Dao yi zhi lue* in 1349. Wang Dayuan devoted much more attention to ceramic trade than Zhao Rugua had in 1225. According to Wang, most of the ceramics were destined for consumers around the Straits of Melaka. Wang mentioned two overseas Chinese communities. One consisted of Chinese soldiers who had been sent to attack Java in 1292 but fell ill during the voyage and were left on *Goulan Shan* (possibly Gelam Island, off west Borneo). In Wang's day, forty years later, "over 100" of these men were still living there, "mixed up with the native families" (quoted in Rockhill 1915, 261).

Wang's second reference to overseas Chinese living "mixed up with the native families" occurs in conjunction with Longya men. Wang describes it as a place where pirates preyed on Chinese ships, but he also mentions that "products of Quanzhou traders," including "coarse pottery," were available there (quoted in Rockhill 1915, 191, 129–132). It is hard to believe that Chinese merchants would live among people who attacked Chinese ships. This apparent contradiction has not been explained.

There was also a trading community with an organized government at the Singapore River, to which Chinese traders brought more expensive commodities including porcelain. In the fourteenth-century, Temasek covered an area of about eighty-five hectares, and seven sites with dense remains of urban life have been discovered in this zone (Heng, Chapter 8, this volume; Miksic 2013). Excavations have recovered several hundred thousand sherds of Chinese ceramics and an approximately equal number of local earthenware (Miksic 2013, 222–263). About 50 percent of the assemblage consists of Malay pottery; the other half comprises mainly Chinese ceramics, coins, and beads. Wang depicted the Singapore River community as an average port, but more Yuan Dynasty blue and white porcelain has been recovered from archaeological excavations there than at any comparable

Figure 7.6 Midai Island, fourteenth-century ceramics

Credit: John N. Miksic

Figure 7.7 Yuan Dynasty jar, from eastern Riau Archipelago, Indonesia

Credit: John N. Miksic

site. This may be due to a lack of research on other sites, but it proves that Singapore was well-connected with the network through which the newest Chinese porcelain designs were distributed during the fourteenth through sixteenth centuries.

An archaeological survey in 1992 confirmed that intact Chinese ceramics of the twelfth to fourteenth centuries are widely distributed throughout the Riau Archipelago, which extends for five hundred kilometers to the

south and east of Singapore (Miksic 1994). Foreign merchants avoided these islands, even though the region contained maritime commodities in high demand in China, such as sea cucumber, coral, pearls, and tortoise shell. This aversion meant that Singapore could play the role of go-between in the trade of ceramics for these natural products. The 1992 survey team collected eighty kilograms of ceramics on Midai and other islands in the eastern part of the archipelago, most of which replicated Yuan period artifacts found in excavations in Singapore (except for *qingbai*, a more refined ware). Song Dynasty wares also found there indicate that Riau islanders were in contact with another international port, perhaps Palembang or Jambi, before Singapore arose as a node in the maritime trade network. Vietnamese and Thai ceramics show that the Riau Archipelago was connected via Singapore to the maritime network until the arrival of the Europeans in 1509. This discussion is continued in the section "The Cultural Significance of Pottery in Premodern Southeast Asia."

In ports on the main routes to the Indian Ocean and South China Sea, Chinese ceramics were used in everyday contexts, and in areas off the main routes they were used as burial offerings. For example, Chinese ceramics in Singapore are found in habitation contexts, while those in the Riau Archipelago are found in graves. This practice of using Chinese ceramics as offerings for the dead is also known in sites of the Song to Ming Dynasties in the Philippines, northwest Borneo, and south Sulawesi. During the fourteenth and fifteenth centuries, in Sumatra, Java, Bali, and Singapore, the dead were cremated. Ming sources also describe this practice on the east coast of Sumatra, Bangka, and Johor (Groeneveldt 1960, 77, 79, 135, respectively), and southwest Borneo (Rockhill 1915, 266). As these data show, Chinese ceramics had very different functions in different parts of the Southeast Asian archipelago. Without understanding the contexts of the finds, it is impossible to use quantities and types of Chinese wares to derive inferences regarding political or economic relationships among the sites.

No archaeological research has been performed on the island of Tioman, off the east coast of peninsular Malaysia, but collectors report that numerous examples of Chinese ceramics of the Song Dynasty were found there, many in intact condition (Southeast Asian Ceramic Society [West Malaysian Chapter] 1985). This island was a navigational landmark and source of fresh water for ships sailing across the South China Sea to southeastern Vietnam, but there is no evidence that it was ever a trading center. Its inhabitants were probably adherents of the same burial customs as those of the Riau Archipelago.

Eastern Java, the Majapahit Empire, and the Philippines

Trowulan, the capital of the Majapahit Empire, sprawled over at least eleven thousand hectares in eastern Java. According to the *Desawarnana*, a Javanese poem written in 1365, many foreign merchants, including Siamese and Chinese, visited the court of the Majapahit Empire. The poem lists Singapore as one of Majapahit's dependencies (Miksic 2013, 145–208). Huge quantities of high-quality ceramics of the fourteenth through sixteenth centuries from China, Vietnam, and Thailand are known from excavations conducted by the Indonesian National Research Centre for Archaeology (Miksic and Endang Soekatno 1995; Miksic and Kamei 2010). Unfortunately, the area has been severely disturbed. Though quantitative data are sparse, and no overall report has been published, glazed ceramics have been analyzed. Preliminary analysis shows that in systematically acquired collections, ancient Chinese ceramics comprise 81 percent of the imported wares found at Trowulan: 17 percent comes from Southeast Asia (Thailand and Vietnam), and 2 percent comes from "other" sources (mainly nineteenth-century Europe). Wares from Vietnam outnumber those from Thailand by a four-to-one ratio (Dupoizat and Harkantiningsih 2007, 17). The artifacts from Singapore and Trowulan are still being tabulated, but sherds of large Chinese jars decorated with cobalt-blue from the fourteenth century are common in Trowulan but rare in Singapore. At least among the ports in Southeast Asia of the late Yuan Dynasty, it may be possible to use this variable to compare the relative wealth of different sites.

The best-known site for porcelain in the Philippines is Santa Ana. Excavations revealed burial sites from a three-hundred-year period—from the late eleventh through fourteenth centuries—many of which included intact Chinese ceramics (Fox and Legaspi 1977; Locsin and Locsin 1967). Many other burial sites in the country, unfortunately, have been looted.

Late Phase: Ming Dynasty (1368–1643 CE)

The Ming Dynasty was characterized by an isolationist policy during which foreign trade was banned until 1567. Thus, archaeological discoveries of Ming ceramics outside China are correspondingly rare. In the fifteenth century, the Ryukyu Kingdom in the East China Sea served as a buffer between China and maritime Asia, and some documents from this period shed important light on the nature of the ceramic trade. Archives from Ryukyu

record that licenses were issued for voyages from Ryukyu to Palembang in 1428, 1429, and 1430; the one in 1428 carried "a cargo of porcelain and other products" (quoted in Kobata and Matsuda 1969: 136). This record and archaeological discoveries prove that some Chinese ceramics were still available in Southeast Asia during the so-called "Ming gap," although many fewer than during the Song–Yuan era.[4] Most of these exports must have therefore been the result of smuggling activity. From 1368, when the Ming Dynasty was founded, until 1430, the proportion of Chinese ceramics in shipwrecks declined to 34 percent. Very few Chinese ceramics are found on the sites of shipwrecks that occurred between 1430 and 1488. Export of Chinese ceramics gradually resumed during the Hongzhi reign (1488–1505 CE) (Brown 2009).

The Thais, the Vietnamese, and the inhabitants of lower Myanmar, including the Ayeyarwadi Delta and Martaban (Mottama), competed with each other to fill this vacuum in the market for high-fired ceramics. In the Philippines, Thai ceramics are found at fourteenth- and fifteenth-century sites such as Calatagan (Fox 1959). Thai ceramics from around 1400 until the late sixteenth century have been found at Angkor, Java, and Singapore, and on numerous shipwrecks. Ceramics from Myanmar were found on the Pandanan shipwreck (Dizon 1996).

The use of jars in burials in Southeast Asia began over two thousand years ago. The custom has reappeared at different times and places. For example, twelve cave burial sites of the mid-fifteenth century have been discovered in the remote Cardamom Mountains of Cambodia, each containing a mixture of Thai, Khmer, and Chinese ceramics (Beavan et al., 2012). Between 1984 and 1986, many burial sites were looted at Tak and Omkoi, along the Thai-Burma border. Brown (1988, 3) noted that these were jar burials that date between 1350 and 1550 and include roughly equal proportions of Chinese and Thai wares. The Tak-Omkoi sites offer further proof that high-fired ceramics were not only available to elites in courts and trading ports; people in the hinterlands were also able to acquire trade ceramics in significant quantity and of good quality.

Several important fifteenth-century port sites are known to exist in Southeast Asia, but some have not yet been excavated. Melaka was the most important port in Southeast Asia during the fifteenth century. Despite the Ming ban on Chinese trade, the sultan in 1468 wrote that his kingdom had never been more prosperous (Kobata and Matsuda 1969, 11). When the

4 The term "Ming gap" refers to the period between 1368 and 1488, when exports of porcelain from China declined steadily until it practically ceased.

Figure 7.8 Removal of fifteenth-century jars from Site 4, Cardamom Mountains, Cambodia

Credit: John N. Miksic

Portuguese arrived there in 1509, Indian Muslims were the most important traders. To date, however, no archaeological data on Chinese ceramics from the pre-Portuguese period in Melaka are available.

The Malay court, driven from Melaka by the Portuguese in 1511, found refuge near the estuary of the Johor River. Its capital was moved several times before it was established on the island of Bintan in 1720. The Malaysian sites of Johor Lama and Kota Sayong have been archaeologically studied (Kamarudin Ab. Razak 1998), and excavations at Johor Lama at the Malay Peninsula's southern tip yielded local earthenware and sixteenth-century Chinese porcelain (Solheim and Green 1960).

Bantam, Melaka's successor as the greatest spice trading port of the sixteenth and seventeenth centuries, developed at the mouth of the Banten River in West Java. An earlier port was located about twenty kilometers upriver at Banten Girang (Guillot, Nurhakim, and Wibisono 1994), where Chinese ceramics of the fourteenth century as well as fifteenth-century

Vietnamese and Thai wares have been found. The shift of the port from the hinterland to the coast in the sixteenth century was probably connected to basic changes in the hinterland-coastal relationship in much of Southeast Asia at that time, due to Islamization, renewed Chinese contact and immigration, and the arrival of Europeans that greatly increased demand for Southeast Asian commodities.

The province of Aceh, at the north tip of Sumatra, is mentioned in many early sources as an important region both in terms of local products and the availability of port facilities. In 1225 Zhao Rugua reported that ships spent the months between monsoons at the port of Lambri in northwest Sumatra. Wang Dayuan in 1349 called it an important trade center but said that "the natives live all over the hills" (quoted in Rockhill 1915, 148), implying that much of its population lived in the hinterland. A Chinese fleet under the leadership of Admiral Zheng He visited Lambri in 1414 and 1430, and the *Ying-ya Sheng-lan*, written in 1433 by Ma Guan, one of Zheng He's officers, estimated the population of Lambri at one thousand families (Groeneveldt 1960, 98; Mills 1970, 122). If the population of this important port in north Sumatra comprised only about five thousand inhabitants, the ports might not have been much larger than highland villages. Lambri's precise location was unknown, but in the 1980s Edwards McKinnon discovered its probable site, which is marked by sherds of Chinese porcelain of the Song–Yuan Dynasties and fifteenth-century Thai and Vietnamese wares. The rapid subsidence of the area is submerging archaeological sites that contain important information on early Sumatran trade; and Islamic-period graves and building foundations of the sixteenth century are now under water (Edwards McKinnon 1988).

Brunei's capital in northwest coastal Borneo in the late Song period contained over ten thousand people (Hirth and Rockhill 1911, 155), placing it in the upper tier of Southeast Asian ports. In the fourteenth century, Brunei was a vassal of the Majapahit Empire. In the early fifteenth century, Brunei sent embassies to China, signifying that it claimed to be an independent polity. At the Kota Batu port site in Brunei, Chinese stoneware comprise 66.5 percent of the ceramics in a surface collection (Harrisson 1970). The Sungai Lumut site yielded stoneware, porcelain, and Thai ceramics of the fifteenth century. This site may have been used as a burial ground; the provision of ceramics as offerings would indicate that the population was not yet Islamicized. A Bruneian archaeologist believes that Sungai Lumut was a ceremonial center where pots were buried, but not as grave offerings (Matussin Omar 1981).

Chinese Ceramics from Coast to Highlands

The only survey designed to trace the distribution of Chinese pottery from the coast to the highlands via a river valley in Sumatra was conducted along the Deli River in 1977. This revealed a series of sites stretching from the coast to the Deli River's source in the Karo Highlands, with sites located in the river delta (the first type), the middle lowland (the second type), the upper end of the river navigable by ships (the third type), and the river's source in the uplands (the fourth type) (Miksic 1979, 222–237). The survey revealed several sites of the second type in the middle lowlands. One of these sites, Kota Bangun, ten kilometers upstream from Kota Cina, yielded surface scatters of Song Dynasty ceramics. Two kilometers further upriver lies Kota Jawa ("Javanese Fort")," near the remains of a fort possibly erected in the fourteenth century by the Majapahit Empire (Anderson 1971, 9, 28). The survey and test excavation yielded sherds from the Song and Yuan Dynasties and wares from fifteenth-century Thailand. Sixteen kilometers west of Kota Cina, a site in the lower Wampu Valley called Tanjong Anom, also yielded Chinese and Thai ceramics of the fifteenth century as well as ancient bricks. Like Kota Cina, Tanjong Anom lies at the inland edge of the mangrove zone that flanks the Straits of Melaka. Tanjong Anom may have once been accessible by river, but it no longer is; river courses in this type of environment are subject to frequent change.

The next sites discussed are of the third type (at the point where rivers become too shallow for boats). The next site upstream from Kota Cina, following the Deli River from the coast, is such a site. It is Deli Tua, which is thirty kilometers inland. It is at a transition point where the land rises and the river becomes shallow and boulder-strewn, making it impassable for boats. Deli Tua is thus an example of sites at the end of the navigable portions of rivers. This specific site consists of two complexes of earthen ramparts and dry moats. No excavations have been carried out here, but a survey in the 1970s recovered Chinese ware of the Song to Ming Dynasties and fifteenth-century Thai ware. It is possible that a kingdom called Haru was based here, which is mentioned in Malay, Chinese, Portuguese, and Arabic sources between 1282 and 1619 (Miksic 1979, 230–235). Proceeding inland from Deli Tua, the next site is Siberaya, which is of the fourth type. It is located on the Karo Plateau, at the source of the Deli River. Surveys there yielded sherds of Yuan and early Ming Dynasties and fifteenth-century Thai origins. In the nineteenth century, before Siberaya was incorporated into the Netherlands East Indies, the village had a meeting hall where chiefs of the Karo Plateau held assemblies, even during periods of inter-village warfare

(Miksic 1979, 235–237). Nearby is the stream Lau Garut, where a survey in 1977 discovered a cliff with an artificial chamber. This was perhaps meant for secondary burial, as the entrance is flanked by relief carvings of boats. "Secondary" refers to exhumation, ritual cleansing, and reburial of human skeletons. This was practiced by inhabitants of the Lau Garut area until the late twentieth century. The carvings of boats suggest that this spot was chosen because of its relationship to the point where boats had to stop and unload their cargoes. These were strategic locations where trade was conducted. From here, commodities would be transported by land either by human porters or on horseback.

Traces of early trade between China and sites in the north Sumatran highlands at the same elevation as Siberaya were still vivid in the early twentieth century. Chinese plates were used to cover chiefs' graves, and porcelain was used by *datu* (shamans) in rituals. An observer recorded that "in recent years [i.e., before 1920,] old Chinese porcelain has been rather thoroughly cleaned out of the Batak lands by Atjehnese and Malay peddlers, to supply a lively demand for old china from European residents and tourists" (quoted in Bartlett 1973, 147 n22). The data on distribution of Chinese porcelain in the Sumatran highlands may have been badly skewed by the propensity of highlanders to bury Chinese ceramics or to keep them intact in houses, rather than to use them in daily life until they were broken accidentally and the pieces discarded, as occurred in lowland societies.

Padang Lawas is an upland plain located on the eastern side of a pass across the mountain range between the west and east coasts of Sumatra. The Panai River, which flows from this plain into the Barumun River and the Straits of Melaka, may be connected with the kingdom of Pannei, which was conquered by the Cholas in 1025 and claimed by the Majapahit Empire in 1365 (Wolters 1967, 193). No search for early sites in the river's lower course has been attempted. In addition to the area's strategic location on overland transport routes, forest products from here were marketed via Aru (located at an unknown place in the northeastern lowlands in the fifteenth century), and gold was mined in the eighteenth century (Perret 2014, 286–290) and probably much earlier. At least twenty-six elaborate complexes of brick shrines dedicated to esoteric Buddhism were built here between the eleventh and thirteenth centuries. At one site, Si Pamutung, Chinese ceramics show that occupation began in the late tenth century, increased in the eleventh and twelfth centuries, and then declined until abandonment in the early fourteenth century (Dupoizat 2014; Perret et al. 2007, 70). Here, Chinese wares constitute only 12 percent of the ceramic assemblage (Desbat 2014, 193) as compared to 30 percent at Kota Cina.

Muara Takus, a complex of brick structures with many similarities to those found at Padang Lawas and Muara Jambi, is site of the third group on the upper Kampar River, one hundred kilometers south of Padang Lawas. The Buddhist complex is associated with Chinese ceramics of late Song–Yuan age. No habitation site has yet been found in the vicinity. It was probably associated with a monastery like most Buddhist sites, which implies the existence of a supporting community, but its remains have not yet been found.

One of the most important vassals of the Majapahit Empire was Malayu. By the late thirteenth century, Malayu's center was located several hundred kilometers inland, in the mountain range along Sumatra's west coast. Several sites in Malayu have yielded statues of Buddhist deities, inscriptions, and remains of brick temples from the fourteenth century. Chinese porcelain of the Song and Yuan Dynasties found at temple sites proves that imported ceramics were transported hundreds of kilometers up the Batanghari River (Peneliti 1992). A probable palace site has also been discovered here (Tjoa-Bonatz 2013), but no habitation or market sites have yet been identified.

The Cultural Significance of Pottery in Premodern Southeast Asia

Ancient Khmer inscriptions indicate that pottery-making was used in metaphors to express the majesty of the ruling elite. An inscription dated 674 CE compares the ruler to the potter's wheel, constantly in motion and a source of creation (Brown 1977, 43 n1). In addition to evidence for the use of ceramics in rituals, linguistic and ethnographic evidence shows that the ancient Khmer made many types of ceramics for specific everyday purposes. Nevertheless, few Southeast Asian historical archaeologists have utilized data on ceramics, and early French scholars working in Cambodia did not consider ceramics a subject for serious research (Groslier 1981, 9).

Chinese ceramics in Southeast Asia carried many symbolic functions never intended by their makers. For example, in Brunei, a sultan had a Chinese jar that he believed would warn him of impending danger (Cole 1912, 11). The Borneo ethnic group known as Dayaks venerated Chinese jars. Some could be owned only by chiefs. Water stored in them could be sold because it was believed to absorb the jar's special powers (Spinks 1978, 104 n9). In Thailand, old jars found by accident were taken to monasteries out of fear that to keep them would bring misfortune to the finder, due to a jar's inherent supernatural power (Spinks 1978, 105). The belief that celadon

(bluish-green porcelain) would react with poison and thus detect or even neutralize it, was common in Southeast Asia and the Islamic world as well.

As noted earlier, during the fourteenth century, Singapore functioned as an intermediary between China and the Riau Archipelago. The Chinese were avid consumers of such rarities as laka wood, hornbill crane crests (which they carved into ornaments of dress and small containers), and products of the surrounding seas that the inhabitants of the Riau excelled in gathering. Chinese porcelain was one of the major commodities that Chinese exchanged for these products. The Chinese did not venture into the Riau Archipelago because the currents and reefs were unknown to them and the inhabitants were reputed to be piratically inclined. Thus, the Riau people would have traveled to Singapore to exchange their products for Chinese manufactured goods, such as glazed pottery, glass beads and bottles, and textiles.

Southeast Asian societies, such as the people of Singapore and the Riau Archipelago, differed in their uses and attitudes toward Chinese ceramics, which highlight certain features of their relations with each other. Hundreds of thousands of Chinese ceramic sherds of the fourteenth through sixteenth centuries have been found along the left bank of the Singapore River. Of these, only about fifteen ceramic items were found intact. The vast majority are fragments, indicating that these ceramics were used in everyday life until they broke. Most of the intact pieces were crude stoneware bottles that had been simply discarded in the same trash heaps as ashes, bones, shells, and other detritus, suggesting how cheap and abundant ceramics were. In the Riau Archipelago, by contrast, the same types of Chinese ceramics were carefully buried with the dead as grave offerings, together with gold ornaments, weapons, and even boats.

Thus, Singaporeans and Riau Islanders perceived Chinese pottery from very different perspectives: as cheap mass-produced items, on the one hand, and as items with mystical properties, on the other. The Riau Islanders maintained a distinct cultural identity rather than adopting the values of urban Singapore. Singaporeans built brick temples, probably for Buddhist rituals, and most likely cremated their dead. The people of the Riau Archipelago believed in the power of their dead ancestors to influence the living, and therefore propitiated their spirits.

A Malay chronicle, the *Sululatu's-salatin*, was composed in the fifteenth century and revised regularly thereafter. The oldest version now in existence was composed in the early seventeenth century (Brown 1970). The *Sululatu's-salatin* depicts two societies: cosmopolitan Malays and *Orang Laut* (Sea Nomads). The latter played significant roles in the courts of the

former. The Sea Nomads saved the last king of Singapore from invading Javanese, helped him to escape into the forests of the Malay Peninsula, and guided him to a new site where he built a capital that became Melaka. The relationship between the Malays and the Sea Nomads appears to have been symbiotic. The Malays depended on the Sea Nomads for defense and various services. The Malays may have convinced the Sea Nomads to bring the products of the sea to Singapore by giving presents, such as rare Chinese goods, to the leaders of the Sea Nomads in the same way that the Malay rulers were linked to the producers of the products of the hinterlands of Sumatra, Borneo, and the Malay Peninsula.

Overseas Chinese trade revived after 1567, when an imperial edict rescinded the ban on Chinese contacts with foreigners. It is no surprise that Chinese ceramics become abundant again in Southeast Asian sites from the late sixteenth and early seventeenth centuries. This resumption of legal trade, after an interlude of two hundred years, had interesting effects on the ceramic industry. One such effect was that Vietnamese and Thai bowls and ewers almost completely vanished from Southeast Asia, although jars from Thailand, Vietnam, and Myanmar continued to be used as shipping containers. A second effect was the development of new types of Chinese ceramics, including some of finest and most original wares, for export to Southeast Asia. Chinese archaeologists have not published reports on the types of ceramics used in domestic sites of the seventh through sixteenth centuries, so it is not possible to compare the styles and quality of ceramics used in domestic versus foreign markets. It has been assumed that "export wares" were of lower quality, but research during the last forty years has shown that reality is considerably more complex than this (Miksic 2009a).

Conclusion

Most studies of Chinese ceramics along the Maritime Silk Road focus on identifying types of wares and the unique or unusual pieces found in particular sites. This approach is interesting for art historians, but it tells us little about the social structure of the societies in South or Southeast Asia. On the other hand, statistical studies of Chinese ceramics found in Southeast Asia could tell us much. Knowledge of the proportion of Chinese to local wares in specific sites would be useful for comparing the role of Chinese ceramics in MSR ports and hinterlands. The proportions of different types of Chinese wares in various sites would offer insights into such variables as

the role of consumer taste in dictating the types of Chinese wares produced for export, and the diversity of life in port-cities in Southeast Asia as well as on the coasts of the Indian Ocean. Unfortunately, little quantitative data on the distribution of ceramics in Chinese sites is available, so it is difficult to make objective comparisons of the economics and social significance of ceramic consumption in their domestic and foreign markets.

Another aspect of the study of Chinese ceramic exports that has been largely neglected (with a few exceptions, such as O'Connor 1991) concerns the contexts in which they have been found. For example, in museums and private collections, many Chinese ceramics discovered in Southeast Asia lack information about their provenance or find spot. Without this information, we cannot use them as windows into early Southeast Asian societies. This chapter has endeavored to show that quantitative studies of Chinese ceramics in sites of the same types (e.g., ports, hinterland settlements, religious complexes, shipwrecks) could be informative, but comparisons of ceramics in different types of sites will not be productive.

The study of Chinese ceramics outside China has much unexploited potential. Collaboration among Chinese and Southeast Asian archaeologists could illuminate many important aspects of economic, technical, and cultural exchanges via ancient maritime networks.

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