8 Urban Demographics along the Asian Maritime Silk Road

Archaeological Small Finds and Settlement Patterns at Premodern Port-Settlements of the Malay Region

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Abstract
As a series of commercial networks and routes, the Maritime Silk Road has provided a common body of material culture that has been traded across different economic zones and markets. However, for port-cities, their society and economy may be impacted by such factors as geography, politics and ethnicity, resulting in unique characteristics that may be elucidated from the variations in archaeologically recovered material cultural remains. Over the last three decades, substantial archaeological data of ceramics have been accrued from early second millennium AD settlement sites in the Malacca Straits Region. Through the use of this information, this paper seeks to identify the social status, demographic differences and cultural identity-traits both between and within contemporaneous port-cities in this region.

Keywords: Malacca Straits Region, Port-cities, premodern Southeast Asia; settlement pattern, archaeology, ceramics

Introduction

The Maritime Silk Road (MSR) that traversed Asia has been, throughout history, a unique network of commercial linkages, diasporic movements, sociocultural flows, and material consumption and production patterns. Unlike the land Silk Road across Central Asia, which saw pack caravans as the sole mode of transportation (Hansen 2012), the use of ships along the

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MSR as the key mode of transport resulted in high-volume distribution of mass-produced items and products from a number of key economies, including China, Southeast Asia, the Indian subcontinent, Middle East, and East Africa (Abu-Lughod 2013; Hall, 2011; Heng 2012).

While there was clearly a wide range of products, both affordable and expensive, that were traded across the different sectors of the MSR, several groups of products began to emerge as the mainstays of this trade. These included ceramics, beads, metal ware, textiles, foodstuffs (including spices), aromatics, and fauna products. The widespread and high-volume distribution of this trade resulted in a similitude of material culture imported by societies that existed along the littoral zones of the MSR. Consequently, at the macro level, the archaeological remains and textual accounts on trade goods exchanged across the MSR have remained fairly consistent over time and space. Chinese ceramics, for example, have been mentioned in texts and found across maritime Asia from Japan and Korea to the east coast of Africa. Similarly, frankincense has been traded from North Africa across to China.

Within a region, small items recovered from archaeological contexts provide a relatively standard vocabulary and dataset through which a socio-economic realm may be articulated. For the Malay region and the Melaka Straits, this data has enabled scholars to study the nature of port-settlements as well as settlements further upstream of the littoral zone, and to understand the nature of the interactions between the societies that occupied both these spaces (Hall 2002; Perret and Surachman 2014).

However, these same items, once imported into specific regions across the maritime realm, began to take on various meanings and uses that reflected the idiosyncrasies of each region. Hence, while the items consumed may have had some degree of standardization across the MSR, the specificities of how they were utilized, from mundane functions of day-to-day life to reflections of aesthetics embodied by the societies of a region, tended to differ significantly.

At the port-settlement level, these items could possibly reflect different modes of expressing sociocultural and economic differences within a settlement's population. Importantly, how each settlement's inhabitants utilized the different imported items, and in the process reflected on the differences and relationships between the subgroups of a population, could differ from settlement to settlement.

To date, two broad approaches have been adopted by Southeast Asian scholars in their efforts to understand the demographic layout of Southeast Asia's port-settlements. The first is the use of geographical-economic redistributive models relevant to coastal Southeast Asia. One is the port-of-trade

model proposed by Karl Polanyi (1957, 1963), in which a location of exchange providing adequate shelter for vessels, the exchange of goods, and rules of accountability was established and enforced by a polity. The other is the dendritic model proposed by Bennet Bronson (1978), in which a coastal polity maintained access to the international and regional markets, while performing a distributive function in exchange for the acquisition of inland products harvested or produced by settlements located upstream of a port-settlement in a riverine system (see Kelley 1976).

The second approach utilizes characteristics of a classical port-city to identify and classify port-settlements, based on the assumption that Malay port-settlements would, in general, possess a range of similar characteristics. These characteristics provide a vocabulary in which a settlement could then be qualified. One model that has been used draws on the characteristics of port-cities recorded in the historical texts of the region. Although these texts are often posthumous to the settlements in question, the characteristics of the classical port-city are extrapolated into the past and used as working assumptions for conducting such reconstructions (Bronson and Wisseman, 1976; Manguin 2002). The result is that while an ideal model of a Malay port-settlement may be created as a framework, often the archaeological data accrued in the field does not fit the model (Manguin 1993; Wheatley 1983).

The absence of a clear urban framework has led scholars to articulate the need for flexibility in approaching the issue of urban generation and urban formation of premodern Malay port-settlements. This heterogenetic approach has allowed settlement sites to be studied in their own right, even as the assumption of similitude in terms of the arc of the urban development trajectory continues to be held (Wilson, von Grunebaum, and Harris 1954). Thus, while the port-settlements are explored as individually unique case studies, there is the assumption that with sufficient case studies, a framework would likely emerge at the macro level, thereby banding the region's cities into a larger sphere through economy, culture, or geography (Miksic 2000).

The scholarly literature on Malay port-settlements indicates that while archaeology appears to provide relatively standardized datasets to work with, the challenge has been to come up with aspects of the settlement's characteristics that may be explored. Further, while scholars have assumed that similarities in the ways in which small items have been used by societies within a region could provide standardized outcomes from which the notion of a regional sphere—based on shared urban commonalities—may be established, would micro-level case studies confirm this assumption?

Small Finds as Reflections of Demographic Patterns

Archaeological research on settlement patterns in Southeast Asia has been prolific over the last fifty years. A number of sites have been archaeologically researched in some detail, including Palembang, Muara Jambi, Barus, the settlements on the Isthmus of Kra (Khao Sam Kheo, Satingpra, and Nakhon Si Thamarat), South Kedah, Kota Cina and Singapore, to name but a few (Allen 1988; Bellina 2017; Jacq-Hergoualc'h 2002; McKinnon 1984; Miksic 1985). Given the climate and acidity of the soil in coastal Southeast Asia, there is relatively limited architectural and textual remains at these sites. Instead, small finds, including metal remains such as coinage, organic remains such as bone remains, glass remains including beads and sherds, as well as ceramics such as earthenware pottery, have been the most important and consistent finds.

This approach has enabled scholars to address several research questions, including the international linkages between these port-cities with the external world (Chi 2017; Heng 2004; Lam 1985; Leong 1973) and the relative purchasing power and economic affluence of these settlements' populations (Guillot et. al. 1998; Leong 1990; Lim 2012).

What has not been done is the utilization of archaeological data on small finds to develop micro-level analyses of the settlements in question, specifically the differences in social groups that may have been located in a settlement. To be sure, there has been some attempt to try to differentiate between areas within a settlement. However, these have been limited to one or two specific types of items that were clearly unique from the general body of ceramics. Importantly, such differentiations have been based primarily on relative purchasing power capabilities and differing aesthetic tastes. Further, there is no ability to establish any co-relation that may have existed between the different groups, since the underlying assumption is that the manifestation of differences is confined to the ability to effect consumption preferences within the social group itself. The resulting demographic model that may be reconstructed is therefore only limited to a hierarchy based on consumption capabilities, with no sense of the interactive dynamics within the group.

What may be possible through the use of a wider range of ceramics is to elucidate the interactive dynamics and co-relation between different social groups of a larger settlement population. The reconstruction of the interaction could be thus characterized by hierarchy, commonality, reciprocity, and distinctiveness. The differences and similarities between groups, and the extent to which they interacted with each other, would reflect varying degrees and distinctions of membership, all within the confines of a port-city or settlement.

Three factors come into play in such an approach. The first—relative purchasing power—assumes that different groups within a settlement may possess different abilities to acquire items that are primarily obtained through some form of economic exchange. While this acquisition may be affected through the use of some form of money (i.e., store of value and means of exchange), it could also be affected through the exchange (e.g., barter) of demanded goods that a group could produce or the rendering of services (e.g., payment-in-kind). Relative purchasing power presupposes relatively egalitarian access to these items that are in demand by the different groups in a settlement and does not presuppose any hierarchical differentiation that may be expressed through the limiting of access to these items as an expression of such hierarchical differences.

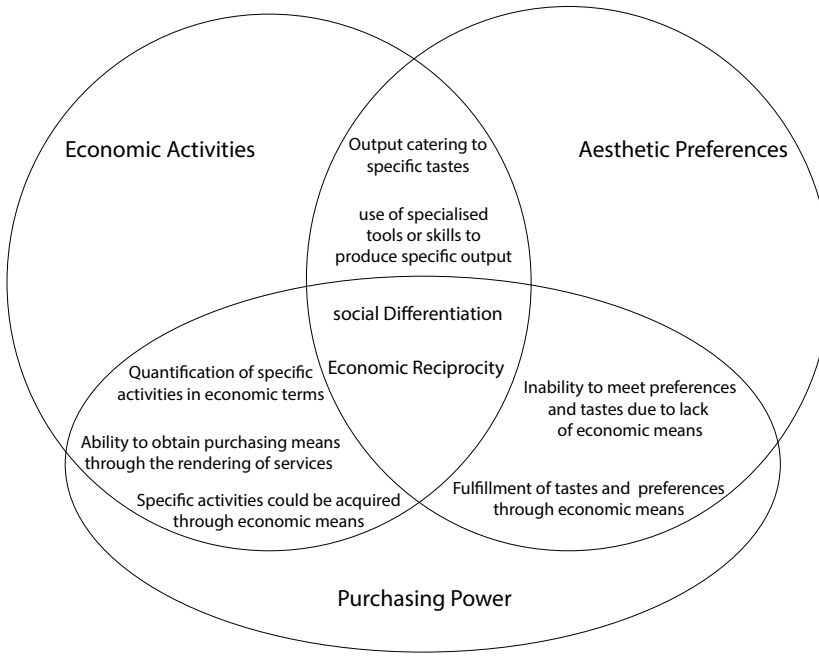
A second factor would be aesthetic tastes. This factor assumes that different groups would manifest different preferences in visual, tactile, and symbolic experiences. Critically, the assumption would be that sufficient cultural differences exist for differentiations to be made manifest within a settlement, even as the range of items made available to the different groups in a settlement would likely have been the same.

A third factor would be economic activities. This factor assumes that different groups would conduct different economic activities based on (1) uniqueness of skills, and (2) the degree of value-added skills needed for a specific activity. While the first type of skills may often be associated with cultural differences between groups, the second may be an expression of social hierarchical differences, based primarily on the ability to put an economic value to an activity.

The three factors of relative purchasing power, aesthetic preferences, and economic activities provide lenses through which groups within a settlement may be differentiated, and in the process allow for the elucidation of the nature of the social demographics of the population in question. Where these factors intersect, there is the possibility of reinforcement of such differences in terms of unconscious and conscious manifestations. These manifestations result in what would be the material cultural remains of mundane or inconsequential materials; in particular, postuse detritus, which is the focus of this study.

Concurrently, material cultural remains could provide evidence for the elucidation of groups that shared varying degrees of common identification, or closeness, within a small settlement space. Lineage groups, kinship groups, and polity groups, while all expressing notions of belonging and membership, also express differing degrees of closeness or social networks between groups. While all groups resident in a settlement could consider themselves

Figure 8.1 Venn diagram of social differentiation based on economic activities, aesthetic preferences, and purchasing power



as belonging to a settlement or polity, within the settlement itself there could be specific groups that have ties that are exclusive among themselves. Similarly, specific groups could be more closely aligned vertically, or related to the central group or groups further up the social hierarchy than others.

Such shared identification between different groups may be manifest in economic reciprocity. Items that would have been more accessible to, or in the possession of, one group would have been shared with others either through generalized reciprocity (in which the benefits of receiving these items is manifest in one group through beneficial exchanges), balanced reciprocity (in which the benefits of receiving these items is equally reciprocated by the returning of commensurate service or goods), or negative reciprocity (in which the benefits of receiving these items is not commensurate to the service or goods that has been rendered for them). Where shared identification between different groups would have been nonexistent or not manifest, then certain items would not have been accessible or been taken away from a group, indicating an asymmetrical relationship between one group with the upper hand and another without the ability to exact a sufficiently equitable relationship (Sahlins 2017, 168–258). Coupled with

the aforementioned factors of relative purchasing power, aesthetic tastes, and economic activities, the liminal differences and ties between groups located within a relatively small settlement space may be elucidated

This chapter seeks to use archaeological data of excavated small finds in the settlements of the Malay region to identify demographic differences within a settlement as well as to develop a workable approach for demographic reconstruction of such settlements, particularly for settlements where there is a paucity of historical documentation.

This study will examine two case studies—Sungei Bujang and Temasik. Located in South Kedah, Peninsula Malaysia, Sungei Bujang was a settlement site active between the seventh to tenth centuries and the twelfth to early fourteenth centuries CE (Allen 1988; Jacq-Hergoualc'h 2002; Leong 1973). Located at the northern entrance of the Straits of Malacca, the port opened up to the Bay of Bengal littoral and served as a landing and launching point for vessels traversing the Bay of Bengal. Several decades of archaeological research has been done at various locations of this settlement, although almost all the sites that have been excavated are sites with ritual functions. The resulting accrual of data on small finds from these sites would allow for some level of spatial and occupational analysis. While quantitative data is not available for all the sites excavated, qualitative data in the form of types of small finds recovered is available.

The two periods of settlement history may be distinguished both in terms of the geographical location of the activity sites located along the Sungei Bujang (Bujang River estuary) as well as the material cultural remains, in particular imported Chinese ceramics. In addition, the nature of the small finds can provide us with the means to determine whether there are demographic differences between the groups inhabiting the settlement of the same period and across time.

The second case study, Temasik, is a late thirteenth century to early fifteenth century CE settlement at the mouth of the Singapore River, Singapore. Textual and archaeological evidence suggests that there were port activities at this settlement, with the possibility of the settlement playing a redistributive role in foreign products to the settlements and populations of the surrounding maritime area, including the Riau Islands and South Johor (Heng 1999, 2002). More than ten excavations have been conducted at the settlement area since 1984 (Miksic 2014), and the result is the present availability of both qualitative data on the small finds recovered through these excavations and detailed quantitative data of the small finds from several of these sites. It is at this site that the spatial reconstruction will be at its most detailed in this chapter's study.

Sungei Bujang

Sungei Bujang comprises several habitation areas spread over four kilometers of the Bujang River estuary near the mouth of the Sungei Merbok River. The seventh-century to tenth-century habitation site has been identified as upstream of Site 16, while the twelfth century to fourteenth century site has been identified as downstream of Site 16. In both periods, the habitation sites were likely located close to the coastline, before the latter moved outward due to geomorphological changes resulting from soil erosion and land extension over time. Between the tenth and eleventh centuries, the site appears to have been abandoned in favor of another river estuary further south.

The site contains a number of monumental architectural remains, primarily in the form of temple bases. Numerous archaeological excavations have been conducted in this area since the 1940s, resulting in a large body of literature on both the large architectural remains and the small finds that have been recovered (Jacq-Hergoualc'h 2002, 193–232, 294–300, 361–390, 443–488). Detailed identification of the small finds has been recorded, although quantitative data is absent.

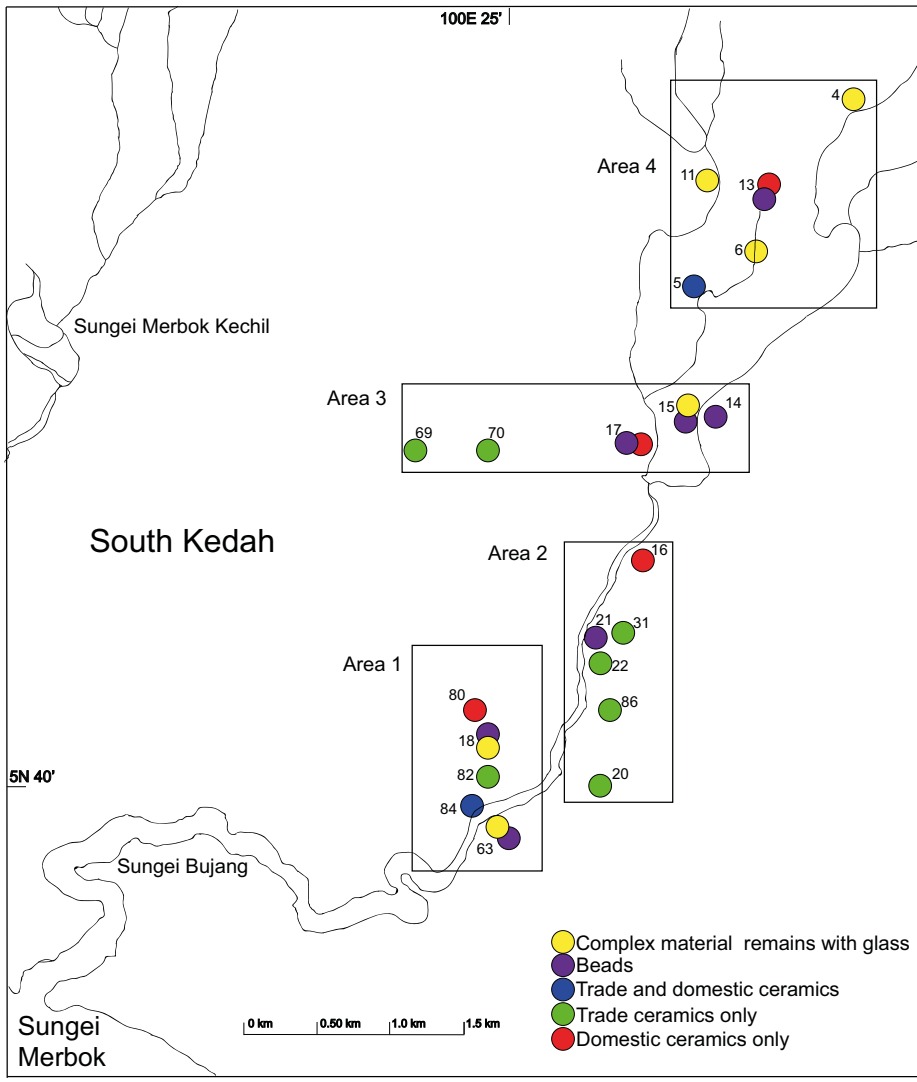
The material cultural remains at this settlement may be classified into five profiles: (A) complex material cultural remains containing imported ceramics and glass sherds; (B) sites that contain beads, primarily manufactured from glass; (C) material cultural remains comprising imported ceramics and locally produced ceramics; (D) material cultural remains comprising only of imported ceramics; and (E) material cultural remains containing only domestic ceramics (Allen 1988, table 16). Each of these profiles may be extrapolated to represent certain consumption patterns that could in turn reflect demographic differences.

Profile A likely represents subgroups that had the purchasing power and access to acquire international products of a diverse range. This range of products includes items from the South China Sea littoral, evident from the Chinese ceramics and Chinese glass, and Indian Ocean littoral products, including South Asian rouletted ware and Middle Eastern glass.

Profile B reflects the likely presence of a specific aesthetic taste in glass material products tied closely to physical or bodily adornment, either in clothing or as jewelry. It is also possibly an indication of an affinity for material cultural tastes associated with South Asian material cultural production. Apart from two excavated sites, Profile B typically occurs with one of the other four profiles.

Profile C, being devoid of glass or beads, reflects subgroups that had the ability to consume international products, but with the range of products

Figure 8.2 Map of the Sungei Bujang settlement area



being limited to ceramics. The presence of both domestic and international ceramics suggests that these subgroups engaged in several culinary activities that could have included both the mundane and daily to the ceremonial.

Profile D, containing only imported ceramics, suggests that the subgroups located at the sites with this profile had very limited activities. The higher value and relative scarcity of imported ceramics, coupled with the absence of domestic ceramics, suggest that the activities were likely periodic in

nature and selective in terms of the usage of specific types of ceramics in the activities conducted here.

Finally, Profile E, containing only domestic ceramics, reflects subgroups that did not acquire imported material culture and likely stand in complete contrast to those from sites with Profile A.

The differentiation of subgroups based on the profiles of the material cultural remains as explicated above; it rests primarily on access and consumption or the lack thereof of international products. Some semblance of selectivity in terms of the usage of materials, such as the exclusive use of imported ceramics, may also be reflected. In both instances, demographic differentiation, social characteristic, and spatial distribution may be discerned.

First, four clusters of subsettlements may be noted—Area 1 is near the coast at the mouth of the river estuary, dated to the eleventh to thirteenth centuries CE; Area 2 is a cluster of sites immediately upstream of Area 1, up to Site 16, also dated to the eleventh to thirteenth centuries; Area 3 is a small cluster of sites immediately upstream of Area 2, dated to between the eighth and twelfth centuries; and Area 4 is a cluster of sites furthest upstream, south of Mt. Gunung Jerai, and dated to the seventh to ninth centuries.

Prior to the eleventh century, the shoreline of the Sungei Merbok lay somewhere north of Site 16 (Murphy 2017, 363). In Area 3, the distribution of Profile A material cultural remains along with the distribution of Profile B remains in close proximity in an east-west orientation suggest that in the first instance, the groups that were resident at this location was likely clustered together. Importantly, the use of glass beads was a characteristic shared by these groups; more so, in fact, than the use of a complex range of imported material culture. Visual aesthetics, as represented by the usage of beads, was likely the common cultural trait of the groups that were located in Area 3.

The converse may be noted of the groups inhabiting Area 4. The primary material cultural profile in this area's sites is Profile A. The three sites (Sites 4, 6, and 11), located fairly equidistant from each other and along the north-south course of the Sungei Bujang, suggest that the groups inhabiting Area 4 were likely more egalitarian than in Area 3. They either possessed relatively equal abilities to obtain items of international origin or a social system that allowed for the equal distribution of international items across all groups occupying this area. At the same time, with Site 13 being the only location with beads, the use of beads as a visual aesthetic preference does not appear to have been a common practice adopted by the groups located in this area but rather a unique incidence at this site.

Bringing both Areas 3 and 4 together as a single settlement area, several characteristics may be inferred of the groups occupying this enlarged

location. First, the same range of material culture appears to have been made available to the groups located in these two areas. This suggests that, at least at the macro level, the inhabitants shared common characteristics in terms of their material cultural consumption. The differences may, instead, be discerned through the different material cultural remains that were manifest in the ritual sites located in this settlement area. Aesthetically, Area 3 groups, regardless of their relative social hierarchical position, appear to have utilized beads as a visual marker. Conversely, Area 4 groups did not exhibit this trait at all. Instead, the egalitarian nature of the distribution of complex material cultural remains appears to have been the shared characteristic of the groups located in Area 4. In this regard, the basis for common identification among the groups in Area 3 and Area 4 were likely to have been distinct.

Second, the locational distribution of the sites and their respective material cultural remains were different in both areas. Those in Area 3 appear to adhere to some form of concentric pattern in an east-west orientation. The concentration of complex material culture with beads at Site 15, of only beads at Site 14, and of only domestic ceramics and beads at Site 17 suggest some hierarchical structure within the group occupying Area 3, reflected by the ability, or lack thereof, to obtain international products. Importantly, the east-west orientation of this concentric pattern suggests that the different subgroups in Area 3 were settled along the ancient coastline and likely exhibited a coastal settlement pattern of spatial distribution. Conversely, the north-south orientation of the sites in Area 4, with their evenly spaced geographical distribution along the river branches, is more akin to the upstream settlement pattern of the dendritic model of settlement distribution articulated by Bennet Bronson.

This pattern has been argued to be the result of the reliance of coastal settlers on forest products and dry rice cultivation on the arable lands upstream of the Sungei Bujang. The resulting economic exchange likely led to the interaction between the different groups inhabiting this part of South Kedah during the seventh to ninth centuries CE. What is unique about Areas 3 and 4 is that this nature of exchange appears to have manifested over a much smaller geographical extent than Bronson's model assumes.

Finally, from a temporal perspective, the datable remains of Area 3 are primarily from the eighth to twelfth centuries, whereas those of Area 4 are from the seventh to ninth centuries CE. The cultural distinction between the groups inhabiting the two areas may be due in large part to this temporal difference, with the inhabitants of Area 4 active in the upstream reaches of the Sungei Bujang and as upland inhabitants at least one century before

coastal settlement activities started downstream in Area 3. It is not clear if the coastal settlers of Area 3 were migrants from the upland groups of Area 4, although it is possible that, given the cultural differences, these migrants could have originated from elsewhere. Even as upland settlement activity ceased after the ninth century in Area 4, the coastal-type settlement activities continued into the twelfth century, even though the silting of the coastline by the ninth century had led to port activities shifting southward to the Sungei Muda and the port-settlement at present-day Kampong Sungei Mas.

The geomorphological changes to the shoreline of the Sungei Merbok resulted in another settlement emerging along the lower reaches of the Sungei Bujang during the eleventh to thirteenth centuries. Consisting of two clusters of habitation sites, this settlement comprised Area 1 and Area 2. The groups inhabiting Area 1 were located along the coastline of the Sungei Merbok from the eleventh century to thirteenth century. The location of the sites in the area also exhibited a concentric pattern in terms of material cultural remains. The groups at Sites 18 and 63 appear to have formed the core of the settlement. Both possess complex material cultural remains (Profile A), while groups sites with lesser access to imported products were located in close proximity along the coastline. The settlement was clustered primarily on the north bank of the river mouth, even though a second core group was settled on the south bank as well. The distinguishing hierarchical feature appears to have been the use of beads and glass items. Only two out of the five sites had imported glass and beads as part of their material cultural remains (Profiles 1 and 2).

However, the common cultural traits in Area 1 appear to have been tied to the access and use of imported ceramics. Four of the five sites in this area had imported ceramics as part of its material cultural remains. This in turn likely reflected the shared nature of activities and possibly aesthetic preferences related to the use of ceramic items. This shared cultural trait extended beyond Area 1 into Area 2. In Area 2, four of the five sites contained imported ceramics (Profile D). This strongly suggests that the groups inhabiting the sites in Area 2 were directly related to the groups located in Area 1, even though these sites were located one to two kilometers upstream from the sites in Area 1.

Three groups may be discerned in this settlement encompassed by Areas 1 and 2. Group 1 is represented by the complex material cultural remains that included glass items and beads and located at the mouth of the Sungei Bujang. Group 2 is represented by the presence of imported ceramics in the material cultural remains. This group is distributed throughout the habitation areas of this settlement, both upstream and downstream. Group 3 is represented by the absence of imported materials in the material cultural

remains. This group was located at the fringes of the settlement—at Site 80, on the northern extremity of the Area 1 settlement site, and at Site 16, at the uppermost reaches of the settlement area along the Sungei Bujang, from the eleventh century to thirteenth century.

This information provides us with what was likely one key manifestation of the differentiation in this settlement's population: the provision of imported material culture. The asymmetrical access to imported material culture suggests that Group 1 likely held primary access to these items. While Groups 2 and 3 had interactions with Group 1 that were likely between balanced and negative reciprocity, Group 2's interaction was likely closer toward balanced reciprocity while Group 3's was likely closer toward negative reciprocity.

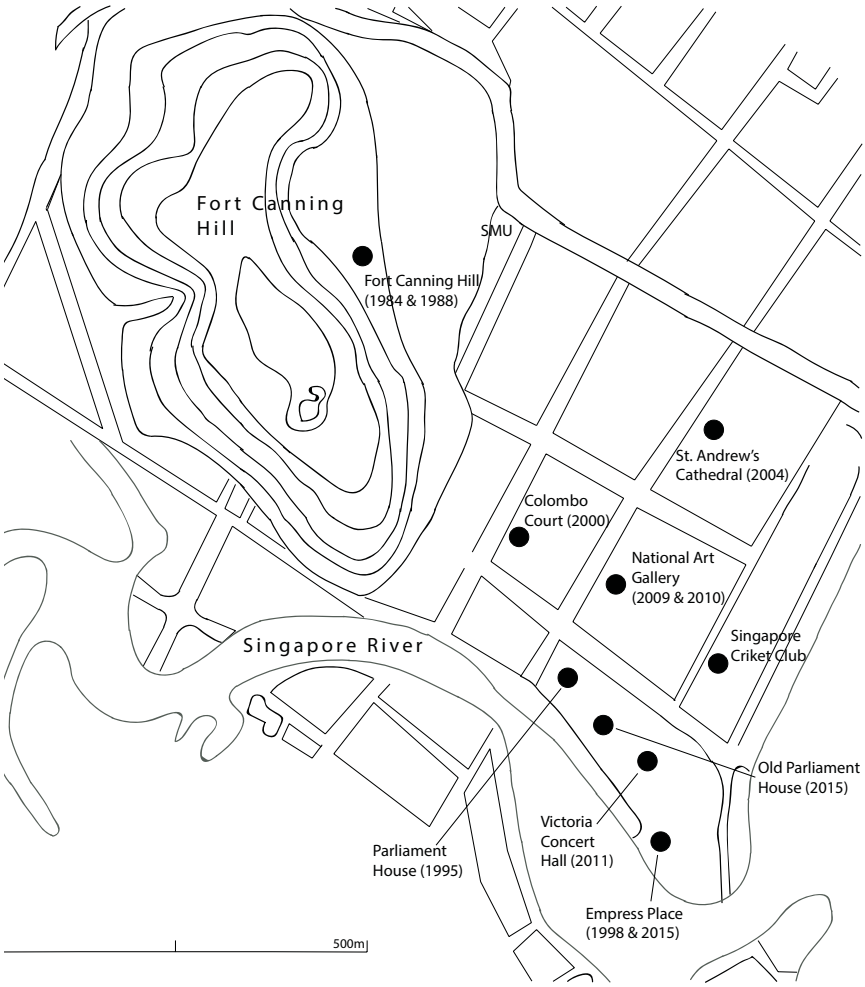
Taken in this light, the eleventh century to thirteenth century settlement at Sungei Bujang may have been more akin to the "port-of-trade" model articulated by Karl Polanyi, in that access to international trade would have been an exercise of political power and that the redistribution of foreign products would have been a manifestation of the political economy exercised by the socio-political elite of the settlement. Importantly, the locus of the settlement in the eleventh century to thirteenth century, being along the coastline with the habitation sites clustered close together, suggest that any relations with the upland areas of the larger Bujang Valley were likely to have been intersettlement interactions as opposed to intrasettlement interactions. This would have been highly distinct from the earlier Sungei Bujang settlement of the seventh to ninth centuries, which manifested a dendritic model characterized by choice and egalitarian access to foreign products.

The case study of South Kedah suggests that the archaeological lexicon of port-settlements of this part of the MSR, even in the absence of detailed quantitative data, may be used to elucidate the nature of a settlement's population and the changes that may have taken place over time. What would the possible kinds of demographic reconstructions be in the presence of quantitative data? To answer that question, we will now turn to the case study of Temasik.

Temasik

The port-settlement of Temasik, located at the southern extremity of the Straits of Melaka, became an active habitation site in the late thirteenth century CE. According to historical records such as the *Nagarakertagama*

Figure 8.3 Excavated sites of the Temasik period at the Singapore Riverbank and Fort Canning Hill, Singapore



(ca. 14th century), the *Sejarah Melayu* (ca. early 17th century), and the *Daoyi zhilue* (ca. 1349) (see Brown 1970; Saktiani 2016; Su 1981), the settlement reached its peak of activity by the middle of the fourteenth century and continued to be active until the early fifteenth century. Located on the north bank of Singapore River Basin, the settlement maintained international trade while also engaging in regional exchanges with the Melaka Straits region settlements of that time.

Unlike the Sungei Bujang settlement, the habitation area of Temasik was located in a compact area. It encompassed the north bank of the Singapore

River Basin up to present-day Stamford Road, and westward to include Fort Canning Hill. This habitation area was enclosed in premodern times by an earthen rampart and fresh-water moat that ran along the course of Stamford Road in a westerly direction, encircling Fort Canning Hill on the north foot and west foot, and eventually terminating in the marshes on the banks of the Singapore River. The settlement area measures approximately seventy-two hectares, with fifty-four hectares being flat land southeast of Fort Canning Hill.

Archaeological research on Temasik has had a significantly long history. Beginning in 1984, more than ten excavations have been conducted at this settlement site (Lim 2012; Lim 2019; Miksic 1989, 2004, 47; Miksic and Lim 2004). At all the sites, ceramic sherds form the majority of the material recovered. With the exception of the Fort Canning Hill excavation (1984), coarse stoneware sherds form the largest group of ceramic remains, followed by fine stoneware ceramics, then earthenware. For the purpose of this study, the coarse and fine stoneware ceramics data from four sites—Empress Place Site (EMP), Old Parliament House Site (OPH), St. Andrew's Cathedral Site (STA), and Fort Canning Hill Site (FTC) (Heng 2012, tables B.1, B.2; Lim 2012, tables 3, 4; Miksic, 1989, table 1)—will be examined. Furthermore, the relative proportions of coarse and fine stoneware finds, expressed in percentages, have been derived based on the weight of sherds in each classification type. For fine ceramics, these percentages represent the weight of all sherds from a particular type. For coarse ceramics, the percentages represent the weight of all the rim sherds from a particular type. The total weight of the ceramics recovered and the size of the excavated area of the four sites are also provided to illustrate the relative density of finds from each site.

Table 8.1 Proportion of fine ceramics within the subassemblage of fine ceramics recovered at the archaeological sites of FTC, STA, EMP and OPH, based on the weight of sherds

	STA	FTC	EMP (Squares A–G)	OPH
Blue and white ware	5.7%	12.9%	0.4%	1.7%
White ware	15.0%	14.1%	34.2%	25.0%
Green ware	62.9%	66.9%	65.4%	73.3%
Area of excavated site	40m^2	40m^2	450m^2	unknown
Total weight of blue and white, white, and green ware sherds recovered from the excavated sites	6,528g (163.2g/m^2)	1,6280g (407g/m^2)	116,900g (259.88g/m^2)	53,200g

Fine ceramics are those that have a clear aesthetic quality and which the item itself is the object of production. In the case of Temasik, three key types of fine ceramics have been recovered and catalogued—blue and white porcelain, white ware, and green ware. The first—blue and white porcelain—was a ceramic product initially produced by the Jingdezhen kilns at Jiangxi Province. The limited quantities produced during the thirteenth and fourteenth centuries suggest that this type of ceramic was likely high in value compared to some of the other types of ceramics made available to Southeast Asia by China.

The second type of fine ceramics—white ware—were primarily produced by a large number of kilns located in the southeast coast of China. Ceramics in this group include *shufu* and *qingbai* ceramics. White ware was produced both as high-quality ceramics and rudimentary ceramics. A more exclusive type of white ware—Dehua ceramics—was produced during the fourteenth century by the Dehua kilns (northeast Fujian Province). While white ware continued to be produced in large quantities by the southeast coastal Chinese kilns during this time, the heyday of its production, in terms of scale of manufacture, occurred earlier in the eleventh to early thirteenth centuries (Ho, 2001).

Green ware—the third type of fine ceramics—was produced both by provincial kilns located along the coast of Southeast China and at national level kilns such as the Longquan kilns in Zhejiang Province. Importantly, green ware became the bulk of the ceramics produced by the southeast Chinese coastal kilns for the export market during this time, surpassing white ware and other types of fine ceramics in terms of scale of production, and therefore accessibility and affordability. This has been attested to by the cargo of such thirteenth century and fourteenth century shipwrecks as the Java Sea wreck and the Jade Dragon wreck, respectively (Flecker 2012; Mathers and Flecker 1997).

The data from the four Temasik sites allow for several observations. First, all four sites likely had access to the full range of fine Chinese ceramics made available to the settlement. The fact that the three types of fine ceramics were present in significant proportions at all four sites suggests that the inhabitants at these sites shared, to some degree, similar aesthetic tastes, accessibility to imported goods, and general consumption patterns.

Nonetheless, a number of differentiating points are noted. The exclusivity of blue and white porcelain, as mentioned above, appears to have been borne out at Temasik, where the inhabitants of FTC consumed slightly more than twice as much of these items as did the inhabitants of the other sites on the plain area and riverbanks. This consumption pattern reflects the

exclusivity of a group of inhabitants in Temasik, evidenced by the distinction in relative purchasing power. Importantly, the ceramic forms that have been recovered at FTC, including stem cups, spoons, ladles, and a basin used as part of a magnetic compass, are not found at any of the other sites. Instead, bowls were the predominant form recovered at those sites. Exclusivity of the FTC group's consumption of blue and white porcelain was based not only on its relatively high cost but also on the limited access and usage of certain forms tied to culinary practices.

The distinction in this consumption pattern at FTC, when compared to those at STA, EMP and OPH, is all the more amplified when the average volume of fine ceramics per square meter recovered at FTC, which is approximately 2.5 times that of the STA site and 1.7 times that of the EMP site, is taken into consideration. At the same time, despite this apparent economic asymmetry, the white ware ceramics data seems to indicate that there were at least some shared commonalities between the FTC and STA. Both FTC's and STA's inhabitants maintained similar proportions of demand for white ware ceramics. This suggests that at least in terms of the usage and consumption of white ware, the STA and FTC inhabitants shared similar traits and may have constituted a larger group together, albeit occupying different levels of a socio-economic hierarchy.

For green ware, the proportions consumed at both sites were similar. This, coupled with the similarities in white ware between the two sites, suggests that at the least, both groups of inhabitants' economic reciprocity was fairly equitable. Also, both groups likely shared common identification points, even as economic differences likely existed between the two.

In contrast, the amounts of white ware maintained by the groups located at EMP and OPH were different. Despite being located in fairly close proximity along the riverbank, the OPH and EMP inhabitants were different not only from each other but also from those at STA and FTC. Additionally, in terms of green ware, for the inhabitants located along the riverbank, the extent of demand was mitigated by the competing demand for white ware. Hence, the EMP inhabitants' demand for white ware offset the demand for green ware. The reverse is evident at OPH. While it is possible that this may be reflective of differences in aesthetic tastes, the information reinforces the observation made above: OPH and EMP inhabitants were likely different from each other. The prevalence of green ware during this period, coupled with the decline of white ware, would have meant that the former was more readily accessible to Southeast Asian markets. It would therefore appear that asymmetry in the economic relations between the subgroups located along the riverbank was tilted in

the favor of those located nearer to the mouth of the river. Furthermore, at this preliminary stage of the analysis, it would appear that three groups of inhabitants may have been resident in Temasik—FTC and STA inhabitants forming one extended group and EMP and OPH inhabitants forming two discrete groups.

While fine ceramics may provide clues as to the differences in aesthetic tastes and socio-economic capabilities, coarse stoneware ceramics can provide clues on the differences between groups in the more mundane types of activities. "Coarse stoneware ceramics" is a generic term in Southeast Asian archaeology to denote ceramics that have not undergone substantial refining stages of the clay and glaze material as part of the production process (Chi 2017; Harrison 1970; Moore 1970; Qin et al. 2017). The final ceramic product tends to be rough, or coarse-bodied, containing such impurities as grit and inclusions, and glazed with a fairly crude and low-quality vitrified glaze. The recovered ceramic sherds tend to have a degraded appearance.

The challenge in the utilization data of coarse stoneware ceramics lies in differentiating the groups within the settlement, so that demographic and even ethnic differentiation may be elucidated. Ceramics, both fine and coarse, provide that basis for amplifying the different inclinations in, as opposed to different types of, activities, aesthetic tastes, consumption patterns, and processual practices. In the case of culinary practices, for example, the distinction in the use of jars would be (1) holding ingredients used at the beginning or end stages of cooking, and (2) holding ingredients to be used in value-added preparation, such as those needing rehydration before cooking.

The data from three types of coarse stoneware ceramics will be examined next—buff ceramics, small-mouth jars, and brittle ceramics. Buff ceramics were produced by the kilns in Guangdong Province, particularly in the vicinity of the Nanhai District where the port-city of Guangzhou was located. This type of ceramics, recovered in Southeast Asia, included basins, mortars, and storage jars. The potting of these ceramics is very heavy and thick, with the clay material containing relatively few inclusions and grit, resulting in the tensile strength of these ceramics being relatively high (Sinopoli et al., 2006). This type of ceramics was produced for food processing and storing foodstuffs. The tensile strength suggests that the storage jars could hold relatively high-density foodstuffs, such as fermented and pickled foods, as evidenced by the cargo of the Turiang wreck (Brown and Sjostrand 2000). Such high-density foodstuffs suggest that usage could be immediate, and thus not needing any value-added processes before the ingredients could be consumed.

Table 8.2 Proportion of small-mouth jar, brittle jar, and buff ceramic sherds within the subassemblage of coarse ceramics recovered at the archaeological sites of FTC, STA, EMP and OPH, based on the weight of rim sherds

	STA	FTC	EMP (squares A & B)	OPH
Small-mouth jars	16%	26.2%	8.6 %	17.1%
Brittle jars	10.6%	10.9%	5.8%	3.2%
Buff ceramics	71.5%	32.5%	53.7%	53.6%
Total of the three types of ceramics	98.1%	69.6%	68.1%	73.9%
Area of excavated site	40m^2	40m^2	40m^2	unknown
Total weight of coarse stoneware recovered from site	32,097.5g	1,6198g	39,217g	4,1408g
Average weight of coarse stoneware recovered per m^2 of excavated site	(802.4g/m^2)	(405g/m^2)	(980.4g/m^2)	Data not available

Small-mouth jars were primarily produced by the provincial kilns in South Fujian, particularly in the Cizao district. Thrown with a small-lip opening and a thinly potted broad waist that tapers down to a small foot that is thickly potted, these jars appear to have been produced as standardized bottles with almost exact carrying capacities. Highly vitrified, the low porosity of these bottles meant that they were likely used for the bottling of liquids such as rice wine or sauces (Wong 2016). Small-mouth jars were the largest group of coarse stoneware ceramics recovered, followed by buff ceramics.

Brittle ceramics are a type of ceramics produced by the kilns predominantly in the Fujian Province, particularly the kilns in the vicinity of the port-city of Quanzhou. The clay body contains significant amounts of inclusions and grit, and the primary form of this type of ceramics is the large storage jar, which could be as tall as sixty to seventy centimeters. Coupled with a thinly potted body, these ceramic jars could hold only low-density items, including dried foodstuffs such as spices, proteins, and vegetables. Such food ingredients typically require substantial value-added processes before they can be consumed.

These three types of coarse ceramics tell us about practices pertaining to culinary activities. With regards to small-mouth jar sherds, what is apparent is that the contents of these jars were readily available to all inhabitants of Temasik. At first glance, it would appear that the inhabitants

of FTC consumed significantly larger proportions of the small-mouth jar contents compared to the contents of brittle jars and buff ceramic jars than those of the other sites in Temasik. It is possible that the differences in the relative levels of demand for these products is linked to the relative purchasing power of the inhabitants in each of these localities. It is also possible that the big difference in the levels of demand between the EMP and OPH subgroups may be due to differences in consumption patterns of these jar contents or in regard to the jar contents, whereas the consumption pattern of OPH and STA were similar. This reflects the possibility that the jars' contents may have been tied not simply to economic accessibility but also to differences in sociocultural activities linked to the role that the jars' contents played. The consumption of the contents of small-mouth jars could be an indication that there were activities utilizing these contents that occurred at a greater intensity at FTC than at the other Temasik sites, such as feasting and ceremonial activities, but shared in common with STA and OPH inhabitants as well.

For the contents in brittle jars, it would appear that the inhabitants of the STA and FTC sites had similar consumption preferences, whereas those of the EMP and OPH inhabitants differed substantially. The former appears to have conducted substantially more value-added culinary activities than the latter, while the latter specifically appears to have not been very keen on culinary value-added activities.

The data on buff ceramic sherds provides another perspective into the relative intensity of the different food-related activities at Temasik. While buff ceramics are represented by strong-bodied storage jars, they are also represented by food preparation tools, including basins and mortars. This group of ceramics therefore represents foodstuffs with higher mass densities such as pickled or salted foods, or foods with high liquid content such as fermented foodstuffs, which could be used without value-added processes if so desired. It also represents activities related to food preparation, such as washing, soaking, mincing, grinding, and mixing. The data suggests that the intensity of usage of these ceramics and their ingredients was highest at STA and lowest at FTC, with intensity in the middle for EMP and OPH. Thus, the inhabitants of FTC did not engage in food preparation activities or the usage of partially processed high-density foods as much as the inhabitants of the plain area and riverbank sites did. Importantly, with both the STA and FTC sites being closely located and likely forming one extended social group, there may have been specialization in activities related to food preparation among the inhabitants of the two sites.

The relative proportions of the three types of sherds as articulated above could suggest that the OPH inhabitants had a preference for liquid food products that could be used immediately, whereas the STA inhabitants maintained a preference for ingredients that had to undergo culinary preparation. This implies that the allocation of resources in terms of total hours in culinary processes may have been higher among the STA and EMP groups, while much less of such resources may have been devoted by the group at OPH. The difference in consumption patterns may not only be due to differences in tastes but also in the availability of time and resources devoted to culinary activities.

Taking both the fine and coarse stoneware ceramics data into consideration, what can be said about the demographic differences between Temasik's resident populations? First, as noted above, there appears to have been at least four sites of inhabitants in Temasik—those occupying the STA and FTC sites can be considered as one extended group, while those occupying the EMP site were its own group, as were those occupying the OPH site. The STA and FTC sites represent two groups of inhabitants that were likely closely related or belonging to the same extended group. The sensorial aesthetic tastes, reflected by the proportions of white ware and green ware ceramics consumed, reflect this characteristic. Within this kinship group, however, distinctions may be noted. The difference in the proportion of blue and white porcelain ceramics consumed suggests economic asymmetry within this extended group. The low intensity of culinary activities at FTC, compared to the high intensity of such activities at STA, further reinforces this economic asymmetry, and suggests that this may also be manifest in the predominance of one group taking up such mundane activities as food preparation in service of the other. This is also coupled by the difference in habitation density between these two sites, as reflected by the density of ceramic finds per square meter. It is highly plausible that all of these are reflective of economic distinctions that ultimately have some bearing on social hierarchical differences, even though the two subgroups appear to otherwise essentially be the same.

In general, the STA-FTC ties likely did not extend to the EMP and OPH inhabitants. These differences may reflect the possibility of the EMP and OPH inhabitants being outside of a kinship group that encompassed the FTC and STA inhabitants, in which the distribution of culinary value-added activities may have been a significant part of the social and economic internal dynamics of the extended group. It may also be reflective of an emphasis on subsistence activities based more on the land for the STA group versus on the sea for the EMP and OPH groups. In turn, the overall

culture of economic production exhibited by the STA, OPH, and EMP groups may be contrasted to the culture of consumption exhibited by the FTC group.

The only exception appears to have been when activities pertaining to the use of small-mouth jars contents would take place, during which time another extended link, involving OPH inhabitants, would manifest. In this regard, EMP inhabitants were clearly a distinct group on their own.

In terms of sensorial aesthetic tastes, the OPH and EMP groups were not only distinct from each other but also from the STA-FTC extended group. This distinction may also be elucidated from the culinary point of view, where the EMP and OPH differed from each other in terms of the usage of ingredients that involved substantial value-added culinary processes.

The above discussion of the different inhabitants of Temasik, based on the ceramic data from the four sites, suggests that the body-politic of Temasik may in fact be reconstructed if sufficiently consistent archaeological data is available from a settlement site. The port-settlement likely had a core group characterized by a social hierarchy, while at the same time including other groups that were part of its population and under its rule but constituting a separate social group from the social core.

Conclusion

This chapter has sought to demonstrate that small finds recovered from coastal settlement sites in the Melaka Straits region, representative of the material cultural remains of the Maritime Silk Road trade that occurred over the course of the early second millennium CE, can be utilized across different sites as a means of helping to distinguish smaller group differentiations within a settlement's demography, tied to the location at which these groups may have inhabited. Critically, a sufficiently consistent presence of the small finds is a requisite for such differentiations to be made successfully across time and space, as the case study of Sungei Bujang has demonstrated.

When sufficiently detailed quantitative data is available, the distinguishing of groups can be extrapolated from the possible economic activities, preferences in tastes and aesthetics, and relative purchasing power exercised by the different groups within a settlement. The data can also be used to demonstrate the relative proximity between groups, based on similitude

in consumption patterns that may be reflective of shared characteristics. The result is the possibility of elucidating the different degrees of belonging within a settlement's population, as the case study of Temasik has demonstrated.

In the two case studies examined in this chapter, there does appear to have been significant differences in terms of the way in which the two port-settlements were spatially organized. In the case of Sungei Bujang, the settlement was akin to coastal settlements in Southeast Asia that had access to the immediate hinterland or upland areas. This layout likely resulted in the demographic differences that were noted through observations in the types of imported small finds associated with the sites in the settlement itself. There was a difference between groups that inhabited the coast, with direct access to imported material culture and the economic gains that came with regional and international trade, and groups that inhabited the upstream and upland areas.

In the case of Temasik, the settlement was more of an urban center with relatively little access to the hinterland or upland area. The result was a tightly knit settlement comprising different groups, each having specific functions, while interacting very closely with other groups inhabiting the urban center. The differentiations and co-relations reflected in the small finds data reflect the intense interaction as well as negotiations that would have taken place within such a confined settlement space.

This study has demonstrated that even with rudimentary data of small finds, it is possible to reconstruct liminal differences and similarities between groups within a settlement. When the data is sufficiently detailed, subgroup affinities and socio-economic hierarchies and even degrees of membership and belonging may be reconstructed. Such an approach to reconstructing the demographic pattern and spatial layout of settlements allows for the possibility of bringing together settlement pattern and demographic information recorded in historical texts, with material evidence from the sites themselves. The reconstruction of premodern settlements in the Melaka Straits region would be less dependent on theoretical models or reconstructed models derived from texts as frameworks, and more on allowing the data, both textual and archaeological, to drive the reconstruction. It is not the theoretical models that would provide the regional framework for our understanding of these port-settlements that dot the MSR but rather the similitude of material cultural remains found across regions of the Silk Road that would ultimately provide that broader regional and transregional consistency.

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