

Transformation of Malay Vernacular Architecture in 20th-Century Peninsular Malaysia

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The *kampung* (Malay village) house represents the traditional form of dwelling of the Malay people in Peninsular Malaysia, the former British colonial territory known as Malaya. The architecture of the traditional Malay-village house, or *kampung* house, encompasses the crystallization of the Malay socio-cultural development in the past several thousand years. Today, the Malay society of post-independence Peninsular Malaysia is rapidly transforming from its traditional agrarian-village past to a modern industrial-urban future. As a result, the *kampung* house has lost much of its heritage value as the Malays become indifferent to and/or ignorant of its cultural importance. This paper examines the transformation of the *kampung* houseform under the impact of socio-economic developments and the introduction of new building materials in the 20th century. The paper concludes with stressing the fundamental importance of maintaining the continuity of the *kampung* house as a *living* architecture and not preserving it as a museum specimen.

THE IMPACT OF URBANIZATION ON MALAY VERNACULAR ARCHITECTURE

The 20th century is truly the watershed between modernity and traditionalism for the Malay society in Peninsular Malaysia, also known by the former colonial name of Malaya. As Gullick (1987, 1) writes, "The nineteenth century appears to have been the last age of unchanging stability [for the Malay society] and the twentieth century marks the beginning of accelerating processes of social

change which continue down to modern times." Among the most noticeable of such changes is in the Malays' traditional societal environment, which had once been firmly rooted in the *kampung* (Malay for 'village') of rural Peninsular Malaysia. In the early 1920s, less than 5% of the Malay population in Peninsular Malaysia lived in the urban areas (Eliot and others 1993, 73). In 1947, two years after the end of World War II, the figure was marginally increased to 7.3% (Saw 1988, 96), and in 1969, six years after the formation of the modern Malaysian nation, the figure was doubled to about 15% (Henderson et al. 1970, 77). Even in as recent as 1980, only about 25% of the peninsular Malays had settled into towns and cities (Saw 1988, 97), while the remaining 75% still lived in the rural areas as farmers and fishermen as they had been for the past hundreds of years.

The Malay society only began to experience the impact of urbanism in the 1970s, when the combined factors of a rapidly industrializing economy, political stability and population increase brought about massive urbanization on a hitherto unprecedented scale. The process of urbanization of the peninsular Malay population began to accelerate rapidly in the 1970s and 1980s as a result of government policies which encouraged the relocation of rural poor people, most of whom were Malays, to existing towns and new urban centres where there were job opportunities and better economic prospects (Saw 1988, 96-97). To give an idea of the pace of urbanization in the post-World War II decades, statistics show that the urban population of Peninsular Malaysia (expressed as percentage of total population) were as follows: 18.9% in 1947; 26.5% in 1957; 28.7% in 1970; and 37.2% in 1980 (Saw 1988, 85), and according to the *Human Development Report* published by the World Bank, the urban population of Peninsular Malaysia was 43% in 1993 and 52% in 1995.

Today, in the last decade of the 20th century, the landscape of Malay villages in the rural areas of Peninsular Malaysia seems to paint an assuring picture that the Malays have managed to preserve their non-urban socio-cultural character. But while recent statistics published by the World Bank in the *Human Development Report 1993* show that at least two-third of Malaysia's rural population (which constitute about 57% of the total population) are Malays, one must ask how long the traditional Malay world will remain as it comes increasingly under the socio-cultural impact of modern urbanized Malaysian society? As Malaysian historian Tham Seong Chee puts it, the recent history of Malay cultural development is a confrontation between traditional agrarian culture and the modern culture of urban areas which has a largely non-Malay character and personality (Winstedt and Tham 1981, 203). It must be said that the fast expanding urban world has certainly weakened the long-standing architectural traditions of the rural society. Aesthetics and construction techniques of the Malay vernacular are being chal-



Map 1. Location of Peninsular Malaysia in Southeast Asia.

lenged by modern designs and construction technology developed for urban buildings. As these contemporary architectural elements are introduced into the rural areas and gradually accepted by the people living there, the stability of the traditional built-form is being undermined. In his book, *The Malay House* (1987, 6), Lim Jee Yuan warns that the Malay village house, or *kampung* house, "is being vulgarised by modern houseforms and materials in the attempt by users to adapt it to the modern situation." Lim explains that "the loss of confidence in the traditional Malay house [is] due to the overglorification of modern westernised houseforms in Malaysia . . . [and] villagers look to these new houseforms as models and status symbols without looking again at their traditional houses for inspiration."

To a large extent, the Malays' rejection of their architectural tradition can be attributed to the economic and material disparity between the urban and the rural areas, which has created among the rural Malays an inferiority complex of their traditional way of life. As a result, many Malay villagers have developed a negative attitude towards their way of life in the *kampung*, which they perceive as poor and backward. Many rural Malays often used the term *malu*, or "shameful," to describe the material impoverishment of their living environment. They especially consider their thatch-roofed timber *kampung* house something to feel "*malu*" about, and expressed a strong desire to live in a *lawa* ("chic") Western-style masonry house built with a tiled roof. It seems that the *kampung* house, in being the most representative element of the traditional Malay way of life, has become the disdained symbol of rural poverty and backwardness. As a consequence, many rural Malays consider living in a modern, ground-sitting, masonry house as a coveted symbol of wealth and modernity, and plan to replace their stilt-raised timber *kampung* houses with modern houses as soon as they have the financial means to do so.

Ironically, while the rural Malays are too ready to abandon their traditional form of dwelling and the stigmatized way of life, many educated urban Malays are beginning to appreciate the architecture of the *kampung* house as they develop a nostalgic yearning for the traditional lifestyle of their ancestors. There is a case in Gombak, a district in the western peninsular state of Selangor, which plainly illustrates the above-mentioned attitudes of the rural and urban Malays. The case concerns a Malay villager, Abdul Razak bin Mohammed Ali Khatib, who owns a famous historical *kampung* house built by his late grandfather in the early 1900s, part of which is open to the public as a living museum. It is a big house in excellent condition and has several bedrooms and an extension at the back. While Abdul Razak's parents continue to live in a small part of the old house, the younger Abdul Razak and his small family much prefer to live in an adjacent modern bungalow, which he is visibly proud of. When asked whether the Malay people are sufficiently impressed by his splendid house museum to pay a visit, Abdul Razak replied, "Only the Malay city folks who come in search of their roots."

20TH-CENTURY TRANSFORMATIONS OF THE TRADITIONAL MALAY HOUSEFORM

As we have seen in the previous section, urbanization has produced a significant impact on the Malay society in the 20th century, which consequently affects the architecture of the *kampung* house by marginalizing the traditional socio-cultural values it embodies. A more direct effect on the architecture of the *kampung* house is brought about by the adoption of building materials and construction methods that do not belong to the Malay tradition, and these have produced perceptible physical changes to the houseform. In most cases, the adoption of non-traditional Malay types of material and construction was brought about by the changing circumstances of the 20th century. One of such circumstances is the rapidly shrinking tropical rainforest of Peninsular Malaysia brought about by exces-

sive logging and urbanization. This means that the traditional sourcing ground for the timber and thatch materials used in the construction of *kampung* house is correspondingly diminished. It is estimated that before the 20th century, well over 90% of Peninsular Malaysia's territory was still covered with primary and secondary forests. By the early 1920s, the total forested area was reduced to about 67% (Winstedt 1923, 41). Today, according to figures obtained from the Malaysian Forestry Department (1990), there is practically no primary rainforest left along the highly populated peninsular coastal areas, and only about 56% of the combined territories of the Federation of Malaysia (which is made up of Peninsular Malaysia, Sabah and Sarawak) is still forested, out of which only a mere 5% is under conservational protection.

The types of timber traditionally used in the construction of *kampung* houses are quality tropical hardwoods such as *cengal* (also spelt *cengai* or *chengal*; *Balanocarpus heimii*), *petaling* (*Ochanostackys amentacea*), *tempinis* (ironwood; *Sloetia sideroxylon*), and *jati* (teak; *Tectona grandis*). These hardwoods are traditionally prized as house-building timbers not only because of their quality of strength and durability, but also for their inherent imperviousness to fungi and insects, the two main threats to timber houses in a tropical environment. For instance, *cengal* contains a natural water- and termite-repelling oil, and *jati* is so hard that it is naturally resistant against rot and insect attack (Dawson and Gillow 1994, 20). *Kampung* houses built with such timbers are traditionally left in their natural wood finish as they need no further weather- and vermin-protection. However, the above-mentioned quality hardwoods are no longer the abundantly and freely available material they were in the past. Besides the shrinking rainforest, Peninsular Malaysia's heavily export-oriented logging industry, which exports most of the high quality timber and more than half of the total quantity of timber produced, has seriously undermined the availability and inflated the price of the traditional hardwoods used in the construction of the *kampung* house (Lim 1987, 132). The increasing scarcity and cost of quality hardwoods means that Malay builders have to resort to inferior timbers to build *kampung* houses with. As a result, most of the more recently-built *kampung* houses have to be protected with enamel paint, which changes the traditional appearance of the building.

Atap thatch, which is made from the long stiff fronds of the *nipah* palm (*Nypa fruticans*), is the traditional roofing material of *kampung* houses. In the past, *atap* also provided a more economical material option than timber for the walls of the more humble *kampung* houses. With the gradual development of many parts of Peninsular Malaysia's coastal environment into built-up areas in the 20th century, *nipah* palms have become increasingly difficult to find in the wild. For this reason, and because *nipah* palm-fronds have to be collected and laboriously prepared before they can be used as roofing thatch, *atap* is no longer the abundantly available and economical building material it used to be. Like all other kinds of thatching materials, the *atap* thatch by itself has limited weather-proofing properties; as such, a thatched roof must rely primarily on a steep roof angle to quickly drain off the large quantity of rain water falling onto the roof surface during a tropical downpour, before the rain water seeps through the layers of thatching. This functional necessity for a steep roof angle in the thatched roof is the technical rationale behind the impressive size of the roof on so many of the traditional houses in tropical Southeast Asia. The traditional roof-form of *kampung* houses has undergone a major transformation in the 20th century with the advent of a new type of roofing material—the galvanized corrugated iron sheet, or more popularly known by the less cumbersome misnomer "zinc" sheet (so named because of the galvanization).

Zinc sheet was first introduced to Malaya in the late 19th century. Its initial application was mainly for roofing large utilitarian structures,¹ such as market and railway sheds, military barracks (namely, the well-known Nissen hut),² and shelters for dockyard and tin-

mining dredges. It was not long before the material found its way to domestic buildings, and *kampung* houses roofed with zinc sheet began to appear in the 1930s (National Archives, 1993, 22). During the Pacific War (1941-1945), the Japanese occupation forces in Malaya recognized the value of *atap* as a lightweight, transportable and renewable building material ideal for the tropical climate; a ban was placed on its use and all available supplies were diverted to military construction applications (Gibbs 1987, 19). At the same time, because of the general shortage of strategic materials during the war, zinc sheet (or rather, the iron in the zinc sheet) became highly priced and many Malay villagers actually sold off their metal roofing to the Japanese authorities (National Archives 1993, 32). Towards the end of the war, the depletion of the palm-frond resource by the Japanese military and the critical shortage of zinc sheet left many roofs of *kampung* houses in a critically dilapidated condition. On returning to Malaya after the war, the British colonial authorities released large quantities of zinc sheet from war surplus stock to the local Malay population to alleviate the severe shortage of *atap*. There was little choice but to use it, and this led to the widespread use of zinc sheet as a roofing material on *kampung* houses (Gibbs 1987, 19). Since then, zinc sheet has so completely supplanted *atap* thatch as the primary choice of roofing material for *kampung* houses that it has acquired the Malay name of *atap zink*.

The underlying reason for the Malays' preference for zinc-sheet roofing over *atap* thatching is not because of the constructional expediency involved, but rather the cost-effectiveness offered by the material, which is an important consideration for the rural Malays who until very recently were among the poorest social groups in Peninsular Malaysia.³ As a roofing material, zinc sheet has the advantages of being cheap and readily usable. In contrast, *atap* thatch has to be laboriously prepared by hand from *nipah* fronds gathered from often faraway jungles, which, for this reason, has rendered it more expensive to buy than the mass-produced zinc sheet. Furthermore, zinc sheet, once installed, requires virtually no maintenance nor frequent replacement, whereas an *atap* roof has to be regularly maintained because of natural decay and damage sustained during the frequently occurring tropical storms, and completely refurbished once every five years or so. Even though the high thermal conductivity of zinc sheet makes it a less practical choice of roofing material than *atap* thatch under the intense heat of the mid-day tropical sun,⁴ this climatic drawback of zinc sheet is far outweighed by the economical advantages offered by its long-lasting and maintenance-free qualities. Another significant reason for the Malays' preference for zinc-sheet as a roofing material is its imperviousness to water, which means that a zinc-sheet roof does not require the steep pitch of an *atap* roof to provide the adequate runoff for rain water. The much shallower roof-pitch requirement of a zinc-sheet roof in turn means that less roofing material needs to be used in the construction, thus giving it an additional economical advantage, which therefore makes it even more attractive as a roofing material to the poor Malays. However, the widespread adoption of the zinc-sheet roof is gradually transforming the traditional appearance of *kampung* houses as the roof form becomes less steeply pitched and more rationalized in design.

Architects often criticize the use of zinc sheet on *kampung* houses from the viewpoint of the material's climatic-compatibility and aesthetic appeal. In reality, there is no better alternative to *atap* than zinc sheet, as it offers extremely good economical value by being a cheap, maintenance-free and long-lasting roofing material—considerations which are far more important to the ordinary Malay villagers than the technical and aesthetic concerns of architects and academicians. Interestingly, in an attempt to strike a compromise between the durability of zinc sheet and the better thermal insulation of *atap*, the Malays have devised an ingenious roofing method which employs metal roofing along the more easily worn out roof edges and thatching in the central portion of the main roof planes where solar heat absorption is most critical. The minimal use of *atap* in this



Fig. 1. Top, a 19th-century photograph showing a *kampung* house completely walled and roofed with *atap* thatch (Courtesy National Archives of Singapore); middle and bottom, examples of 20th-century *kampung* houses roofed with zinc sheet, a material which allows shallower and more rationalized forms of roof construction. (Photos: Ho-Yin Lee)

composite metal-and-thatch roofing method serves to underscore the increasing scarcity and cost of traditional building materials and reflect the economical imperative of the Malay villagers in the construction of their *kampung* houses.

As the British began to assume full colonial rule over the entire Malaya towards the late 19th century, the arrival of an increasing number of Europeans (mainly the British) into the country brought about a need to import building materials that were more familiar to the European construction tradition. One of such materials was Portland cement,⁵ which was originally brought into Malaya in around the mid-19th century for use in the construction of concrete foundations and floor-slabs of public buildings, but found similar application in the local houses of Europeans in the late 19th century (Edwards 1991, 209, 212). It was not long that such a usage of concrete began to have an influence in the construction of *kampung* houses. *Kampung* houses were previously built with their

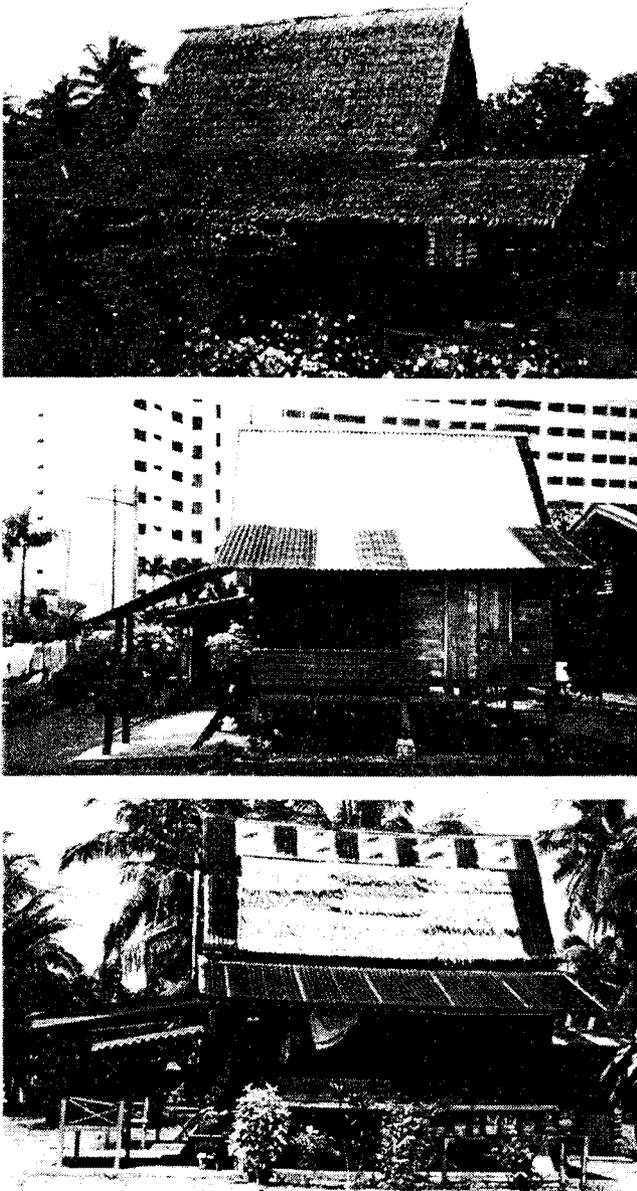


Fig. 2. Transformation of roofing method: from *atap* thatch (top), to zinc sheet (middle), to zinc-*atap* composite (bottom). (Photos: Ho-Yin Lee)

house-posts standing on bare grounds, or on bases of hardwood or laterite. As the availability and usage of the cement material filtered to the Malay populace in the early 20th century, cast-concrete plinths, usually in the shape of a truncated pyramid, came into popular use as bases for the house-posts of *kampung* houses. These concrete footings have since become so commonly found under the house-posts of *kampung* houses that they are now often considered as a "traditional" architectural element of the building.

A more conspicuous usage of cement is found in the entrance steps of the *kampung* house, which until the 20th century were of simple timber construction. The front portion of the *kampung* house is traditionally given the most attention in the construction as this is the part of the house present to public view. As constructions of concrete became common in the early 20th century, the more well-to-do Malays households began to replace the humble flight of timber entrance steps in front of their *kampung* houses with grandiose Classical-style concrete stairways. The concrete entrance stairway

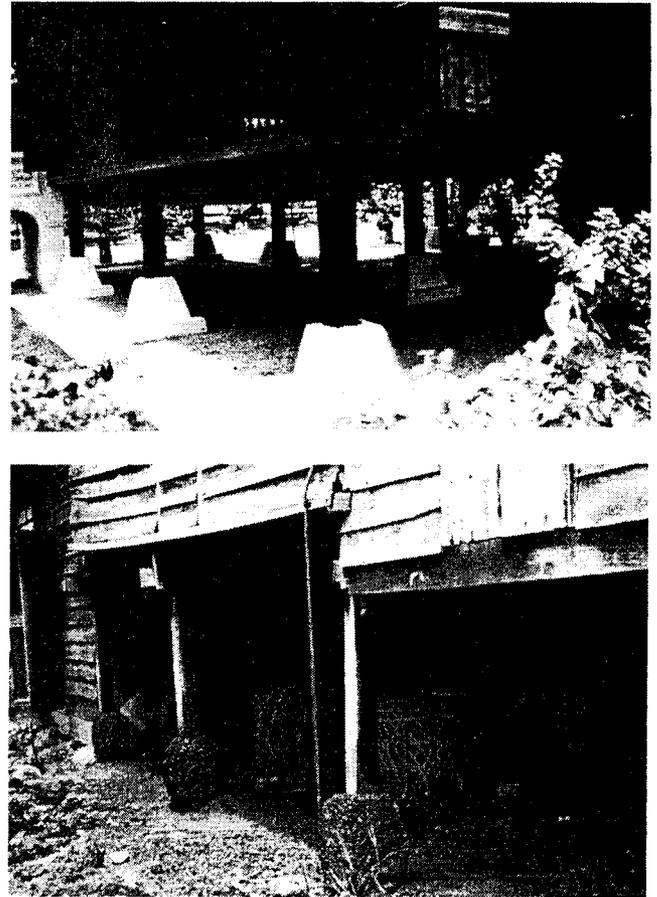


Fig. 3. House-posts of *kampung* houses resting on plinths of cast concrete (top) and blocks of natural stone, probably laterite (bottom). (Photos: Ho-Yin Lee)

seems to have developed into a formal architectural element of the *kampung* house that serves to express the social as well as economic status of the household.

While the use of non-traditional materials in the construction of *kampung* houses in the 20th century has subtly transformed the physical appearance of the building, it is by no means as subversive to the Malay cultural character of the *kampung* house as the incorporation of Western architectural aesthetics in the houseform. The local European residents' bungalows that began to appear in numbers in the late 19th and early 20th century provided a prime source of inspiration for many Malay builders and well-to-do house-owners of the contemporaneous period, who introduced into the *kampung* houses elements such as Venetian fanlights, Venetian louvered shutters, French windows, Palladian archways and other Western-classical ornamental detailing. Despite their non-Malay origin, such Western-classical architectural elements are so well synthesized into the tectonics of some of the more attractive historical *kampung* houses that they are often mistaken by the laypersons (as well as some architects) as the aesthetic tradition of the *kampung* house.

ATTITUDE TOWARDS THE PAST AND THE FUTURE OF THE KAMPUNG HOUSE

It is inevitable that the architecture of the *kampung* house will lose more of its original character as the peninsular Malay society advances further away from its *kampung*-based agrarian past. For the pessimists, the grim future of the *kampung* house is already prophesied in the neighbouring nation of Singapore, where the

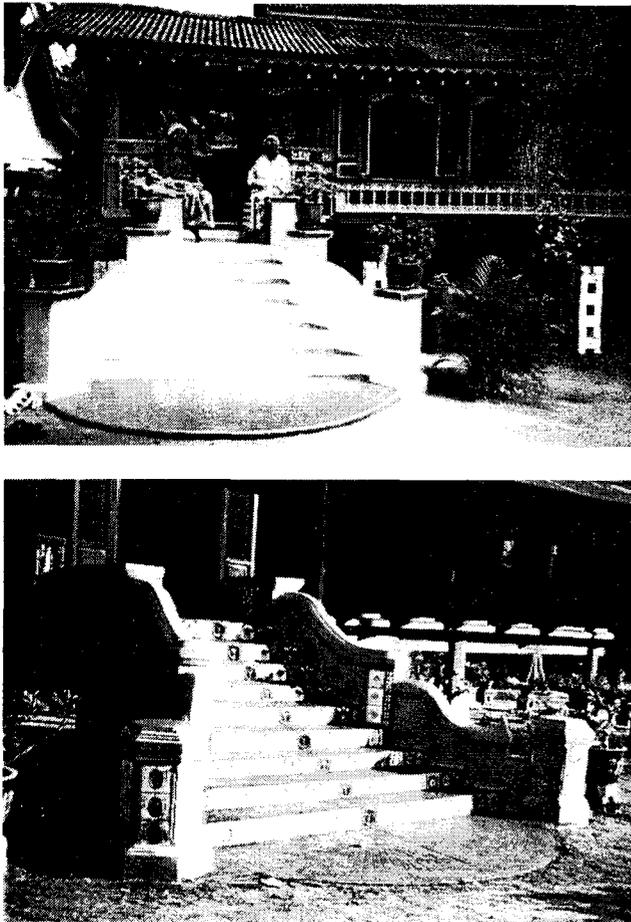


Fig. 4. *Kampung* houses with grandiose Classical-style concrete stairways. (Photos: Ho-Yin Lee)

kampung house and the associated traditional Malay village lifestyle exist only as a vague memory with the clearance of the last surviving *kampung* on the ultra-modern island republic in 1990.⁶ It is perhaps suitably symbolic that a high-rise slab of a luxurious condominium now stands on this last *kampung* site in Singapore, like a giant memorial marking the *kampung*'s passing. Today, the bygone *kampung* memories in Singapore is "preserved" in a place called Malay Cultural Village. Located in the predominantly Malay district of Geylang Serai, the so-called "cultural village" serves no socio-cultural function whatsoever, but consists of no more than a series of shops and restaurants contained in *kampung* house-style structures.

At around the time when the last surviving *kampung* in Singapore was bulldozed away, a cultural theme park called "Mini-Malaysia Complex" was opened in the outskirts of the Malacca city. It contains thirteen full-size replica *kampung* houses representing the different regional styles of different parts of Malaysia. The very lifelessness of these empty buildings, laid out in a row like a ghost village, seems appropriately reflective of the gradual disappearance of the socio-cultural tradition—the human elements—embodied in the architecture of the *kampung* house. Such Disneyland-esque recreations of the *kampung* way of life are certainly not the way to extol, much less to sustain, the architectural-cum-cultural heritage of the Malay vernacular. As Lim Jee Yuan (1987, 133) puts it, "... just as a decorative piece, denying it of its deeper significance and uses, and putting it completely out of context."

The conflict between the preservation of past socio-cultural traditions and the necessity for socio-economic advancement is a

difficult dilemma faced by almost every developing nation. Must age-old traditions, particularly those relating to the traditional way of living, inevitably give way to urbanization and industrialization in the course of economic development? The Malay society in Peninsular Malaysia is facing exactly such a predicament as the nation is driven by political and economic forces to undertake a paradigmatic shift from the traditional *kampung* past to a modern urban future. For as long as the Malay villagers are lured by the glitter of modernity and feel *malu* about their *kampung* roots, the *kampung* house will continue to be rejected by its own inheritors, and will eventually be consigned to tourist-oriented pseudo-cultural theme parks.

The house architecture of a society, especially one belonging to a traditional culture, is created and shaped by the social lifestyle and cultural traditions of the people who live in it. As Roxana Waterson writes in her book *The Living House* (1990, xv), "[vernacular] architecture involves not just the provision of shelter from the elements, but the creation of a social and symbolic space—a space which both mirrors and moulds the world view of its creators and inhabitants." The *kampung* house can only be kept truly alive not by technically-perfect preservation or re-construction of historical specimens, but by reviving in its inhabitants the pride of living in their very own architectural heritage.

NOTES

- ¹ An example of an early architectural application of zinc sheet in Malaya can be seen in a photograph illustrated in Norman Edwards' book *The Singapore House and Residential Life 1819-1939* (1991, 193 fig. 148). The photograph is dated to the 1890s and shows a market shed roofed entirely with zinc sheet.
- ² Named after its inventor Lt. Col. Peter Nissen (1871-1930), a mining engineer who served in the British army, the Nissen hut is a military shelter noted for its simplicity in design and economy in construction, being no more than a semi-cylindrical timber or steel frame clad with zinc sheet.
- ³ In as recent as 1969, as many as 85% of the peninsular Malays lived in rural area as subsistence farmers or coastal fishermen (Henderson et al. 1970, 77). During this time, while the Malays made up more than half of Peninsular Malaysia's population, they held only about 2% of the country's corporate equity. Economic power was concentrated mainly in the hands of the urban Chinese, while the average Malay person's income was less than half of that of other ethnic races in the country. Because of the vast economic disparity between the Malays and the ethnic Chinese, the two peoples—who respectively made up of about two-third and one-third of the Malaysian population—became easy victims of racial politics, and clash against each other in a major racial riot in 1969. In 1971, the Malay-led Malaysian Government implemented the radical, and controversial, New Economic Policy (NEP) to improve the economic status of the Malays. The NEP set a racial quota for Malay involvement in commerce and industry, and Malays were given special preferential privileges in employment, investment and educational opportunities. The NEP aimed to raise the Malays' stake in the economy from about 2% in 1970 to a target of 30% by 1990. With the lapse of the NEP in 1990, Malay investments in the Malaysian economy had attained a figure of 20%, out of which 7% were held by individuals and the rest by big investment companies, institutions and government trust agencies (Eliot et al. 1993, 86).
- ⁴ The thermal conductivity (or K-value, measured in W/m²K) of galvanized iron is about 50 times that of palm thatch. See: *Handbook on Energy Conservation in Buildings and Building Services*, revised edition (Singapore: Development and Building Division, Public Works Department, 1980), 38.
- ⁵ "Portland Cement" was originally the name of a particular brand of hydraulic lime invented in England in 1824 (Edwards 1991, 212). The cement was so named because its colour resembled that of the stone quarried from the Isle of Portland (off the coast of Weymouth in southern England), and its initial usage was as a stucco to simulate Portland stone.
- ⁶ The *kampung* concerned was known as Kampung Pasir Pajant Batu 6 1/2, located at the south-western coast of island republic near the campus of the National University of Singapore (NUS). In 1987, three years before its clearance, two studies were carried out on this *kampung* by the undergraduate students of NUS: one is an unpublished sociological study by a geography student, Kartini binti Yayit (1987); the other a study by

a group of 4th-year architecture students, which was compiled into an unpublished document edited by Powell and Wong (1988).

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