Proceedings of Symposium on Mosque Architecture, Vol. 7B, pp 27-44, College of Architecture & Planning, King Saud University (1419H-1999)

A Survey of Roles, Functions and Architectural Styles of the Traditional Mosques in Peninsular Malaysia

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Abstract: The paper presents a descriptive survey of 5 Traditional Mosques in Peninsular Malaysia. There are basically three kinds of Mosque typology which have been built by Malay and Chinese craftsmen of the past. They are the raised timber mosques, the on-grade masonry mosques and the house type moques. The drawings and information about these mosques are taken from the Measured Drawing Archives at the KALAM research centre (Centre for the Study of Built Environment in the Malay World). The primary aim of the paper is to present a historical and documentary survey of these mosques and also to raise several questions regarding the adaptation of its forms and spaces in the modern context.

Introduction

The main purpose of this paper is to present a brief survey of the roles, functions and typological styles of the traditional mosques in Peninsular Malaysia through the works of measured drawings from the Pusat Kajian Alam Bina Melayu (KALAM) or Center for the Study of Built Environment in the Malay World. It is sincerely hoped that through this brief presentation there would be many scholars who might be interested to take up the important study of the origins and meanings of these mosques in the early days of Islam in Malaysia. The paper identifies some important areas of study and weaknesses in the present conjectural statements about mosque architecture in the traditional contexts.

From our collection of more than 30 traditional mosques in the KALAM archives we have chosen these six mosques as they represent three distinct typology. The first type is the raised timber mosque with the three tiered roof structure as represented by the Kampung Laut Mosque and Kampung Tuan Mosque in Kelantan and Terengganu respectively. The second type is the masonry mosque built with a concrete slab on grade and also with a three tiered timber roof as represented by the Kampung Hulu Mosque, the Kampung Keling Mosque both from Malacca and the Undang Kamat Mosque from Negeri Sembilan. The last type is the Langgar Mosque from Kelantan which represents the 'house type' with a double tiered gable roof construction of timber. At the writing of this paper students are in the process of measuring two other 'house type' traditional mosque in Pattani, Thailand.

The documentation of these mosques are part of the measured drawing program at KALAM. The centre has over 200 documentation of heritage buildings in Malaysia compiled over a period of 20 years. The documentation consists of main drawings, detail drawings, slides, photographs and audio-visual cassettes of oral traditions. The work present here consists of a brief historical description of the traditional mosques and some of their drawings done by the UTM students. Research on the traditional mosque in Malaysia is still in its infancy. These documentation presents a foundation for much comparative studies and also the verification of oral traditions. However, before discussing the

possible roles and meanings of the traditional mosques, it is important to portray the historical development of Islamic learning system in the Malay World as this would be prudent in painting a picture of the lifestyle of the times.

Islamic Practices and Educational Institution

This section describes the perception of Islam and how it is practiced in everyday life. The paper describes the experience of both the Malay Peninsula and Indonesia. This is because the Malay World covers both these countries culturally. [1] Much of the literature on the origins of Islam in this region abound in Indonesia than in Malaysia.

In discussing the adoption of Islam in the Malay World, we must consider the various factors that influenced it. It is not only important to consider the agents who brought Islam to the region but also how they spread it and how the inhabitants' condition of the region had assimilated it into their lives. The Muslim missionaries had to understand the economic, political and cultural conditions of the region.

The inhabitants of the coastal region were very dependent on international trade. That is why they can accept Islam easily. On the contrary, inhabitants of the interior region, were slower in adopting Islam.

The adoption of Islam in the Malay World can be considered "adhesion" rather than total conversion. This is because although Islam had been accepted as a new belief, the inhabitants still carry out the old way of life. According to Naquib Al-Attas Islam has transformed both the socio-cultural and spiritual tradition of Malay society. He believed that the introduction and spread of Islam in the Malay world as a whole have affected the entire structure of Malay society, particularly in the political cultural, religious and social realms.

The preaching of Islam in Indonesia is very interesting to observe. Every place Islam encountered grew into thriving and prosperous settlements. Every time Islam comes to one place the local condition is very conducive. The inhabitants of the region and the ruler accepted and adopted Islam easily. Then this society attempted to increase and expand the implementation of Islamic doctrine. It seems that every sultan who accepted Islam was the one most instrumental in the development of Islamic civilisation. This can be seen from the Islamic institution, education, law as well as literature that were left as legacy for future generation.

This phenomenon had not only occurred at one place but every place where Islam spread. It never failed to create a new spirit and, like a generator, it helped the society to grow.

The Early Islamic Sultanate

The adoption of Islam in the Malay World in various parts of the region indicates that the sultan of each sultanate can bring Islam to the highest point. It meant that aspects of the Islamic doctrine were attempted to be implemented in every day life and institution. Thus, many newly Islamic institution were developed such as Islamic law and learning system. The sultans patronised the Islamic religious institution and learning system. He built facilities for accommodating such institution and activities in various forms according to the current needs of the society.

Both the people and the ruler changed their old beliefs to Islam. The character of sultans can be known from the person who met them during the time. Usually he was a traveller, trader or scholar that came to that place. They reported what they had experienced and what they heard and saw in the region. The earliest travellers who had known about the rise of Islam in the Malay World were Marco Polo and Ibn Battutah.

Among the earliest Sultanate that changed to Islam in the Malay World was believed to have been in the western region. The region was named Perlak (Ferlect) and it was located in the eastern area of North Sumatera. It is believed that the sultanate there converted to Islam in 1204. The region then became more popular with Samudera Pasai empire ruled by the ruler Sultan Malik al-Salih.

According to Marco Polo, Samudera Pasai is the earliest centre of Islamic education throughout the western part of the Malay World. It provides a good example of Islamic religious institution in the region. This can be seen both in the Islamic practices but also in the sultan's personality. The sultan followed the Shafi'i sect and was very fond of studying and discussing matters particular Islamic law. Among the Muslim ruler that Ibn Battutah had met in various parts of the Muslim world, then sultan was an exemplary figure.

Islamic life in the region penetrated much deeper into the fabric of the society. Along his activity in religious life, he gave last injunctions that the society was to implement the law of the Qur'an and avoid anything which ran contrary to the holy law (shari'ah). In short, they should obey all the commandments of Gods.

After the fall of Samudera Pasai, the Sultanate of Malacca took over not only Pasai's position in international trade, but also its prestigious role as an important centre of religious education and training. This may have been due to the positive attitude of the Malacca's Sultans towards Islamic learning. It led to the development of a great centre of Islamic learning in the Malay World. Malacca was believed to have been an agent of spreading Islam within the Malay Peninsula, the western Malay archipelago and the Philippines island as well.

When Malacca is attacked by the Portuguese, it's position as a centre of Islamic learning and international trade were assumed by the Sultanate of Acheh. Moreover Acheh became the centre of Muslim power in the Malay world politically and economically. Muslim scholars or *ulama* from outside Acheh contribute a great deal to the rise of Acheh as one of the most important centres of Islamic education and learning in the region.

The several sultanates mentioned above were parts of sultanates that emerged in the western region of the Malay World. These are the most popular. However, the Islamic development didn't stop at this place but kept spreading to all regions of the Malay World.

The Development of Islamic Institution

In accordance with the emergence of the Islamic sultanates in the Malay World, the *ulama* played a crucial role in establishing and maintaining religious institutions. Moreover, they built not only the centre of learning system but religious institutions for the sultanate. Good relations and deep understanding between *ulama* and the ruler made the acceptance and implementation of the Islamic ideology relatively easier. Malay Muslim rulers did attempt to apply a great of the Islamic doctrine Shari'ah, such as the Sultan of Pasai and Sultan of Malacca. For instance, the Undang-Undang Melaka (Malacca Digest) ruled that Malacca should be governed in accordance with the Qur'anic law. The Malacca Digest, considered as the earliest Malay law digest available, indeed contained a great deal of Islamic elements in addition to those of the indigenous adat (local customary usages/ tradition).

The implementation of the Shari'ah greatly dependent on Qur'anic and Hadith sources. The court of Malacca was evidently quite religiously oriented. According to Malay history there were official religious ceremonies during the reign of Sultan Muhammad Shah, who was the one most responsible for instituting court ceremony. These ceremonies are the celebration of the "*feast of breaking fast*" ('Id al-fitr), and the celebration of the "*feast sacrifies*" ('Id al-Adha). All celebrations were held in the Jami' mosque in the presence of Sultan, ministers and other court officials.

The Development of Learning Centres

Islamic centres of learning that emerged in the sultanate of the Malay region became a place of gathering of scholars from various parts of the Malay region. They study in one place until they've got what they needed and then went back to their respective countries. Then, after arriving at their countries, they developed new schools or probably expanded new ones. Many leading Javanese scholars were also reported to have pursued their Islamic studies in Malacca.

The development of centres of learning and the establishment of numerous educational institutions, accelerated the acquisition of literary and education among the Malays. Early in 1500, The scholars studied various branches of knowledge in Islam and emphasised the more legalistic interpretation of Islam.

Nur' al-Din al-Raniri worked on Islam Fiqh as fundamental duties of each Muslim in his life. He also wrote the first rather complete book on *fiqh 'ibadah'*, concerning ablution (*wudu*), prayer (*salah*), alm (*zakah*), fasting (*sawm*), pilgrimate (*hajj*), sacrifice (*qurban*), and other ibadah. Raniri also wrote some standard books and made the Shafi'i school of law as the dominant madhhab in Malay world.

In the implementation of the Islamic doctrine in the Malay world, the *tarekat* view was realigned back to the true source of Islamic religion i.e., Quran and Hadith by several *ulama* such as al-Raniri, al-Sankili and al-Maqassari. After the development of Islamic learning and institution in the earliest sultanate, the centres for Islamic learning kept spreading to other regions. In this newly emerged regions, Islamic learning developed to another glory especially in Islamic studies. For instance, the centres for Islamic learning that had emerged were in Palembang and Banjarmasin.

In the Malay World, an *ulama* by the name of Abdul Malik bin Abdullah had dedicated his life to preaching Islamic on the East Coast in the eighteenth century. He established his Islamic institution at Pulau Manis, Terengganu. The book written by Abdul Malik , named Al-Hikam became a guide for the people throughout the Malay world.

During the Islamic era the Malay world saw the emergence of writings on religious subjects and other branches of religious knowledge like Hadith or Syari'ah by the local scholars. The *ulama* who studies in religious institutions acted as the agents of religious knowledge as well as leaders in Malay writing in the Malay World. The *ulama* was not only teaching and writing books in the Malay language, they formed the intellectual elite in local societies. They were also in demand by their rulers to serve in the administration of the Malay Sultanates. The *ulama* in Malay traditional society therefore played a great role in charting the intellectual life throughout the Malay World.

The Islamic Education System

The development of education systems in the Malay World is directly in accordance with the emergence of Muslim sultanate in the region. Thus, the type of system itself is dependent on the respective sultanate or region.

Initially, the classification started with function of the mosque itself where the early mosque, since the time of the Prophet, functioned not only for ritual but also for social activities including educational institution In relation to this model, probably the oldest education system had ever been in Malay was the two basic forms of Islamic educational institutions namely the mosque and *halqah* (study circles). This type of education system was found in Samudera Pasai, the earliest sultanate in the Malay World. Usually the *halqah* is attached to the mosque and could be divided into three categories, those designated for children to study rudimentary teachings of Islam; those reserved for students at the

more advance level; and those specialising in the study of a particular branch of Islamic discipline. The *halqah* were headed by a senior teacher (*sheikh*) who was assisted by several assistants. The *halqah* generally comprises a group of people sitting around the *sheikh* who had attracted students to the *halqah* by his erudition and piety.

There were other new forms of Islamic educational institutions, besides the mosques and *halqah*, namely the *meunasah*, *rangkang* and *dayah*. These new educational institutions were founded in the sultanate of Acheh that had had numerous religious schools at various levels. *Meunasah* (or *binasah*) was initially a small place of worship which later functioned as an elementary school for children to study the Qur'an and basic teachings of Islam. "*Rangkang*" was a continuing further studies institution from the *meunasah* which was an intermediary religious schools established mainly within the compound of a mosque. *Daya*h is the most advance school in Acheh. The *dayah* were generally built outside of the mosque complex. Later, some of the *dayah* were turned into special schools by giving special attention to certain subjects of the Islamic disciplines. Thus, we have *dayah of tafsir* (commentary of the Qur'an), *dayah of fiqh* (detailed rules of Islamic laws), and the like.

Then, in Minangkabau, there were religious schools called *surau* or *suro*. Initially, it means simply a place or more specifically "place for worship". But in its development it became a gathering place for young men to carry out various activities both religious and otherwise. The term *surau* now generally refers to a small mosque, but not to be used for Friday noon prayer.

In the Malay Peninsula there were two kinds of *surau*. The "*surau besar*" (large) and the "*surau kecil*" (small). Based on Roff's description , it seemed that the *surau besar* functioned like a mosque in Indonesia. In contrast, the *surau kecil* was usually used for rudimentary religious training such as the recitation of the Qur'an, knowledge on the pillars of the faith (*rukun iman*), the pillars of Islam (*rukun Islam*) and the like. Moreover, the *surau* can be divided into several categories based on number of students enrolled; small with up to 20 students, medium which had up to 80 students and big which had between 100-1000 students.

The most popular educational institution in Java was called *pesantren* or *pondok pesantren*, that means a place of *santri* or *scholar*. In the early times, *pesantren* was simply a small centre of Islamic education and training. There are four types of *pesantren*: small *pesantren* that was designated for basic religious knowledge; intermediate *pesantren* that functioned for intermediate level of Islamic knowledge; advanced *pesantren* stress on certain particular branch in greater detail.

The learning system in the Malay Peninsula, besides the *surau*, was the *pondok*. It originated from Patani, a state in the southern of Thailand. Pondok is similar in characteristics as the *suro* or *pesantren*. It accepted students who have completed their elementary religious knowledge. The teacher is called *tok guru* or *great teacher*. Students lived in the *pondok* (huts). Pesantren are usually concentrated in rural areas but *pondok* are mainly found around the state capital.

Briefly, the religious educational institution had ever been in the Malay world in the past can be described as below in (Table 1). It can therefore be seen that the mosque of the past functions as a 'house of worship' as well as an educational institution. Since much of the learning culture of both Indonesia and the Malay Peninsula are the same it is important to frame the investigation of mosque architecture in the traditional Malay-Islamic contexts.

The Traditional Mosques of the Malay Peninsular

It is believed that Islam came to Peninsular Malaysia through the maritime trading routes via India and Sumatra to Malacca and also through Champa and Pattani to Kelantan and Terengganu in the mid 15th century. The following accounts of the mosques present the traditional mosques of the Malay Peninsular.

Education Institution Location	Definitions and Categories	Location of Buildings
1. The Mosques and *Halqah* (study circles); under patron-age of the sultan. Firstly, established in Samudra Pasai, seceondly in Malacca	Usually centred around a sheikh who had attracted students to his *halqah*. 3 categories: a. Designated for children to study rudimentary teachings of Islam. b. The more advanced level and; c. Specialised in the particular branch of Islamic disciplines	Attached to the mosque
2. Religious schools in Acheh.	a. *Meunasah*, initially a small place of worship which later functioned as elementary school for children to study the Quran and basic teaching of Islam. b. *Rangkang*, intermediary religious schools. c. *Dayah*, the most advanced schools. Later some of the dayah were turned into special schools by giving special attention to certain subject of Islamic disciplines.	The compound of the mosques Built outside the mosque
3. Religious schools in Minagkabau are called *surau* or *suro*. It is integral part of the socio-religious system.	*Surau* means simple place or more specifically "place for worship". It became a gathering place for young man to carry out various activities both religious and otherwise. The term *surau*, now, a small mosque, but not to be used for Friday noon prayer.	Near residential areas.
4. Malay Peninsula Religious function of the *surau kecil* = narrow sense term in Minangkabau = the *meunasah* in Acheh = the *langgar* in Java. The small *surau* seem-ed to have similar characteristic of the '*surau mengaji*'.	There were two kinds of surau: a. *Surau besar* (large), functioned like a mosque in in the Indonesia. b. *Surau kecil* (small), used for rudimentary religious training, such as the recitation of the Qur'an. The *surau* as a full-fledged educational institutions was called *pondok* = *pesantren* in Java. In this respect the *surau* was an Islamic training centre for advanced studies. *Surau* can be divided into several categories: a. *Surau* kecil (small), with up to 20 students b. Medium *surau*, with up to 80 students c. Big *surau*, with between 100-1000 students.	In the state capital

Table 1: The development of religious educational institutions of the the Malay world in the past.

The Kampung Laut Mosque, Kelantan

One of the most celebrated mosques in Malaysia is this fully raised timber structure said to be the oldest mosque in this country. [2] It is even claimed by some to be older than the famed Demak mosque in the Javanese mainland. The Kampung Laut Mosque now sits on its present site in Nilam Puri and serves the faithful from the Foundation for Advanced Studies in Islam in Kota Bharu. It was transferred from its original site in Kampung Laut a year after the Great Flood of 1966 by the insistence of the Malaysian Historical Society. One of the most curious and important aspects of the buildings concerns its origin which is said to be between 300 to 500 years ago. There are three popular narration concerning the origins of Kampung Laut Mosque.

The first theory is related by a local historian by the name of Nik Man bin Nik Mat who claims that his family line traces back to his ancestor, Raja Iman who built the Kampung Laut Mosque. Nik Man related that about 400 years ago there was a Muslim Sri Vijayan prince by the name of Syed Mahmud and whose title was Raja Muda Laksamana. The prince had sailed away from Java after a bitter quarrel over the succession to the empire's throne. His ship was caught in a raging storm which brought it to

the shores of Southern Siam. Some of his followers settled there while others continued exploring the mainland until they reached a small village which was named Kampung Laut. Syed Mahmud, who had changed his name to Raja Iman established a mosque which was said to be in the form of a simple open 'wakaf' or small shelter.

Another theory about the mosque's origin was forwarded by a scholar named Dr. Randhos Abdul Rahman Al-Ahmadi. Dr. Randhos had collected the oral traditions of the villagers and along with his own research postulated that the mosque was built 500 years ago by Muslim scholars from Champa. These scholars were said to be missionaries from Java who carried a prototype plan of a mosque with the intention of establishing three Muslim centers. Dr. Randhos went as far as claiming that the pre-fabricated components of the three mosques were taken along and assembled at their specific sites. two of the mosques were in East Java in which one was identified as the famed Demak Mosque. The Kampung Laut Mosque was said to be the first one built after which the scholars had sailed for the Javanese mainland. This, therefore put the Kampung Laut Mosque as older than the Demak Mosque and thus the oldest known mosque in the Malay Archipelago.

The third theory is related by Ustaz Abdullah bin Muhammad who lives in Kampung Langgar in Kota Bharu. He hypothesized that the mosque was built by two Wali Songo by the names of Sunang Giri and Sunan Borang. It was believed that these two mystics came from Java to study under the tutelage of Sheikh Mohamad Saman. The Sheikh had ordered them to build the mosque and it was constructed in its complete form with four main posts and 12 perimeter ones.

The present mosque has been restored to the state of condition similar to that during the reign of Sultan Mahmud at the turn of the twentieth century. The main mosque proper consist of a square plan with its three tier pyramidal roofs. The topmost roof is lifted high enough to allow the presence of clerestory windows. The roof is crowned by a heavy 'buah betong' motif. The whole floor area is raised just over a meter high from the ground.

The mosque did not have a *serambi* area originally as full paneled timber walls cover the interior. The walls are punctured by full length doors and windows on each side. Later a *Balai lintang* was added to the side opposite the *mihrab* wall and a *Serambi Besar* was also annexed. The two new additions are lower than the main mosque proper. The *serambi* on the east side was also added later and is known as the wakaf Orang Kaya. The phrase 'Orang Kaya' literally means a Rich Man but it also suggest a high government officer. The timber minaret, which is attached to the mosque via the East Serambi, was originally situated in the center of the *Balai lintang*. The minaret's height only just clears the tip of the mosque's crown. The mosque is made of strong *cengal* timber and covered with *singgora* roof tiles. The mosque does not posses much elaborate carvings or ornamentation but its *minbar* is fully decorated. The mosque's joinery and construction system presents one of the most talented gifts of the traditional craftsmen.

The Kampung Hulu Mosque, Malacca

One of the oldest mosques in Malaysia is located in the historic city of Malacca. [3] The Kampung Hulu Mosque was built in 1728 and its patron was the late Datuk Shamsuddin who was a Chinese Muslim. It is one of the first mosques built primarily of masonry construction and possess the distinctive Chinese pagoda-like pyramid tiered roof form. The mosque was one of the bustling centres of Islamic missionary activities during the days of the Dutch occupation.

Datuk Shamsuddin was the son of the late Kapitan Melayu or Malay Captain appointed by the Dutch whose name was Datuk Harun. The Kapitan was a Chinese man born in Mainland China. He left his birth place after a family quarrel and sailed to the Malay archipelago. He was shipwrecked near the coast of Malacca and was cared by a Malay muad'dhin. He later married the daughter of his foster parent and quickly established himself as a master business entrepreneur. He was as industrious as he

was religious and his land endowment became quite significant. His son, Shamsuddin carried the business and religious fervor of his parent and added more land as religious endowment. When the mosque of Kampung Hulu was established, it was said that it had impressive earnings of half a million ringgits. The obvious Chinese influence in the overall form and the much-ornamented architectural elements are testaments to the wealth and upbringing of the patron.

The Kampung Hulu mosque sits on a rather constricted site, which seems unfitting of its wealthy patronage. Although the mosque had much land endowed to its treasury, it was said that a swindle had stripped it of its many possession. The main prayer building, ablution place, minaret and gateway seem to be squeezed onto the small site. The main building has no raised floor on stilts but is of concrete slab about half a meter high. The pedestal is laid with colored ceramic tiles of floral motifs. A highly ornamental iron railing encircle the mosque *serambi* space. The walls stand at about two meters and give way to the imposing three tier roof structure. The pitch of each roof level increases in the manner of Chinese temples. The highly pronounced concrete roof ridges with their end floral motif tails celebrate the beautifully carved roof crown or *mastaka*.

The main prayer space is enclosed by masonry walls and measures 12 meters by 12 meters. The four-belian timber columns at the center of the space support the two tier roofs above. The columns are decorated with long sinuous vegetal motif. There are three doors opposite the *mihrab* side with two more at its flanks. Four windows with iron grilles puncture the walls flanking the qibla side. The 3-metre *serambi* space surrounds the prayer space on three sides. The two ends of the *serambi* give way to two storage spaces. The three-sided *serambi* each contains a stairway with an ablution space attached on the side directly opposite the Qibla wall. The ablution space is off the axis of the *mihrab* and main entrance.

The main gateway of the mosque is a structure totally separated from the mosque proper. It is a two-story structure that houses the *taboh* or traditional drum for calling worshippers to prayer. The *taboh* is hung from the pyramid roof structure directly on top of the gates into the mosque compound.

The minaret seems totally out of character to the whole architectural ensemble of the mosque both from its aesthetic style and its position. It is placed rather haphazardly off any axis of the mosque and it is shaped into an octagonal cone tower. The masonry wall of the minaret encloses a spiral staircase to the top *adhan* space.

The Kampung Hulu mosque serves as one of the best examples of a well to do hybrid traditional Malay-Chinese architectural influence (Figs.1-4).

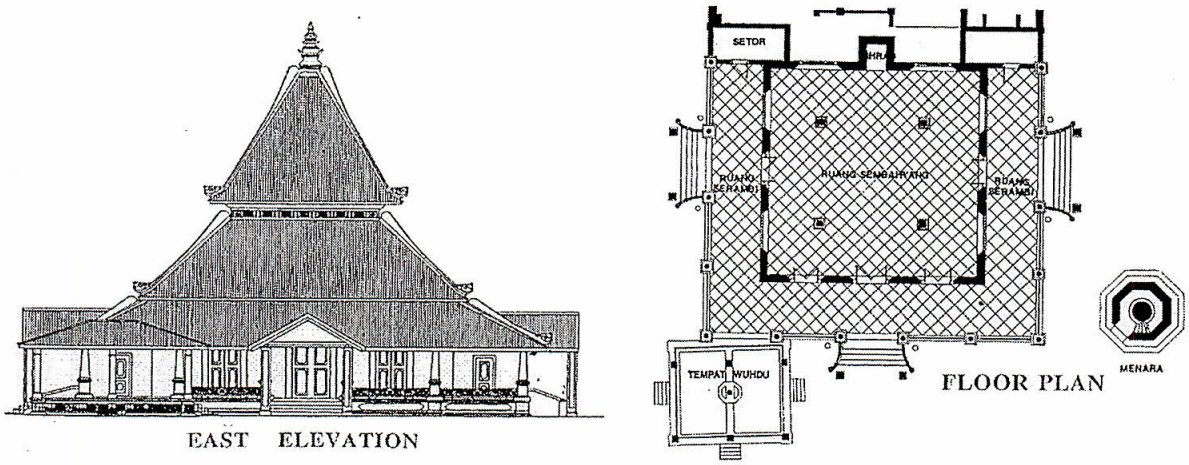


Fig. 1: The Kampung Hulu Mosque.

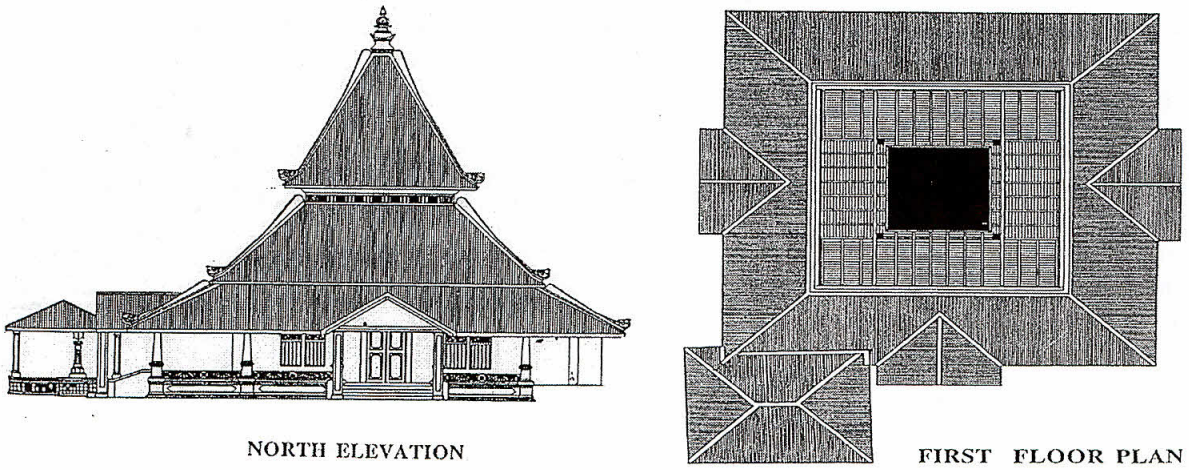


Fig. 2: The Kampung Hulu Mosque.

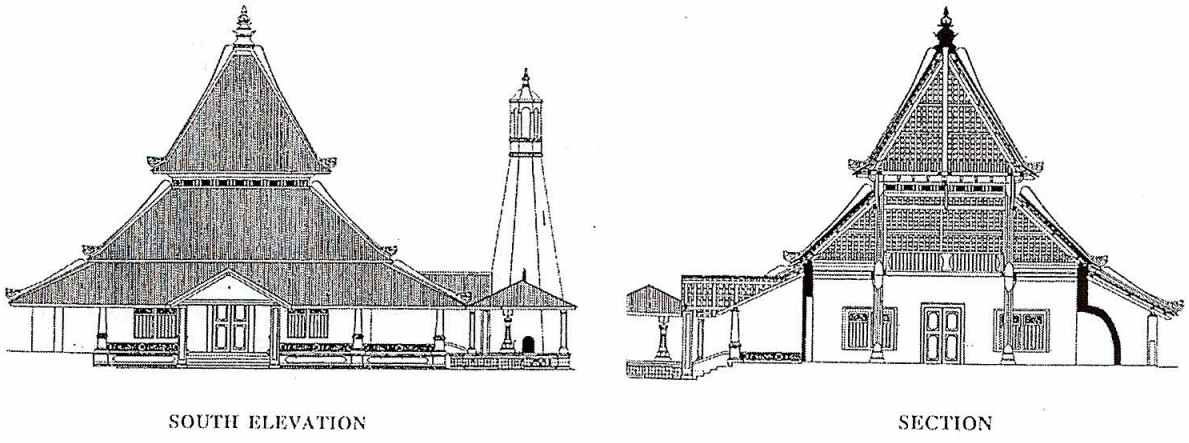


Fig. 3: The Kampung Hulu Mosque.

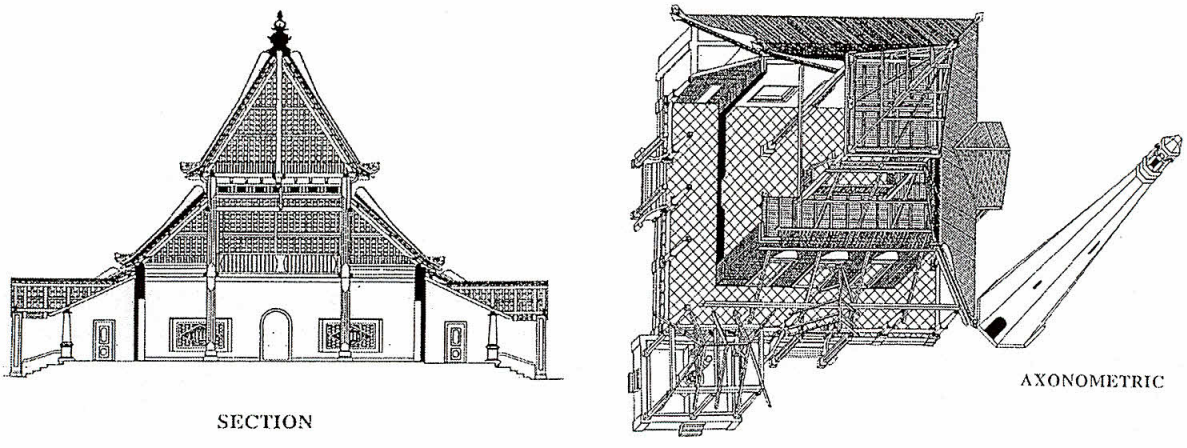


Fig. 4: The Kampung Hulu Mosque.

The Kampung Keling Mosque-Malacca

During the glorious days of the Malacca Sultanate and even up to the colonialists' times, Malacca was home to a multitude of races and nationalities. [4] One of these races was people from India who came to trade. Some of them were Indian Muslims from Cambay who traded in Acheh, Pasai, Pedor and Malacca. When a number of them eventually settled and married the local ladies the mixed marriage produced a race colloquially known as 'Keling'. The large settlement of this new race allocated by the Portuguese was known then as the Upeh district. The settlement thrived until the Dutch occupation when commercial activities fell which forced the Keling people into a much smaller settlement called Kampung Keling. The present Kampung Keling Mosque was built in 1748 on the foundation of its original timber construction (Figs. 4-7).

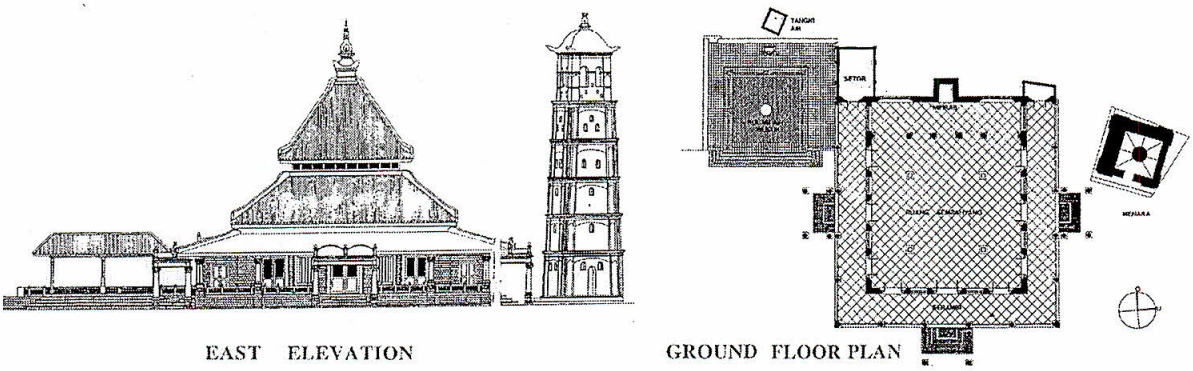


Fig. 4: The Kampung Keling Mosque.

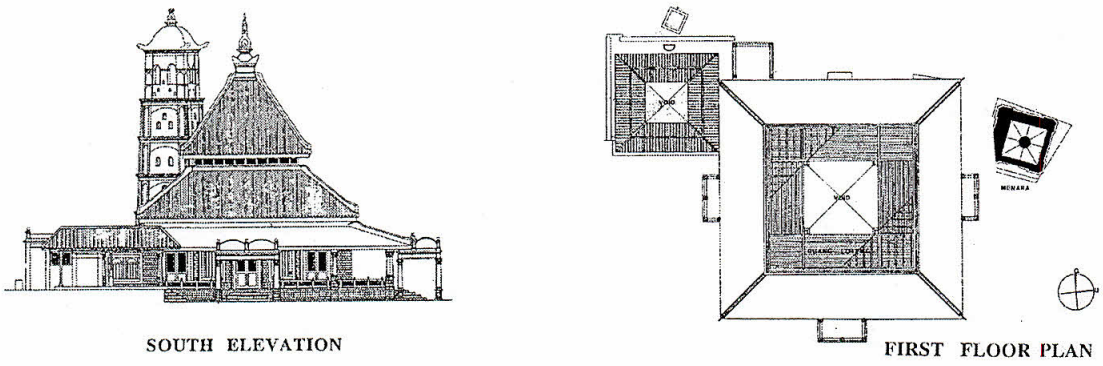


Fig. 5: The Kampung Keling Mosque.

The locals related that the Kampung Keling Mosque was founded because the local Malay community was not on the best terms with the Keling people. The Malays were centered around the Kampung Hulu Mosque and the Keling community established their own mosque after a Malay by the name of Haji Shamsudin endowed a piece of land nearby. Two mosques at close proximity were not a common situation in Malacca or anywhere in Malaysia. However, in this situation the two mosques exist amicably and the Friday Prayers are held according to alternate turns.

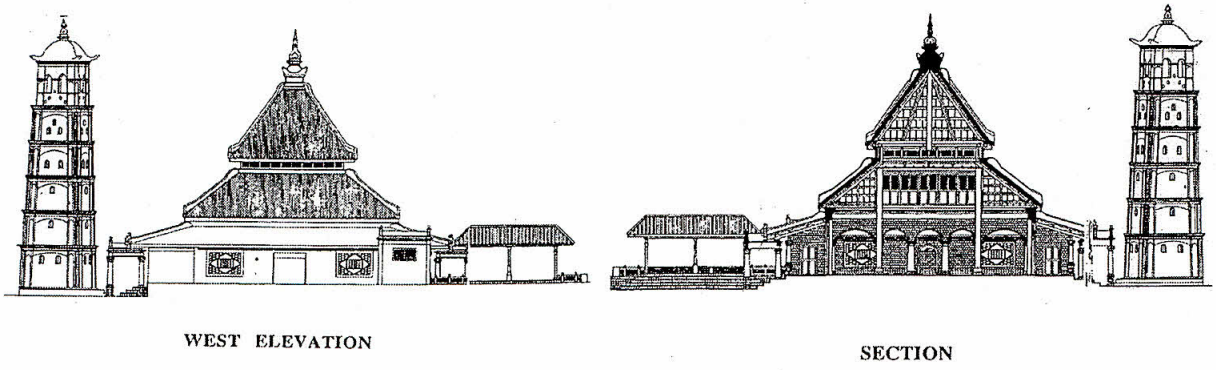


Fig. 6: The Kampung Keling Mosque.

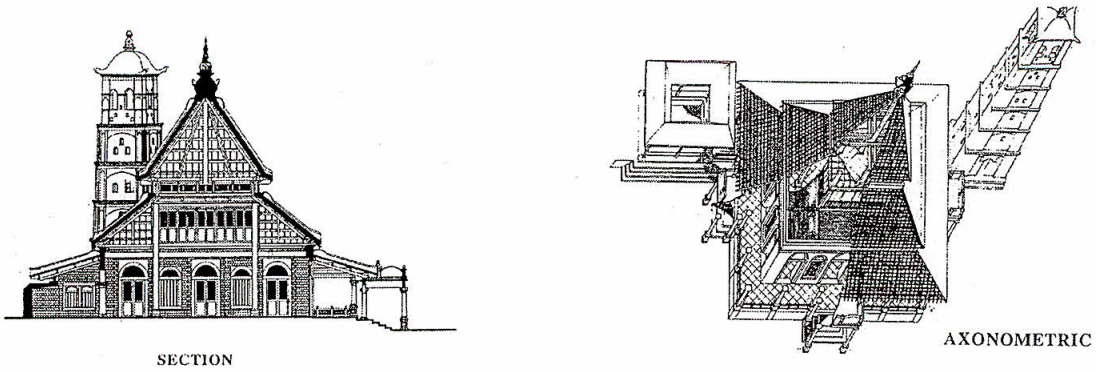


Fig. 7: The Kampung Keling Mosque.

The mosque sits on the corner of Jalan Tukang Emas and Jalan Lekiu with the pagoda like minaret at the extreme corner edge. Other than the minaret, the mosque complex also comprises of an ablution hut attached to the left side of the *mihrab* wall. The mosque is a square with three entrances framed within a porch structure. The mosque plan consist of an enclosed prayer area with three *serambi* sides. The heavy masonry walls enclosing the mosque interior have three doors on each side. The *mihrab* is enclosed like a *maksu*ra with four round column arcades. There are four belian timber columns from the original mosque, which supports the topmost roof structure. The top of the three tiered roof gives way to a generous clerestory windows all around. The roof of the mosque is crowned by a *mastaka* of which the height to its tip would enable the whole mosque to be inscribed into an almost perfect cube.

The mosque floor and parts of the walls are covered with ceramic tiles and is heavily ornamented in the mosque's interior. The *minbar* is especially finely crafted with timber carvings. As mentioned earlier the present masonry construction done in 1748 was built upon an older timber one with the four-tiang seris still intact. In 1872, a masonry wall was added to surround the mosque ground thus separating the inner yard from the houses and shops surrounding the mosque.

The Kampung Tuan Mosque, Terengganu

One of the oldest mosques in Malaysia built in the early 19th century is the mosque in Kampung Tuan near the town of Chukai. [5] The village is located in the district of Kemaman, which is one of the original six districts in the state of Terengganu. The town of Chukai, which means 'tax' used to be the

center of the Kemaman district because of its location at the mouth of the Kemaman River as one of the main transportation routes into the area (Figs. 8-11).

The mosque was said to have been built with the setting up of the village of Kampung Tuan in the 1830's. The mosque in the fishing village is situated facing the Limbong River as one of the main gateways to the area. Sheikh Abdul Rahman who was known as Tuan Mandak laid the foundation of the mosque. This religious scholar-teacher was the son of the famed Sheikh Abdul Samad al-Palembangi who was one of the great religious scholars of the Nusantara who traveled to the Malay Peninsular and participated in the war between Muslims and Siamese colonialists. [6] Although it was his son who founded the Kampung Tuan Mosque, it was the grandson of Sheikh Abdul Samad who made the mosque known throughout the district. Tuan Wok, whose original name was also Sheikh Abdul Samad, was a dedicated religious teacher and leader who was most particular about who was allowed to populate the village. It was said that he had chased out any villager who does not adhere strictly to the Islamic code of life in communal affairs.

The mosque was the main Friday Prayer place in the Chukai area but its role has dwindled now to merely that of a *surau* after the construction of the bigger modern mosque in the town of Chukai in 1920. Others eclipsed the fame of the mosque after Tuan Wok left for Baserah after a bitter crisis with his family members and the villagers of his birthplace. However, the mosque is still used as the place of learning, marriage ceremony and religious celebrations. The mosque consists of a single building with a single space enclosed within the four vertical paneled walls. It has a single formal entrance opposite the *mihrab*. The mosque has a four tier roof layer in the form of a pyramid topped by a massive 2 m mastaka shaped like a Siamese royal head dress. The whole form of the mosque below the mastaka can be inscribed into a 9 m cube. Unknown to many, the mosque posses a 'secret' entrance for women through the floor boards underneath the prayer space which leads into a section curtained off for them.

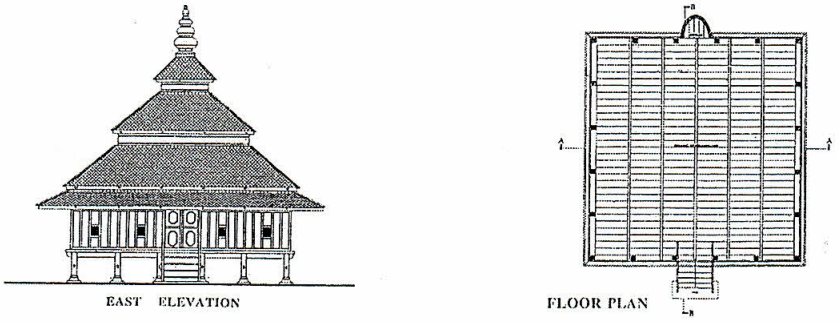


Fig. 8: The Kampung Tuan Mosque.

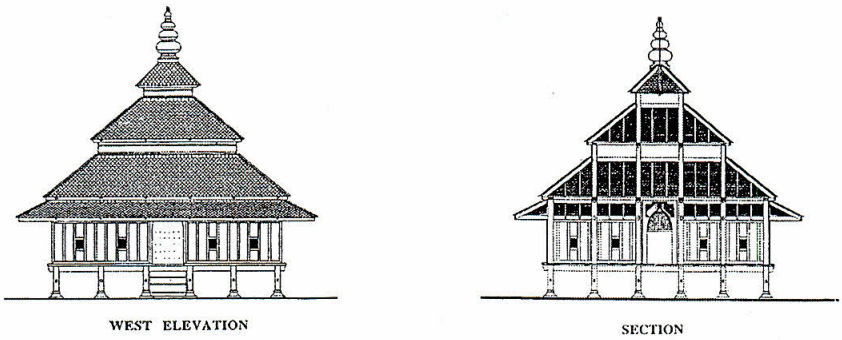


Fig. 9: The Kampung Tuan Mosque.

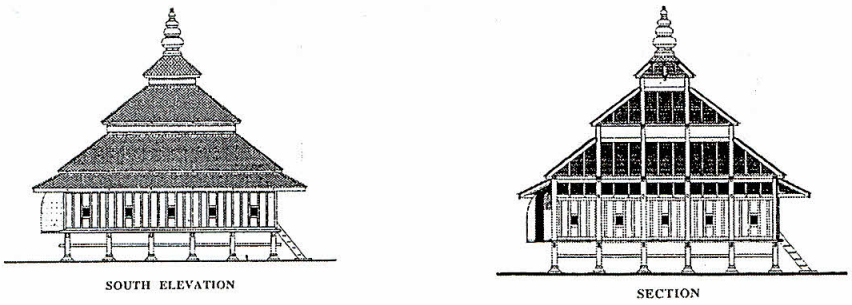


Fig. 10: The Kampung Tuan Mosque.

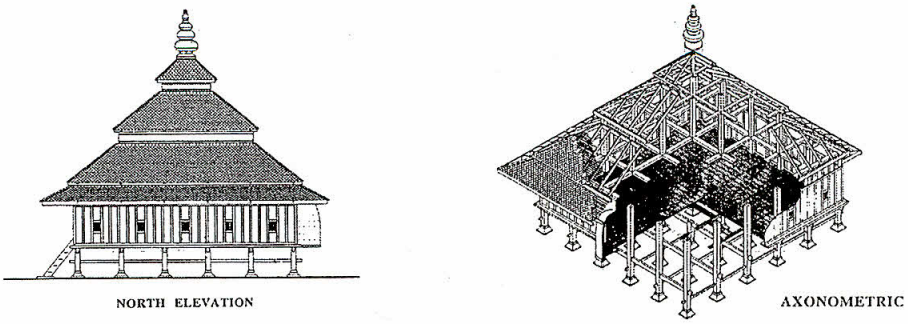


Fig. 11: The Kampung Tuan Mosque.

The whole mosque construction elements are of *cengal* timber. One of the most interesting parts of the mosque is its structural roof spanning system. The mosque contains no interior columns. The whole space is spanned by the four tier roof structure made up of simple beams and columns placed onto beam ties which results in the whole structure acting as a 'timber space frame' system. The use of the Western style arch system with diagonal brace struts is virtually non-existent in Malay traditional construction methods. What exist is the King post truss action which is here repeated in a three dimensional manner which enable it to span up to more than 9 meters. Another incredible feat of construction is that the mosque was built without the use of a single nail by the traditional *tanggam* and *pasak* or the pegged joinery system method. A last interesting item about the mosque is the concave *mihrab* which consists of a hollowed out tree shell probably prepared by the ancient method of building dug out canoes.

The mosque possess no minarets or ablution place. Since it is close to the Limbong river the ablution rites can easily be performed there.

The Dato' Undang Kamat Mosque, Negeri Sembilan

This mosque in Simpang is named after its financier and the man who endowed the land for its construction, Dato' Undang Kamat. [7] Dato' Kamat was one of the 'Undang's' of the 'luaks' in Negeri Sembilan. The state is the only one in Malaysia that still maintains the tribal matrilineal system and each of the nine tribes that inhabit Negeri Sembilan has their own Undang or tribal leader.

The Dato' Undang Kamat mosque was popularly known at one time as 'Masjid Batu' which literally means the'stone mosque'. It was referred as such because it was one of the few mosques then which was built of concrete and masonry. It has a square plan with two entrance stairs. The mosque is raised less than a meter above ground and has a tiled concrete floor slab. The whole mosque plan is 6 m by 6 m in dimension and the building stands at about 7 m to its full height at the crown. The three tiered roof is highly dominant not only because of its temple like roof form but also because of its carved concrete ridges that display plant tendril motifs. The *mihrab* space protrudes out of he main prayer space and is topped by an awkward looking onion dome. The main prayer space contains four concrete columns at the center that support the two tier roofs from the top. The prayer space is punctured by nine decorated doors on three sides. Is also surrounded by a tiled *serambi* apace which leads into the open ablution pond at right side of the *Qibla* wall (Figs. 12-15).

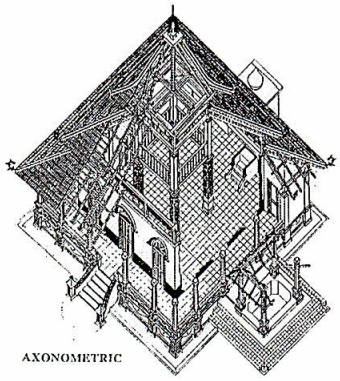


Fig. 12: The Dato' Undang Kamat Mosque.

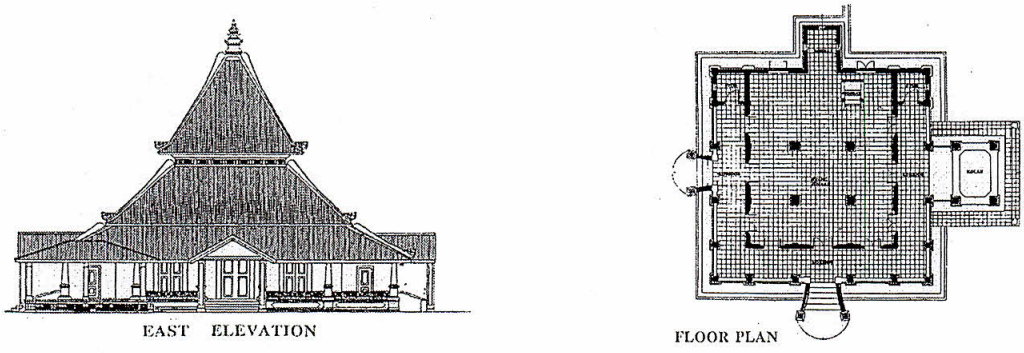


Fig. 13: The Dato' Undang Kamat Mosque.

The mosque contains no minaret but it has a *taboh* house on its right side a few meters from the ablution pond. The *taboh* house is a small 1.5-meter square hut raised half a meter on four timber stilts. Its roof reflects the shape and has almost the same angle as that of the main mosque building.

A Comparative Analysis of the Six Traditional Mosques

In this section we present a formalistic comparative analysis of the floor plans, sections and elevations of the six mosques described previously. It is our hope that further suggestions of research and hypotheses can be attempted by using this simple data (Tables 2, 3, & 4).

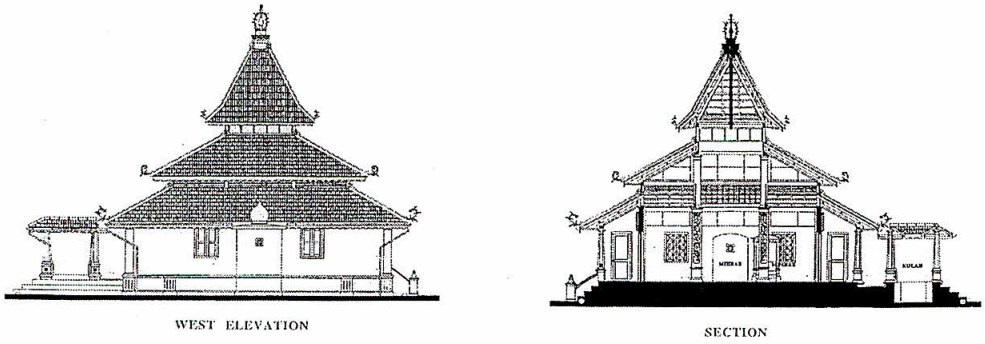


Fig. 14: The Dato' Undang Kamat Mosque.

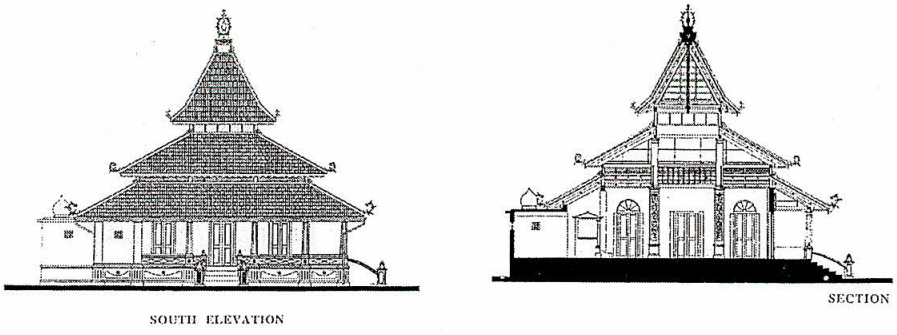


Fig. 15: The Dato' Undang Kamat Mosque.

Table 2: Comparative Analysis of the Floor Plans.

Location of the Mosque	Types of Roofed Function	Num. of Rooms	Structure and Materials	Minaret, Structure, Materials	Form of Floor Plan	Num. of Entrance	Open & Closed Spaces
1.Kampung Laut, Kota Bharu Kelantan	R.Besar Masjid, Mihrab Wakaf, Serambi Balai lintang, Kolah	3 rooms	Raised timber framework, main roof on square plan, four column at centre.	One minaret, west north, timber structure	Square + extension	Main entrance	Open and closed spaces
2. Kampung Hulu, Malacca	R.Sembahyang Mihrab Serambi, Setor, R.Wudhu,	4 rooms	Bearing wall, main roof on square plan four column at centre.	One minaret at east-north, masonry structure	Square + extension	3 entrance	Open and closed spaces
3.Kampung Keling, Malacca	R.Sembahyang Mihrab Serambi Setor R.Wudhu	3 rooms	Bearing wall, main roof on square plan four column at centre.	One minaret at west-north, masonry structure	Pure Square	3 entrance	Open and closed spaces
4.Kampung	R.Sembahyang	3	Raised	No	Pure	1 Main	Closed

Tuan, Tereng-ganu	Mihrab	rooms	timber framework, on stilts, main roof on square plan	Minaret	Square	entrance	spaces
5. Datuk Undang Kamat, Negeri Sembilan	R. Jemaah Mihrab Koridor Kolam	2 rooms	Bearing wall, main roof on square plan four column at centre.	No Minaret	Pure Square	2 Main entrance	Open and closed spaces

Table 3: Comparative Analysis of the Sections

Location of the Mosque	Main Structure	Secondary Structure	Main Roof Structure and Room Below	Roof Form and Other Function
1.Kampung Laut , Kota Bharu Kelantan	Timber framework, on stilts	Post and beam, Serambi, and Balai.	Three tiered roof R.Besar masjid	Skylight ventilation, *loteng*
2.Kampung Hulu , Malacca	Bearing wall	Post and beam	Three tiered roof R.Sembahyang	Skylight ventilation
3.Kampung Keling, Malacca	Bearing wall	Post and beam	Three tiered roof R. Sembahyang	Skylight ventilation
4.Kampung Tuan, Terengganu	Raised Timber framework,	No roof	Four tiered roof R.Sembahyang	Skylight ventilation
5. Datuk Undang Kamat, Negeri Sembilan	Bearing wall	Post and beam	Three tiered roof R. Jemaah	Skylight ventilation

Table 4: Comparative Analysis of the Elevations

Location of the Mosque	Roof Form	Compatibility Roof vs. Main Floor Plan	Height Width Proportion	Building Openings and Façade	Ornamentation
1.Kampung Laut , Kota Bharu Kelantan	Three tiered roof	Compatible	Height≤width	Plain wall and corridor (serambi)	At roof top
2.Kampung Hulu , Malacca	Three tiered roof	Compatible	Height≤width	Plain wall and corridor (serambi)	At roof top up and down, wall column, stairs
3.Kampung Keling, Malacca	Three tiered roof	Compatible	Height=width	Plain wall and corridor (serambi)	At roof top, wall column, stairs
4.Kampung Tuan , Terengganu	Four tiered roof	Compatible	Height>width	Plain wall	At roof top, piers
5. Datuk Undang Kamat, Negeri Sembilan	Three tiered roof	Compatible	Height>width	Plain wall and corridor (serambi)	At roof top up, down, edge, wall, pedestal, column

The tables describes several points:

1. The floor plan is assumed square which strengthened by using three tiered roof.
2. The minaret is not necessary.
3. Height width proportion is almost achieve 1.
4. *Serambi* functioned as a complement of a mosque.

Concluding Remarks

Much research need to be done by using the base historical and graphic data established in the archives of KALAM. We will present here several important questions that surrounds the conjectural statements about the meaning and uses of the traditional mosques in Peninsular Malaysia.

The most obvious characteristics of the traditional mosques are the three tiered pyramidal roof forms, the square plans and the fact that most of these types of mosques can be inscribed almost perfectly into a cube. There are suggested theories concerning the pyramidal roof form. These are as follows:

- The possibility that the tiers of the roof were for ventilation purposes in the hot humid climate of Malaysia.
- The possibility of the method of construction in relation to carrying heavy members for the beams and spanning members may have limited the span and thus the number of tiers would relate to the size of the mosque's plan. For instance if a larger timber mosque were to be built, there would have to be more roof tiers.

Other theories have been suggested but not argued forcefully. There have been many books written by the religious scholars in the Malay world as attested by Ismail Said in his article Kitab Jawi: Intellectualising Literary Tradition'. A correlative study between these works and the life of the mosques in Peninsular Malaysia would highlight much about the perception about the idea of the mosque at that time. Another work which might be helpful for a start in this particular area of study is Azyumardi Azra's article Education, Law, Mysticism: Constructing Social Realities' and Zainal Kling's 'Social Structure: The Practices of Malay Religiosity'.

The notion the roof forms are for ventilation purposes lacks the experimental verification necessary. If it can be shown by a laminar flow studies and temperature measurements of traditional mosques to establish its comfort criteria, the theory might withstand any mystical interpretation of its construction. Finally, the construction proportion theory lacks a strong study in the traditional construction methods particularly in the strengths of elephants as primitive cranes hauling structural members.

All the theories might apply similarly to the square shapes of the plans and the fact that the pyramidal roof form can fit into an almost perfect cube. Finally the presence of the 'house type' roof of traditional mosque challenges the meaning of the pyramidal roof as a distinctive form. perhaps the house type mosque is a different idea entirely from that of the pyramid roofed ones. A study of religious perception of past Malay cultures is needed to answer these questions.

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الوظائف والأساليب المعمارية للمساجد التقليدية في الجزر الماليزية

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ملخص البحث: تظهر هذه الورقة مسح وصفي لخمسة مساجد تقليدية في ماليزيا، حيث يوجد هناك وبشكل رئيسي ثلاثة أنواع من المساجد بنيت بواسطة الحرفيين الماليزيين والصينيين في الماضي، وهذه الأنواع هي: المساجد الخشبية، المساجد المبنية من الطوب والحجر، والمساجد التي من نوع المساكن. أخذت الخرائط أو الرسومات والمعلومات عن هذه المساجد من أرشيف مركز Kalam البحثي(مركز دراسة البيئة العمرانية في ماليزيا). أما الهدف الرئيس لهذه الورقة هو المسح التوثيقي التاريخي لهذه المساجد، وإثارة العديد من الأسئلة فيما يتعلق بتبني أشكال هذه المساجد وفراغاتها في المفهوم المعاصر.