Early Architectural Images from Muara Jambi on Sumatra, Indonesia

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INTRODUCTION

A TOTAL OF NINE TERRACOTTA BRICKS AND BRICK FRAGMENTS, containing incised drawings of different types of buildings, were discovered at the large Muara Jambi complex in eastern Sumatra (Figs. 3, 4, 6–9, 11, 12). Likely dating from between the ninth and the fourteenth centuries, these bricks contain the oldest graphic representations of Sumatran architecture. These images are important for architectural historians because most of the buildings that they depict were made of perishable materials and consequently have not survived. Indeed, archaeological excavations at Sumatran sites from this early period, including those at Kota Cina, Palembang, and Pondok, have only unearthed foundations of wooden posts; they do not reveal anything about the elevated portions of the dwellings themselves. Moreover, there are no other data sources from which to reconstruct the appearance and structure of buildings from that period of time. Malay written sources from Sumatra, for example, mainly postdate the sixteenth century and rarely include either textual descriptions or graphic depictions of buildings. Those that do, such as court chronicles, tend to focus on palace complexes and religious buildings, never domestic dwellings or other types of structures. As such, architectural historians have been forced to obtain information about early Sumatran domestic architecture either from Javanese temple reliefs or to assume that the features of early Sumatran houses resemble those of later centuries (Sargeant 1977).

While two of these designs have been previously published (Chihara 1996: pl. 264; Dumarcay and Smithies 1998: Fig. 8), the brick images have not been thoroughly analyzed to determine what new light they shed on the domestic architecture and building traditions of early lowland Sumatran settlements. We start by briefly outlining the archaeological and historical background of the Muara Jambi...
complex, underlining divergent scholarly opinions about the nature of the site. We then analyze the images and their archaeological context in attempts to interpret when the images were made, who created them, the purpose behind them, the types of architecture depicted, and the reasons behind the diversity of building types represented. Having argued that the majority of bricks depict domestic architecture reflecting a variety of cultural influences, we conclude by suggesting that the presence of such images supports the scholarly view that Muara Jambi was a multi-ethnic trading community.

MUARA JAMBI AND THE MALAYU POLITY

The Muara Jambi archaeological complex lies 30 km downstream from the present-day city of Jambi on the Batanghari River (Fig. 1). Covering approximately 12 km² and transected by at least six anthropogenic waterways that were used for drainage and transportation, the complex consists of eight large Hindu-Buddhist temples, as well as more than 30 other smaller structures that have been interpreted as dating from between the ninth and fourteenth centuries. The exact number of temples and date of their construction, however, are disputed. Schnitger (1937: 67), for example, dates the five biggest temple structures to between 1050 and 1250. Dumarc¸ay and Smithies (1998: 29) mention 40 temples dating from the thirteenth to the end of the fifteenth century, while Chihara (1996: 219–221) speaks of only 35 temple sites of the eleventh to the post-twelfth century.

The existence of the temple complex was first mentioned in European sources by Lieutenant S. C. Crooke in 1820 (Schnitger 1937: 5). It was subsequently visited by John Anderson in 1823 (1971: 397) and members of an expedition sponsored by the Dutch Geographical Society in 1877–1879. Early excavations at the site were undertaken by T. Adam in 1921 (1922) and Schnitger in 1936 (1937, 1939). Excavations in the post-colonial period started in 1976, with the reconstruction of the brick-built structures initiated in the 1980s (Salmon 2003: note 4), though most of the site has remained unexcavated.

One of the largest temples at Muara Jambi is Candi Gumpung (Fig. 2), where most of the incised bricks were found. The temple sits in an enclosed courtyard (85 × 93 m), which is divided into six smaller compounds. The main temple (18 × 17.5 m) consists of a rectangular cella (inner chamber) of 5.1 m² located on a highly elevated podium with projecting niches (Chihara 1996: 218–220; Schnitger 1937: 5–6, pl. XII). According to Boecheri (1985: 238), the temple was built sometime between the middle of the ninth and the beginning of the tenth century, and then further enlarged during the eleventh or twelfth century.

Excavations at Muara Jambi have resulted in a number of important finds. Inside Candi Gumpung, a box was discovered containing gemstones and a total of 21 inscribed gold plates, which together furnish the names or fragments of the names of 22 tantric deities. These plates have been interpreted as belonging to either the Vajradhātu Mandala (Boechari 1985) or the Trilokavijaya Mandala (Nihom 1998). Archaeologists also unearthed a makara-demon head near the entrance to the temple and a headless statue of the female Bodhisatva Prajñāpāramitā in one of the niches of the foundation. The latter has been dated to the thirteenth or fourteenth century on the basis of its resemblance to a statue found in the East
Fig. 1. Plan of the Muara Jambi site. (after Chihara 1996: fig. 144; Miksic 1996: 102; drawing by S. Hageneuer)
Javanese kingdom of Singosari. In the area surrounding the Candi, which was possibly the site of a monastery, numerous fragments of blown glass vessels and glass beads of various colors have been collected as surface finds (McKinnon 1992:9). Other important finds from the Muara Jambi complex include a nandi, fragments of Buddha statuaries, Chinese and Thai ceramics, and numerous artifacts of silver, gold, and bronze. All of these artifacts point to Muara Jambi’s significant interregional commercial and cultural contacts with Java, Thailand, China, and India.

Aside from archaeological sources, some of the early history of this site is known from written records. In 672, the Chinese pilgrim, I-Ching (635–713), who was traveling to India in order to deepen his knowledge of Buddhism, stayed at both Srivijaya and Malayu, polities that scholars generally believe were based at Palembang and Jambi respectively. In Srivijaya, I-Ching found a large religious community and it can be assumed that an extensive Buddhist complex existed at Muara Jambi in I-Ching’s time as well (Wolters 1986:18–19, 27, note 71). On his return from India ten years later, I-Ching included a vaguely worded statement in his report about the status of Malayu, which has generally been interpreted as indicating that Srivijaya had established suzerainty over Malayu during I-Ching’s time in India. This interpretation is supported by the seven inscriptions of the 680s found in South Sumatra and Bangka, which document the expansion of Srivijaya during that period.

Other written sources indicate that in the middle or the last quarter of the eleventh century, Malayu took over the political leadership of the region. This shift in political power is reflected in the Jambi ruler’s donation of two temples at
Negapatam in the Chola territory during the early eleventh century and the sending of ambitious tributary missions to China in 1079, 1082, 1084, 1088, 1090, and 1094 (Manguin 2002:85; Salmon 2003:112; Wolters 1966). This interpretation is further supported by an account of Chan-Ju-Kua in 1225 (Hirth and Rockhill 1966:62), which mentions the names of 15 vassal states of Srivijaya, including Palembang (Pa-lin feng), the earlier capital of Srivijaya (Kulke 1995:72).

Given this connection with China, it is not surprising that a large number of Song (960–1279) period ceramics—initially from Guangdong, but later from ports in Fujian and Zhejiang—have been recovered from Muara Jambi (McKinnon 1992:136–137). More intriguing, however, is the discovery of a bronze gong bearing an inscription and the date of A.D. 1231. The existence of this bronze gong may indicate that a Chinese prefect headed an administrative unit at Muara Jambi during the late twelfth or early thirteenth century (Salmon 2002, 2003:111).

Based on these archaeological and documentary sources, scholars consider the late tenth to thirteenth centuries to be the period of Jambi’s greatest prosperity. During this time, Malayu acted as a center for trade and as a gateway community for travelers and foreigners waiting for the monsoon. It also managed commercial facilities and served as a conduit for products from the Sumatran hinterland, including metals, and forest and animal products (McKinnon 1992:4–8; Miksic 1980:46–48, map 2). Drugs and spices, in particular, played an important part in the Chinese trade because of their use in the preparation of medicines and incense. The flow of these products to and from the hinterland was coordinated through the development of smaller collection and redistribution points located at river junctions. Numerous other settlements developed from the eleventh century onward along the lower Batanghari downriver from Jambi and the Batang Kumpeh.

Malayu’s political and economic importance appears to have started to wane in the thirteenth century. In 1275 the ruler of Singosari in Java launched a military expedition against Southeast Sumatra. Then, in 1377, the settlements on the lower Batanghari River were destroyed by the Javanese (Wolters 1986:40). Sometime during this period, Malayu became a vassal of the Javanese Majapahit Empire and its capital gradually lost its influence in international trade (Locher-Scholten 2003:38; Miksic 1989:17).

An important historical question that remains about Malayu’s golden age is whether the center of the empire was located at Muara Jambi or at the present-day city of Jambi. Edwards McKinnon (1992) and others (Dumarçay and Smithies 1998:32; Kulke 1995:72) have argued for Muara Jambi as the capital based on the prevalence of architectural remains at the site. Those favoring Jambi as the capital believe that Muara Jambi was just a “center for administrative and ceremonial activity” since no remains of a dense settlement have been discovered there as of yet (Miksic 1989:17; Rouffaer 1921:16–18). Archaeological discoveries at Jambi, which include two makara bearing the data of 1064, meanwhile attest to the upstream location’s archaeological past (Soekmono 1986:2). Recently Andaya (2004:65), following Schnitger (1937:8, 1939:16), has suggested that the Malayu Empire of the thirteenth century consisted of two centers, one downstream at Muara Jambi and another upstream at the city of Jambi. The first was
Fig. 3. House design on brick fragments of Muara Jambi: drawing and original (inv.-no. MJB/V/LL/110/99nd).
the trading place whereas the latter, he contends, was established closer to the highlands in order to obtain products for trade. We return to this argument in the conclusion.

THE ARCHITECTURAL IMAGES ON BRICK

The architectural images at Muara Jambi are inscribed on terracotta bricks that measure 23–27 cm in length, 15–17 cm in height, 4.5–6 cm in depth, and represent the most common form of building material for the temples. Most of the bricks are broken or partly damaged. All nine of the drawings, which were incised with a narrow tool, are rather similar in size and well placed in the center of the bricks. The incisions themselves are almost of equal size and depth.

Beyond these observations, everything else about the bricks and drawings is open to interpretation. When were the bricks made? Who created the bricks? What is the function of the bricks and their images? What types of building do the images represent? Finally, what explains the diversity of buildings depicted? We now turn our attention to these questions and provide some preliminary answers.

When Were the Bricks Created?

All nine of the bricks and brick fragments were excavated by Indonesian archaeologists. Seven are said to have been discovered between 1979 and 1982 at Candi
Fig. 5. Traditional house of Rantau Panjang, Bangko.

Fig. 6. House design on a brick fragment of Muara Jambi (inv.-no. MCT-I/K-6/05).
Fig. 7. House design on a brick fragment of Muara Jambi: drawing and original (inv.-no. GP/V/LL/3/84).
Fig. 8. House design on a brick of Muara Jambi: drawing and original (inv.-no. GD/V/LL/114/99nd).
Gumpung (Figs. 3, 4, 7, 8, 11, 12). The eighth brick (Fig. 9) is reported by Dumarçay and Smithies (1998:31) as having been found at Candi Gudang Garam (which was recently renamed Candi Gedong I), a site where excavations were conducted in 1988 and 1996. Officials at the Archaeological Preservation Office of Jambi (SUAKA), however, have insisted that this brick is also from Candi Gumpung. Finally, the ninth brick (Fig. 6) was recently discovered in 2006 near Candi Tinggi, which lies to the east of Candi Gumpung. Given this information, it would appear that Candi Gumpung is the most important site for interpreting the age of these bricks.

As stated earlier, the construction of Candi Gumpung is believed to date to the middle of the ninth or beginning of the tenth century, with at least one enlargement having been undertaken in the eleventh or twelfth century. Tracing the origin of the bricks to either of those construction periods, however, is made impossible by the fact that the exact provenances of the bricks at the Candi Gumpung site were not recorded by the SUAKA, which has the bricks on display at the site museum at Muara Jambi. Moreover, the poor documentation of the finding context allows for the possibility that they could be from a later date. Given this uncertainty, we cannot be more precise than to suggest that the bricks were created sometime between the middle of the ninth century, when the temple is believed to have first been built, and the fourteenth century, when Muara Jambi is believed to have experienced a major decline in its political and economic power. Hopefully additional archaeological discoveries will allow for greater precision in the future.

Who Created the Images?

What is remarkable about the drawings on the Muara Jambi bricks is the careful attention given to the depiction of the constructional details. First, all of the images appear to show the longitudinal section of the building through which the construction and partition of the structure can be better seen. Second, the load-bearing parts of the buildings are indicated with double lines, whereas the structurally less-important walls, which would likely have consisted of timber, strips of bamboo, grass, or rattan attached to the main posts and beams, are not drawn at all. Finally, the bricks also depict other types of architectural details, such as different types of roof covering, which are skillfully rendered by using horizontal strips of crosses (Fig. 3), a small grid pattern (Fig. 4), parallel stretches (Fig. 7), and sugar palm fiber (ijuk) tied in bundles (Fig. 9).

The exceptional skill in the depiction of the architectural details likely indicates that they were created by specialists in the design and building process, such as carpenters, stone-cutters, or a master builder. The existence of such specialists at Muara Jambi would not be surprising, given that the Telaga Batu inscription (c. 686) from the early Srivijaya kingdom at Palembang mentions the existence of sthāpaka, a Sanskrit term that most researchers translate as architect (Miksic 1980:51; Nik Hassan 1990:77). Hall (1985:92–93) describes the sthāpaka as being a brahman advisor, technical supervisor, religious specialist, and architect, who directed but did “not actually [work] on these projects”. As an advisor to the ruler, this individual would likely have been involved not only in the archi-
tectural design, but also in the construction of major communal and religious buildings, the erection of divine images, and the performance of religious ceremonies during construction. While there is no evidence that master builders were involved in the construction of common housing, the historical evidence in Southeast Asia is too fragmentary to accurately describe the functional groups involved in the building process (Dumarcay 2005).

What Is the Function of the Bricks and Their Images?

The bricks of Muara Jambi are unique artifacts because they contain images rather than inscriptions or religious symbols, which are far more common. The closest artifact to the Muara Jambi images are terracotta reliefs from the Majapahit period of the thirteenth and fourteenth centuries, which have been documented on East Java (Karow 1987: 35–61; Miksic and Soekatno 1995: 170; Muller 1978: 34–35, 140–141, 145; Soemantri 2003: 160–161). Those high reliefs and sculptured tiles serve as picture panels and depict landscape settings in which architecture is included among other descriptive details. The spatial setting and rendering is more advanced than the abstract line drawings of Muara Jambi.

Other artifacts from that period on Java are three-dimensional small terracotta house models that also carefully depict the architectural details. They reflect a special interest in documenting domestic housing of that period. The function
of these models, however, is still debated. Some presume that they served as funerary objects, similar to Chinese house models of burnt clay. Others suggest a secular function, such as a children’s toy or a kind of decorative object (Karow 1987:62–63; Miksic 1995:106, fig. 93).

Given this divergence of opinion on these better-studied artifacts from Majapahit, it may be prudent to reserve judgment on the exact purpose behind the creation of the Muara Jambi bricks. Nevertheless, the fact that the designs were incised into the bricks before they were fired would indicate that they were created as display objects, rather than being graffiti. Moreover, the precise archaeological rendering of the buildings mentioned above would seem to indicate that the images were depictions of buildings that were already in existence or were plans for buildings that were to be constructed. If the buildings did indeed already exist, then the bricks might have been part of a ritual commemoration of building construction as signaled by their existence within the temple compound. If they did not exist, then they could have been pragmatic illustrations made by a master builder as a way to model the finished architecture for a client.

What Types of Buildings Are Illustrated on the Bricks?

Of the images on the nine bricks, the nature of some of the buildings is easier to interpret than others. It is seemingly apparent, for example, that two images rep-

Fig. 10. Traditional house in Matur, West Sumatra (with courtesy of Imran bin Tajudeen).
resent brick structures comprising religious architecture. Figure 11 appears to be a temple that is elevated on a high platform with a tower-like superstructure and a radiating arch, surmounted by a round final, while the image provided by Chihara (1996: pl. 264) appears to show a stupa, consisting of a base, cupola, and an umbrella on top. This interpretation of the second image as a stupa is supported by the fact that curved bricks have been found at Candi Gumpung. The image in Figure 12 also seems to be fairly clear, depicting a barn or a shelter with a gabled roof supported by thin pillars, which are placed on foundation stones or blocks.

The exact nature of the remaining buildings depicted in the six images is less clear. One possibility is that some of the images represent a palace. This is a logical possibility since the existence of a palace was recorded in 1820 for Jambi (Dumarcay 1991: 85; Schnitger 1937: 6). A major difficulty in identifying any of these images as a palace, however, results from the fact that in Southeast Asia, the architectural schema for palaces is not very different from the buildings used by ordinary people. Indeed, a nineteenth-century description of the sultan’s house in Moco-Moco on the west coast states the following: “At the northern end [of the bazaar] is the sultan’s [house], which has nothing particular to distinguish it, but only its being larger than other Malay houses” (Marsden 1966: 318). Other descriptions of palaces on Sumatra are rare and poorly detailed in literary texts. Thus, in the absence of a special enclosure or high decorative accomplishment, it is difficult to define a single building as palace architecture.

A second possibility is that some of the bricks represent a monastery. According to I-Ching’s description of a monastery on the outskirts of Palembang, monks were not isolated from the laypeople and their living quarters appear to have had similar features to those of the general population. A monastery, however, would...
have to have provided several apartments, a storage area, a kitchen, wet areas, and wide spaces for ceremonies in the interior (Wolters 1986:27). This does not seem to be the case in the images on the bricks, since not all of the buildings appear to be especially large in size.

A third possibility is that the bricks display different types of domestic habitation. The nature of housing during this period is partially provided by descriptions of Chau-Ju-Kua, written in 1225, which indicate that harbor cities of Southeast Asia were characterized by three main types of dwelling: floating houseboats, wooden houses, and bamboo houses. Floating houseboats, which clearly are not depicted in the images from Muara Jambi, were noted from Srivijaya, where they were located on the rivers or connected to the riversides outside the city (Hirth and Rockhill 1966:60). Wooden houses constituted more prestigious housing and were specifically noted as being used by officials in Tambralinga, South Thailand (Hirth and Rockhill 1966:67), while painted “dwellings of imposing appearance” were found on Java (Hirth and Rockhill 1966:77). Finally, regarding bamboo houses, Chau-Ju-Kua reports that “the common people [in Tambralinga live] in bamboo cottages, the walls being filled in with leaves and the poles fastened with rattan” (Hirth and Rockhill 1966:67). He similarly describes houses in West Java as being “made of poles stuck in the ground, roofed over with the bark of the coir-palm [Nipah palm], the partitions being made with wooden boards (tied) with bits of rattan” (Hirth and Rockhill 1966:70). Since the urban setting in these cities was not an egalitarian society, we hypothesize that some of the buildings on the Muara Jambi bricks depict elite housing, which are distinguished by elaborated decoration and bigger dimensions, while others are more common dwellings.

What Explains the Diversity of Housing Models?

All six of the houses on the bricks appear to show three basic characteristics that are typical of the traditional architecture in Southeast Asia (Figs. 3, 4, 6–9). First, all of the houses are made of wood and other vegetal material. This usage of organic materials, which has largely continued from the Neolithic period into the present time, is a reflection of the abundance of locally available resources that can be used as building material and the warm climate (Reid 1988:62). Second, all the dwellings are raised on posts with an elevated living area. This construction technique, which can be traced back to the Southeast Asian and Chinese Bronze Age of 1800–1300 B.C. (Schefold 2004:23, 25; Sørensen 1982:12–13; Waterson 1990:18–26), is especially useful in marshy areas and riverside settlements like the Muara Jambi area, where the annual height of flooding is 1–3 m. The elevated floor also allows for air circulation, which is especially important in hot and humid climates. Third and finally, all the dwellings represent tripartite houses, made with a post and beam system of construction. The roof-supporting posts rise from the ground creating an “H-frame-construction” (Schefold 2004:25–26). The front elevation of these tripartite houses is already visualized on Dong Song drums, which can be dated from between 600/400 B.C. and the first century A.D.

Apart from those basic similarities, the houses exhibit a number of striking differences in their architectural features. One of the most obvious differences lies in the size and construction of the posts. In Figures 4, 6, and 8 the posts are dug di-
rectly into the ground, while others are either placed on foundation stones (Fig. 9) or wooden blocks that are triangular or conical in shape (Figs. 3, 7, 12). The elevated living area is accessed by a ladder which is clearly seen in Figure 6. The benefit of using foundation stones or supporting blocks is that they protect the wooden posts from humidity and termites, while an advantage to planting the posts directly into the ground is that the building is more stable in the case of floods or earthquakes. Both techniques remain in use in Jambi province today, though in some other regions, like among the Minangkabau of West Sumatra, higher status is accorded to those grounded on stone, as it is to buildings with taller posts.

The houses also vary in terms of how they are partitioned. In three of the houses (Figs. 6, 8, 9), the living area exists on a single level, while the other three consist of a central section with side wings (Figs. 3, 4, 7). In the latter technique, smaller rooms of less height are symmetrically attached to the sides of the house in order to enlarge the internal volume of the building. The beams are mortised to the underside of the house posts, resulting in the floor level of the side wings being slightly lower than the elevated main section of the house. Aside from this technical explanation, the raised floor structure can also be seen as the result of a design principle, indicating a hierarchy in the internal division of space. The structural hierarchy is even more emphasized with the construction of lean-to roofs for the side wings and one big gable roof for the main part. This multi-leveled construction technique, which is first documented on Prambanan reliefs of the ninth century on Java (Schefold 2004:29), still characterizes many traditional houses in Aceh or Jambi Province (Dumarçay 1987: pl. 5; Kerlogue 2004: Fig. 1), including one located in the small village of Rantau Panjang, near Bangko (Fig. 5). If we are correct in saying that Figures 3 and 4 depict the longitudinal

Fig. 12. A barn on a brick fragment of Muara Jambi (inv.-no. MJB/V/LL/115/99nd).
section of the house, then the side wings are attached transversally to the axis of the roof, which is very similar in design to traditional South Sumatran houses, especially those of the Ogan group (Barendregt 2004: fig. 8c, d).

Finally, the bricks demonstrate two basic alternative roof designs: the typical Southeast Asian saddle-shaped roof and a pyramid-shaped roof. In the saddle-shaped roofs, the earliest archaeological evidence for which comes from bronze artifacts during the Dong Song period, the gables slant outward and are connected by an inward-curving ridge. While all of the images, except that in Figure 7, have this style of roof, Figures 8 and 9 are worth an extended discussion due to their striking similarity with the steep upwardly curving roofs of traditional Minangkabau architecture.

In Figure 8 the axial entrance, which is flanked by two big rectangular windows, is placed on its longer side. The saddle-back roof of this building is particularly large in proportion to the height of the walls. This design exaggerates the slope of the roof so that the ridge pole seems to develop wings on each side. The scale of the roof gives the house an impression of grandeur, which is emphasized first by the long gables that rise to sharp peaks, and second by the miniature stilts on the ground. Like the outward-slanting roof, the walls or maybe only their upper parts are set obliquely against the vertical posts.

Meanwhile, the illustration in Figure 9 recalls the big Agam houses with double roofs, which are still seen in the areas of Padang, Bukittinggi, and the traditional house in Matur, which is depicted in Figure 10. In the image on the Muara Jambi brick the stretcher at the ridge, which causes the curve of the roof, is indicated by double lines. Four posts of the central bays support the upper roof whereas two shorter posts on the sides only reach the lower roof. Between the bays a fretwork of rounded horseshoe arches gives an aesthetic effect. This as well as other decorative details like the protruding final on the ridge, the hangings from the ridge poles and the eave line, the wavy and crossed lines at the gable or eave line, the foundation stones and the big dimensions of the house, which may reach between 15 and 20 m, indicate a prestigious house. Palm leaves or similar decorations of sugar palm fiber hanging down from the ridge poles, which are also seen in Figure 3, represent a widespread form of decoration applied to temples, dwellings, or entrance gates for special ritual occasions (e.g., Dumarcay 1996: Fig. 1, 40; Dumarcay and Smithies 1998: Fig. 8; Kumar and McGlynn 1996: 47; Waterson 1990: Fig. 181).

The second kind of roof construction, the pyramid-shaped roof, is shown in Figure 7. This style of roof has a radiating beamwork structure with rafters starting from a single node and radiating down to the square or rectangular plan of the frame, which connects to the top of the walls and the pillars. This roof construction is simple to build and most suitable for buildings with a square plan. It is said to be of Indian influence and has appeared in central Java since the eighth century. Later, East Javanese artifacts show pavilions using the pyramid-shaped roof, which are either thatched with palm leaves or constructed of tiles. On Sumatra this roof type with upward-curving finals has a long tradition not only in religious architecture, but also in domestic architecture. Indeed, Lampung’s traditional houses have pyramid-shaped roofs, which ascend steeply and are crowned with a decorative top like that of Muara Jambi (Dawson and Gillow 1994: 35).
These variations allow us to distinguish between a number of different house types. While one possibility is that the different styles are autochthonous in nature, simply reflecting variations in function, adaptation to environmental conditions, or social composition, the Malayu Empire’s wide commercial links with other parts of the region suggest an alternative explanation. Maritime trade during this period was often accompanied by the migration and establishment of settlements or enclaves by different ethnic groups. While concrete evidence of foreign settlements is currently lacking from Muara Jambi, it seems likely that the diversity of residential architecture represented in the bricks reflects different cultural influences.

Some of these cultural influences may also have come from contacts with the highland societies. From at least the seventh century onward the Malayu polity depended on an array of products that were extracted from the upland forests. While historians have often downplayed the size and importance of those societies (Reid 1997), archaeological evidence in the form of megaliths indicates the existence of significant clusters of human settlement dating from at least the early first millennium A.D. in South Sumatra (Hoop 1932) and the early second millennium A.D. in Jambi (Bonatz et al. 2006). A difficulty in tracing cultural influence from the highlands to the lowlands, as well as from other maritime regions to Muara Jambi, however, is that knowledge of early architecture from those regions is extremely limited or completely unknown, so that particular architectural features cannot be directly traced to a specific region of origin.

CONCLUSION

Through our examination of the architectural images found on the terracotta bricks at Muara Jambi, we have advanced several interpretations. First, we have suggested that the brick drawings are architectural depictions of buildings that were located at Muara Jambi at some point between the second half of the ninth and the first half of the fourteenth centuries. Second, noting several different types of architecture that would have existed at Muara Jambi, we have argued that the majority of images represent alternative styles of domestic architecture. Third, given Muara Jambi’s extensive network of trade connections with other regions, we contend that the diversity of housing styles found in the images is a physical manifestation of the wide array of different cultural influences in the region. If we are correct in asserting those three points then it would logically seem to follow that Muara Jambi was not only a religious and ceremonial center, as some scholars have suggested, but also a multi-ethnic trading community.

In making this suggestion, it should be noted that the pattern and processes of insular Southeast Asian urbanization remain poorly understood. Historians, who have relied mainly on Chinese and Indic texts, have helped to develop a chronology of different kingdoms and patterns of trade, but their data provide little information about building technology and urban spatial settings. The disconnect between historians’ suggestions that Srivijaya’s capital was located at Palembang and a paucity of significant archaeological remains, for example, led some scholars to question whether Palembang was really the location of the capital of Srivijaya. While subsequent archaeological excavations have largely confirmed this connection (Manguin 1992), a conclusion from this debate was that urbanization appears
to have followed a different pattern in insular Southeast Asia than it did on the mainland.

In his discussion of urban development, Miksic (2000) makes an important distinction between two basic types of premodern city structure in Southeast Asia. He characterizes the “orthogenetic” cities of the mainland as being stable, ritual-oriented, hierarchical, and highly specialized with a relatively low population density, whereas the “heterogenetic” cities of the Southeast Asian archipelago are connected with change, entrepreneurship, and a relatively dense population. In line with the heterogenetic model for Sumatra, French-Indonesian excavations undertaken in Palembang between 1988 and 1990 have provided evidence to suggest that the most densely populated area of the Srivijaya capital from the eighth century onward consisted of loosely knit settlements in a semi-rural environment stretching some 12 km along the riverbanks (Manguin 1993: 33). Within this “urban-agro” zone, neighborhood areas integrated housing with specialized forms of manufacturing, trade, and other occupations, which were next to quarters of religious communities and foreign traders (Kathirithamby-Wells 1990: 3–5; Manguin 2002: 84–85; Miksic 1989: 7). Neither a clearly identifiable urban center in the form of a fortified city with ramparts or palisades, nor a clear distinction between the urban and suburban zones has been found to date. Excavations at other early settlements on Sumatra like Lobo Tua at Barus or Kota Cina show a similar urban pattern for multi-ethnic trading communities during the ninth to the thirteenth centuries (Guillot 2003; Miksic 1995: 96–97, 2000: 110–112).

In the case of Muara Jambi, the images on the bricks suggest that the religious center, constituted by the various temples, was also connected to areas of settlement. The buildings might not have been located in the immediate vicinity of the temple complex, but could have been situated in the extensively large area of Muara Jambi. The diversity of domestic architecture illustrated on the bricks, thus, supports the position that Muara Jambi was not only a religious and ceremonial center as assumed earlier, but also an important multi-ethnic trading settlement. The veracity of this suggestion, however, will need to be tested through additional archaeological excavations.

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NOTES
1. To avoid confusion, several points of clarification may be needed. First, if the brick has been broken, but the fragments clearly go together, we consider those fragments as constituting a single brick. Second, we only provide images of eight of the nine bricks and brick fragments in this article. The image of the ninth brick has been published in Chihara (1996; plate 264). Finally, the images have been numbered in such a way as to facilitate comparison between the buildings represented on the bricks and contemporary examples. Another brick from Muara
Jambi (inv.-no. M-D-E-165-01) shows an incised lotus flower, but will not be discussed in this article.


4. This date has been very recently proposed by Miksic et al. (1996) and revises his former statement referring to 33 temples from the eleventh to the thirteenth centuries (Miksic 1998:777).

5. The statue is currently exhibited at the National Museum of Jakarta (inv.-no. 1403/XII587), whereas most of the other recoveries from Muara Jambi are housed at the site museum or the provincial museum at Jambi. The date of the female statue is disputed, having been discussed by Edwards McKinnon (1985:28–29, pls. 12, 13) and Dumarcay and Smithies (1998:29).

6. The fact that glass waste was also found might indicate that the beads were manufactured locally, although the raw material itself may have been imported from other glass-working centers (Francis 1991:224–225).

7. Some authors suggest Jambi’s period of great prosperity ended during the eleventh to the twelfth centuries (McKinnon 1992:131–132; Wolters 1986:56), whereas others suggest it continued into the thirteenth century (Miksic 1996:102; Schnitger 1937:7).

8. In 2005 Miksic et al. (1996) started new archaeological surveys in that region, which yielded evidence of rather large sites dating from before the fourteenth century. These and earlier surveys (McKinnon 1982, 1984, 1985:26) have put to rest an earlier hypothesis proposed by Obdeijn (1941) and promoted by Soekmono (1955; 1963) that the Sumatran coast was located much farther inland during the late first millennium than is currently the case (Junus 1994).

9. Dumarcay and Smithies (1998:31) date the brick in Figure 9 to the fifteenth century but give no reason for this assessment.

10. Kulke (1991:7) questions this classification but gives no explanation for his doubts.

11. Inscriptions on bricks have, for example, been found at Muara Jambi’s Candi Gumpung (Boechari 1985:238), a site in Pugung Rahardjo in Lampung (Sri Utami Ferdinandus 1994: fig. 1) and at Candi Bumijaya near Palembang, the last of which is exhibited at Taman Purbakala Kerajaan Srivijaya in Palembang. Mandala diagrams and vaira symbols, were found on a brick from the wall surrounding the Muara Takus temple at Padang Lawas (Miksic 2001:77).

12. This hypothesis has been proposed by several authors (Domenig 1980:44, figs. 32, 91–97; Karow 1987:62; Muller 1978: note 101) and reflects the fact that the resemblance between tombs and houses is widespread in the archipelago (Waterson 1990: figs. 171–173, 177–179). Contrary to this funerary interpretation, however, miniature terracotta houses in Thailand represent a dwelling place for certain gods, including the earth-god phi phum.

13. The latter might not be a separate piece of wood, but rather a conical shape carved at the end of the post. Carved posts of this nature were documented in Central Sumatra in the late nineteenth century (Veth 1881: pls. LXI.1, LXVII, LXVI).

14. The decoration on the roof is rarely found in Minangkabau architecture and may reflect a decorative detail imported from Palembang where a floral peak made of terracotta, called a simbar, is used.

15. This roof type may have first been used for round structures (Dumarcay 2003:20). Earlier Dumarcay (1987:20, 1993:112, pls. LXIII, LXVI, Fig. 51) argued that the roof construction appears at the beginning of the thirteenth century, but he later revised his opinion by showing examples from the eighth and ninth centuries (Dumarcay 2003: Figs. 8–9). This roof technique is still commonly used today in Java and Bali.

16. An early image of a building, probably a mosque, with a three-layered roof and slightly upward-curving roof ends is evident in the seal of the seventeenth Minangkabau prince and Islamic rebel Ahmad Syah ibn Iskandar (Gallop 2002:134).

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Nine terracotta bricks and brick fragments, containing incised drawings of different types of buildings, were discovered at the large Muara Jambi temple complex in eastern Sumatra. Likely dating from between the second half of the ninth and the first half of the fourteenth centuries, these bricks contain the oldest graphic representations of Sumatran architecture. While two of these designs have been previously published, the brick images have not been thoroughly analyzed in order to determine what new light they shed on the domestic architecture and building traditions of early lowland Sumatran settlements. To address this lacuna, we analyze the bricks and their archaeological context in order to interpret when the images were made, who created the images, the purpose behind them, the types of architecture depicted on the bricks, and the reasons behind the diversity of building types represented. Having argued that the majority of bricks shows domestic architecture reflecting a variety of cultural influences, we conclude by suggesting that the presence of such images supports the scholarly view that Muara Jambi was a multi-ethnic trading community. Keywords: Muara Jambi, Sumatra, Indonesia, house architecture, urban history, Malayu polity.