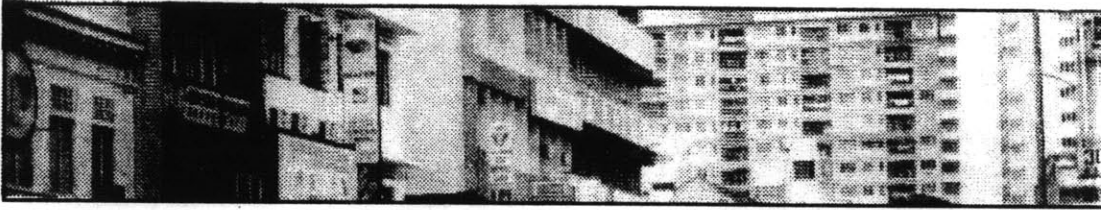


# UNITY IN DIVERSITY



: AN EXPLORATION OF THE SUPPORTS CONCEPT AS A DESIGN APPROACH TO HOUSING IN MULTI-ETHNIC MALAYSIA

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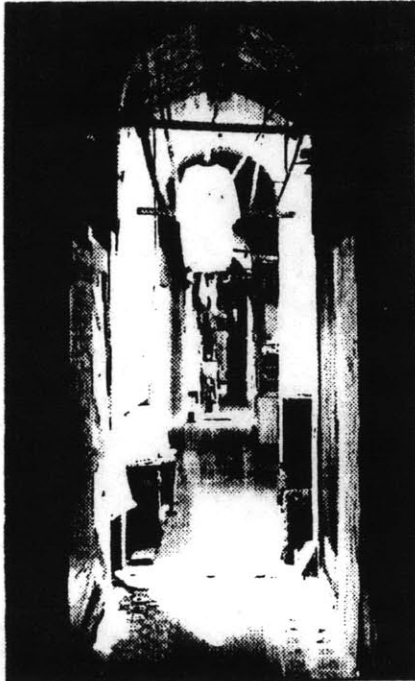
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My deepest thanks

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UNITY IN DIVERSITY :

An Exploration of the Supports Concept as a Design Approach to Housing in Multi-Ethnic Malaysia.

by:

Radziah Mohamad

Submitted to the Department of Architecture on January 17, 1992, in partial fulfillment of the requirements for the degree of Master of Science in Architecture Studies

Thesis Supervisor: Reinhard Goethert  
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Masood Khan  
Visiting Professor of Architecture

Abstract

This thesis explores the supports concept as an alternative approach to the design of Public Housing in the context of multi-ethnic Malaysia. It stems from a conviction that the design of public housing should be based on the lifestyles and ways of living of the people it is designed for. The Malaysian people are composed of three diverse cultures: Malay, Chinese, and Indian. This thesis explores the potential of the supports concept as theorized by John Habraken, as an alternative approach to address this diversity. The thesis proposes that despite the differences in their cultural background, there are many common elements in their built forms and living patterns that have evolved from several centuries of cultural assimilation and adaptation to specific climatic, social, and economic conditions. Therefore, the aim of the thesis is to discover those shared elements, which will be the basis for the design of the support system..

This thesis is the first part of a two part work:

Part I is a research on of various types of dwellings - traditional, squatter and public housing - to discover the important principles and elements that persist in all the dwelling types of the Malays, Chinese and Indians.

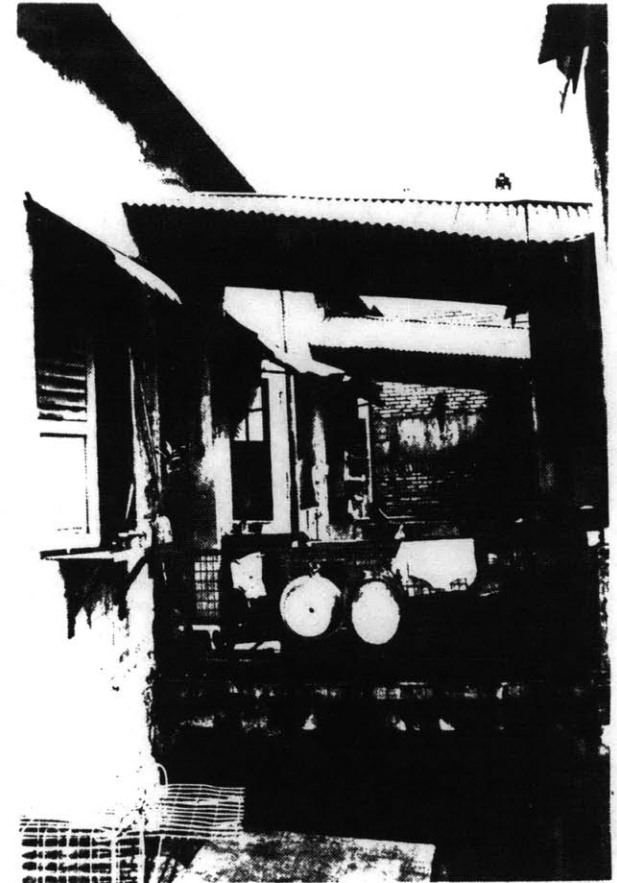
Part II is a design projection of those principles for a participatory housing project in Kuala Lumpur, involving actual participants who were four of the thirty families surveyed in Part I research study. The design exercise includes exploring various transformations possibilities to produce a whole range of variations that satisfy the needs of the diverse Malaysian cultures.

Part I and Part II are documented separately into S.M.Arch.S. and M.Arch. theses respectively. Each documentation is a complete, independent thesis, but is very much interrelated. Therefore, it is recommended that they be read in sequence.

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*"The house is only finished once the owner is dead".*

-Spanish Proverb-



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*" The true basis of any serious study of the art of architecture still lies in those indigenous, more humble buildings everywhere that are to architecture what folklore is to literature, or folksong to music, and with which academic architects were seldom concerned.... These many folk structures are of soil, natural. Though often slight, their virtue is intimately related to the environment, and to the heartlife of the people. Functions are usually truthfully conceived and rendered invariably with natural feelings. Results are often beautiful and always instructive."*

Frank Lloyd Wright

*"The Sovereignty of the Individual"*



I grew up in a low cost housing project, just outside the city centre of Kuala Trengganu. There were ten of us including my parents, crammed up in the two bedroom rowhouse. It was a typical modern house with a generic floor plan that is built all over third world countries.

Despite the modern furniture that filled the house, our day-to-day life was anything but modern.



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We still entertained our guests in the living room, sitting on the floor. We still ate our meals in the dining room, on the floor. My mother still prepared the meals on the floor. We all, except my father, slept on the floor. The only difference now was that the floor was a cement floor, instead of the wooden floor raised above ground as in my grandmother's house. The traditional customs and rules of the house remained, even though the house was no longer traditional. We were required to take off our shoes and wash our feet before entering.

I pitied my friends who lived in the walk-ups or "flats" as we called them. We all played in the same dirt, but they had to be careful not to dirty their feet because living in the flats, they could not wash their feet before entering their houses. They could not even get their shoes dirtied because, unlike us who lived in the rowhouses, they kept their shoes inside the house because outside their front door was the public corridor. Another traditional custom was that children and women were not allowed in the public zone of the house, i.e. the living room, when guests were entertained. In order to play in the front yard, we had to walk around the entire block, just to avoid passing through the living room.. We considered ourselves lucky because at least our house had a kitchen entrance (i.e. back door). Our friends in the flats had to wait in agony until all the guests had left before they could come out to play, because their house had only one entrance. Our kitchen entrance and the area around it was also the area where my mother or my elder sisters entertained their female friends. The tiny and awkward area was nothing compared to the "ladies' living room" that my grandmother had in her house, but it was better than nothing. Those mothers who lived in the flats had to make do with their 8'x8' kitchen as the socializing area.



from Lat, the Kampung Boy, 1979

I have experience both living in a traditional house and in a modern house. Reflecting on those experiences, I felt compelled to devote my thesis research to lifestyles in public housing, to study the cultural needs and values of the Malaysian people and incorporate them into the design of future public housing.

Malaysia presents a unique case because its people are multiracial. The Malaysian population consists of Malays, Chinese, and Indians, each with its own distinct culture. For decades, architects had ignored the significance of this diversity. Instead they designed the public housing based on the western concept of dwelling, which had nothing to do with the way Malaysians live; neither Malays, Indians, nor Chinese. However, it would be unwise economically or politically, to build separate and different housing for each of them. For that reason, I focus on developing a "support system" derived from the common elements which are in the living patterns and the built forms of these three cultures.

One of the legacies that colonialism had left behind in Malaysia was a deep chasm dividing the three ethnic groups as a result of the "divide and rule" policy. The Malaysian society, after the Independence was not simply a multiracial society, but rather a pluralistic society where the ethnic divisions had ramifications for every aspect of life. But, that had not always been the case. For centuries prior to colonialism era, the Chinese and the Indians had been living harmoniously with the Malays, exchanging not only goods, but also, knowledge of each other's culture. These cultural exchanges are still evident today. As Malaysian society becomes more urbanized, racial and cultural factors are no longer the attributes of social division. Rather, it is income that sets lines in social strata. It is important to note that this thesis is not about racial integration or segregation; it is simply about people - the Malaysian people.

from Lat, the Kampung Boy, 1979

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It is about the way they live, then and now. Its purpose is to help myself and other architects understand their cultural needs and values when designing their dwelling places.

Architect may hold different positions with respect to public housing. This thesis explores the support system as an alternative because I believe every individual dweller has a right to participate in the creation of such an important and personal belonging as a place of dwelling. Working towards a support design has taught me to think of the supports as the Malaysian essence that all of us, Malays, Chinese, and Indians alike may share; and the variations that the supports generate as the identities that each of us brings out from deep in our roots.

This thesis is developed through five chapters:

Chapter 1: INTRODUCTION introduces the reader to the concerns of the thesis. It discusses the concept of dwelling and the differences between houses and housing, based on the writings of Habraken, Turner, Rappoport, and Fathy. It sets up arguments for the "supports concept" in general, and for the proposition of supports as an alternative for Malaysia's public housing in particular.

Chapter 2: BACKGROUND provides the general information on the ethnic composition in Malaysia and the historical events that contributed to it. It is a setting for later analysis of the lifestyles and living environment of each of the ethnic groups in Chapter 3 and 4. For that purpose, this chapter gives a historical description of each ethnic group, specifically on their origins, and their social transformation.

Chapter 3: RESEARCH AND SURVEY describes the houses and the living pattern of the Malays, Chinese, and Indians. The houses are described in 3 categories: Traditional houses, Squatter houses, and Public housing. The information on the traditional houses is abstracted from the numerous books and articles written on Malay, Chinese, and Indian vernacular architecture. The Chinese and Indian traditional houses described are those of

Southern China and Southern India respectively. This is included to help understand the transformation process as the people settled permanently in Malaysia. The other two categories are the results of a survey done in Kuala Lumpur. The squatter houses were recorded from a mixed squatter settlement of Kampung Sentosa. The public housing included in the survey was a squatter resettlement housing project of the same area called Sri Sentosa.

Chapter 4: ANALYSIS offers a comparative analysis of the various types of dwellings to discover the important principles and elements that persist in all the dwelling types, common to the Malays, Chinese, and the Indians. The analysis is broken down into: patterns of use, religious matters, public/private, front/back, and male/female.

Chapter 5: CONCLUSION draws conclusion from the previous analysis. It discusses the factors that are important in the decision making process of designing a support system for the Malaysian people.

An EPILOGUE, provides some concluding remarks reflecting lessons learned from Part II of the documentation.

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*" When dwellers control major decisions and are free to make their own contribution to the design, construction or management of their dwelling, both the process and the environment produced stimulate individual and social well-being. When people have no control over, nor responsibility for key decisions in the housing process, on the other hand, dwelling environments may instead become a barrier to personal fulfillment and a burden on the economy".*

J.F.Turner  
Freedom to build



### 1.1 House, Housing, and People

Since the dawn of civilization, housing oneself has been an act of survival as basic as feeding oneself. It was, up until the age of mass-production, an activity unique to each individual.

John F. Turner describes housing as one of the activities, "*...which are relevant to personal life; that is, those which can act as vehicle for personal fulfillment, assuming that fulfillment and maturity in turn depend on personal responsibility for making decisions that shape one's own life*". He adds, "*housing is one such activity as are all those on which the immediate ends of life depend : the cultivation and preparation of food, the clothing of oneself, the care of our bodies, the procreation and nurture of children and the sheltering of those activities*".( Turner 1972:153)

Today, housing is no longer an act; it is a product - a commodity like other everyday needs. In English, the word "housing" is very difficult to define for it can be both a verb and a noun. This ambiguity causes confusion when people of many diverse disciplines - planners, architects, economists, politicians, etc., are making decisions upon it.

John F. Turner, in his book Housing by the People, clearly pointed out the critical differences between the interpretation and the resultant effects;

*"In English, the word "housing" means both the stock of dwelling units (a noun) and the process by which that stock is created and maintained (a verb). It is entirely reasonable to speak about the market value of houses. It is also entirely reasonable to speak about the human and social values of housing action, to*

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*housing processes. But it is absurd to mix these sets of terms and their meanings. As the cases show, the performance of housing, i.e., what it does for people is not described, by housing standards, i.e. what it is, materially speaking. Yet this linguistic inability to separate process from product and social value from market value is evident in both commercial and bureaucratic language.*

*Social and institutional processes have many more or less quantifiable aspects: but considered as understandable wholes, they are only partly quantifiable. Monetary or market values cannot be placed on them. And it is a disturbing sign of decay of language and values in the modern world that official housing, building, and planning terminology universally confuses the meanings of housing and of housing value". (Turner, 1976: 64-65)*

Similarly, John Habraken in his book Supports: An Alternative to Mass Housing stresses the crucial distinction between the action, as he terms 'dwelling' and the production , 'housing'. Dwelling was not, according to him, what housing had become: concerned with efficiency, functions, certain forms or meeting quotas.

*"...dwelling is the result of a process, and that it is this process which requires our attention in the first place, finds no hearing. Everyone wants to build dwellings, regardless of what is meant by the term; no one is prepared to regard housing in the light of a social activity preceding house building. Especially insofar as this activity conditions the set of building. The search for the dwelling is in full spate and follows a direction which is characteristic of the thought process underlying it. For the question posed in terms of production; the problem is approached 'functionally' ". (Habraken, 1972: 17)*



---

## 1. INTRODUCTION

Housing as we know it today did not exist until the beginning of the 20th century when the Industrial Revolution brought about the need for housing for thousands of factory workers. What occurred was the 'prelude' to the ubiquitous mass housings exist today.

After WWII, the need for housing was acute resulting from the destruction of cities, the relocation of entire populations, and the subsequent baby boom. Mass housing and modernism provided useful tools for both the politicians and the architects in their visionary zeal to reconstruct Europe in a new image. To the politician, quantity replaced quality as a criteria for housing policy. And to the architects, it was their utopian dream come true - repetitious concrete slabs and glass boxes symbolizing the equality of mankind. This vision then spread outside Europe to the rest of the world. Replicas of Le Corbusier's designs for Paris were built all over the First World and the Third World - all alike regardless of the peculiarity of the different locations, climates, cultures and people.

N. J. Habraken, J. F. Turner, and Hassan Fathy were among the many who criticized Mass Housing for it ignored the social aspect of housing and the relationship of the housing process to the people.

In the early 60's, Habraken warned against the failure of mass housing - *"It need not surprise us if the approach proves wrong because individual human action forms part of the housing brief. We are after all dealing with an important expression of human civilization: to build dwellings is par excellence a civilized activity, and our civilization is by no means confined to the activities of a number of more or less talented architects. This is perhaps the least part of it, for civilization*

---

*is first and foremost rooted in everyday actions of ordinary people going about their business" (Habraken, 1972: 11).*

Mass housing, Habraken argues, "reduces *the dwelling to a consumer article and the dweller to consumer*". And the house, in its natural sense, has lost its meaning - the house which according to him, "*... is an important means of illustrating (mans's) position in life. It was his social expression, his way of establishing his ego.*"

Hassan Fathy, in a similar tone, wrote "*... a house is the viable symbol of a family's identity, the most important material possession a man can ever have, the enduring witness to his existence ...*" (Fathy, 1973: 33). He criticized the Government's attitude towards people as "millions". He argued that for as long as the government regard the people as "*uniform, inanimated, unprotesting millions*" to be "*shovelled into various boxes like loads of gravels,*" they miss the biggest opportunity to save money ever, for Man naturally seeks to house himself. He wrote, "*...you no more have to build him a house than you have to build nests for the birds of the air*".

Habraken speaks of a similar theme when he explains the "natural relationship" between building and dwelling. He argues that dwelling is first and foremost a relationship between man and environment, and because the relationship arises from the most common actions of daily life, it is rooted in the foundation of man's existence. This relationship is therefore an indispensable factor in the housing process.

*"Dwelling is indissolubly connected with building, with forming the protective environment.. These two notions cannot be separated, but together,*

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## 1. INTRODUCTION

*comprise the notion of man housing himself; dwelling is building.*" (Habraken 1972:18).

Yet Mass Housing has suppressed this natural relationship, and replaced it with pre-conceived, pre-packaged notions of housing. This lack of consideration of the forces of the "natural relationship" is the failure of Mass Housing, and the problems associated with Mass Housing are the manifestation of this failure. Uniformity, the unnatural state of affairs which is the hallmark of Mass Housing, occurs because of an artificial imitation of the housing process which substitutes the natural, spontaneous and vibrant act of dwelling. Rigidity, is unavoidable because Mass Housing pre-supposes a finite set of lifestyle patterns for the community and individuals, and is thus unable to adapt to new circumstances. Even the economic goals, one of the stated reasons for Mass Housing, are not met, as evidenced by the festering, gutted hulks of huge "Housing Projects" scarring the landscape of American cities.

Clearly, then, the individual, the force behind the natural relationship, must be re-introduced into the housing process. His role must be re-defined, and renewed in the context of modern day urban housing. For ultimately, the success of housing is determined by its occupants, and the individual must be engaged whenever possible, to ensure this success.

---

## 1.2 Supports as an alternative

In the 1960's, the universal validity of Mass Housing was questioned by John Habraken. He argued that in spite of Mass Housing techniques, which allowed governments to build many dwellings in a short time, there was still a shortage of dwellings. This implied that Mass Housing was not a sufficient means of production (of housing), and as such, there was indeed no industrialization of housing yet. It was a fundamental mistake to associate Mass Housing with industrialization. In light of this realization, Habraken and other members of the Dutch architecture community founded SAR (Stichting Architecten Research) as a foundation for research to investigate better ways to deal with the problems of the design and construction of housing in Holland. They proposed a methodology for designing adaptable dwellings by means of "supports" and "detachable units", based on the "supports" concept that had been developed by John Habraken.

The supports concept recognizes the problems and constraints of having to house large populations, and attempts to involve, as much as possible, the dwellers in the building process. Habraken defined the supports concept as "*... one in which the dwelling is not a product that can be designed and produced like any other commodity, but is a result of a process in which the user can make decisions within a larger framework of common services and infrastructure.*" It implicitly recognizes that the dwelling, regardless of its physical dimensions, consists of two areas of responsibility and decision making. One of these is the domain of the dweller, who is allowed to change and adapt the living space to suit his own needs and preferences. To fully exploit modern factory-based mass production, and also

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## 1. INTRODUCTION

to comply with laws and regulations, the user is presented with a set of standardized elements to accomplish this task.

The other part is the responsibility of the community, and is concerned with the structural framework necessary to support the dwelling spaces (termed "detachable units"). This framework is appropriately known as the supports.

Therefore, in the supports concept, there are no fixed, pre-determined units, rather, there is a collection of dwelling units, each of which can be adapted to suit its occupants.

John Habraken argues that supports concept overcomes the disadvantages of Mass Housing. As mentioned earlier, the use of standardized elements in the building process allows these elements to be rapidly and economically produced, thus truly industrializing the housing process. Yet, the dweller maintains control over the design of his dwelling, allowing him to claim the unit for himself. An individual's most important material possessions is once again truly in his hands, to craft and shape as he so pleases, and to become an enduring testament to his existence. It is a living thing, filled with vibrance and expressiveness, able to transform and renew itself as it's owner's needs and aspirations changes over time. With the dweller assuming his rightful responsibilities, the house is once again the representation of individual identity. The natural relationship is restored.

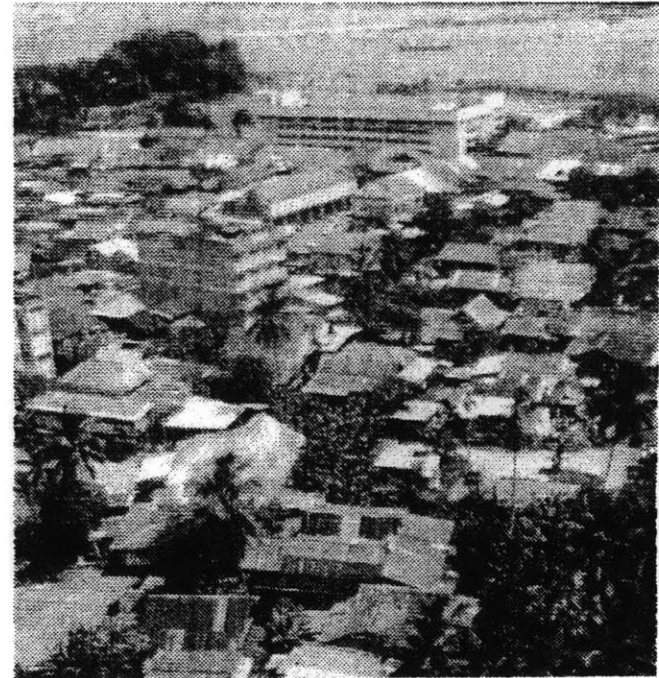
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### 1.3 Supports in Malaysia

The supports concept, with its inherent advantages, may provide a viable alternative to existing housing schemes in Malaysia. Mass Housing, which is the current approach of the government, does not take local culture into consideration. The Malaysian people consist of a diversity of cultures - Malay, Indian and Chinese- all of which have long-lived and powerful cultural traditions that dominate their ways of life. Therefore, the cultural aspect of housing cannot be ignored. The idea of the individual having control of his environment, as mentioned in the supports concepts, allows his cultural needs to be addressed.

As a developing country, Malaysia was subject to rapid urbanization, which then brought about an acute housing shortage, especially in urban centres which felt the full brunt of the effects of rural migration. For example, in Kuala Lumpur, the capital, one out of every three persons is a rural migrant. Most of them live in squatter settlements which make up about 25% of the city area. (Sidhu 1978:62). These rural migrants arrive with strong cultural values and traditional ways of living, yet in their new environment, they are unable to live the way they used to, thus making them feel alienated from the environment.

To further complicate the matter, the government has to take into account the different cultures when devising a housing scheme. Although these cultures do possess similarities, they are distinct enough that housing schemes intended for one culture will be incompatible with another. But the Malaysian government seems to have disregarded this problem, and like other governments facing similar predicaments, its approach to overcoming the housing shortage problem has been



A typical squatter settlement in Malaysia

## 1. INTRODUCTION



A typical public housing in Malaysia's urban areas

to provide "full package" dwelling, usually high-rise, high-density Mass Housing as practiced by western industrialized nations. Not only are the housing structures ignorant to the needs of the individuals, but even worse, the units, with their Western layouts and cultural influences, are totally ignorant of the practices and lifestyles of all three cultures. For example, the concept of compartmentalizing different activities into designated rooms is totally alien to the Malay culture. Furthermore, the spatial relationships of these rooms (e.g., having the kitchen next to the living room) blatantly contradicts the living patterns of the three cultures. Also, climatic concerns were left as an afterthought in the design of the structures. The units are designed for relatively small, fixed-sized nuclear households, but in Malaysia, the extended family is still an important household type, comprising approximately 28% of all household types. The pre-packaged housing units are not flexible enough to accommodate these households. Therefore, the housing units suit no one.

The supports concept specifically leaves the design of the dwelling units, to the individual. This flexibility is exactly what is needed to allow the different cultures to adapt the living spaces to identify with themselves and their society. It is also possible for the different cultures to make full use of the living space to deal with the common, extended families, yet, more modern families can also be accommodated.

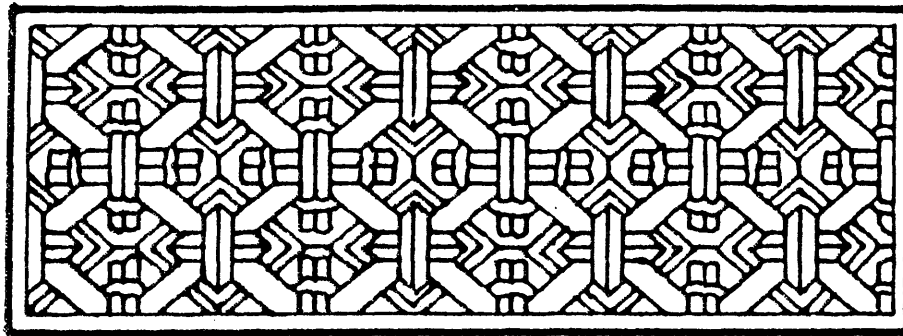
The government, too, stands to gain from this concept. It can avoid having to design separate housing for each of the three cultures, while it effectively deals with the cultural alienation common in Mass Housing.

It should also be noted that the support system need not necessarily be built

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entirely with modern construction techniques and materials, as the supports concept does not depend on the use of any particular construction techniques or materials. Therefore, it is possible to design a support system using traditional materials, thus reducing costs.

The detachable units can also take advantage of local materials and expertise. In Malaysia, most housing is still built by traditional craftsmen, but modern construction techniques are inevitably leading to the demise of these professions. The supports concepts holds out promise for the survival of these crafts by engaging craftsmen to build the detachable units. For instance, a Chinese tenant may hire a Chinese carpenter to furnish the interior spaces of the unit according to the traditional ways that they are accustomed to. Instead of gradually eliminating this class of workers, the government can provide them with active employment, thus allowing these crafts to survive and thrive.



Detail of a Chinese screen panel with the tortoise motif, traditionally believed to bring luck to the dweller.



Detail of a Malay screen panel with a flower motif, a common theme in Islamic arts worldwide.



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## 1. INTRODUCTION

### 1.4 Impediments to Implementation in Malaysia

Despite the arguments presented in the case for Supports, it is unlikely to be implemented in Malaysia in the foreseeable future. The political realities of housing in present-day Malaysia presents obstacles that must be overcome before this concept can be fully explored and developed.

In most other developing countries, housing has become an important and powerful tool in local politics. Its quantity is often used to represent the degree of urbanization, industrialization, and general progress achieved. Among housing schemes, mass housing is the form best suited to showcase the progress made by the country. In Singapore, for instance, the widespread uniform mass housing estates serve as a very visible, though superficial, symbol of integration and harmony. Therefore, it is not surprising that the Malaysian government frequently opts for mass housing developments as they are most likely to impress both citizens and outsiders alike. The government views support systems as belonging to the same category as the site-and-services approach to housing, even though this is not the case. In the site-and-services approach, the government provides only the infrastructure, e.g., roads, sewage, electricity, necessary for housing, and tenants are charged with building their own dwelling from the ground up. The resulting structures appear disorderly and tend to overly emphasize cultural differences. Therefore, it is the direct opposite of mass housing, and the government has avoided it because of the incompatibilities with its housing objectives. Support systems moderate between the two extremes of mass housing and site-and-services. Completed building structures are constructed, as with mass housing, but tenants are still able to adapt the living space to their own needs. Its philosophy is entirely

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consistent with the government's policies to foster a common Malaysian identity within the distinct ethnic groups. Therefore, before they can be implemented, the Malaysian housing authorities must be convinced that support systems are indeed compatible with their housing goals.

Another difficulty arises due to the social barrier that exists between government officials and people. The Malaysian people are generally deferential towards authority. They would rather refrain from interaction with government officials or architects, and often feel intimidated when such interactions take place. At such meetings, it would be difficult for them to state their requirements and express their opinions with the result that they are often resigned to whatever the authorities have in store for them. Often tenants find it easier to make their own adaptations later, without interference from the authorities, than to discuss their individual needs early in the design process. Architects and city planners, on the other hand, may disdain the opinions and needs of regular folk, making communication even more difficult. To resolve this difficulty, go-betweens or middlemen must be employed to convey the opinions of one group to the other. Instead of communicating directly with the authorities, the tenants may, for example, form a body in which they can freely discuss their needs and voice their opinions among themselves and elect a representative to convey those needs to the designers.

It is my belief that these problems, although significant, can be overcome provided that there is a firm commitment by the government to do so. Support systems are entirely viable in Malaysia, and so an exploration of this concept is justified, and should be undertaken in the search for a better alternative to existing housing in Malaysia.

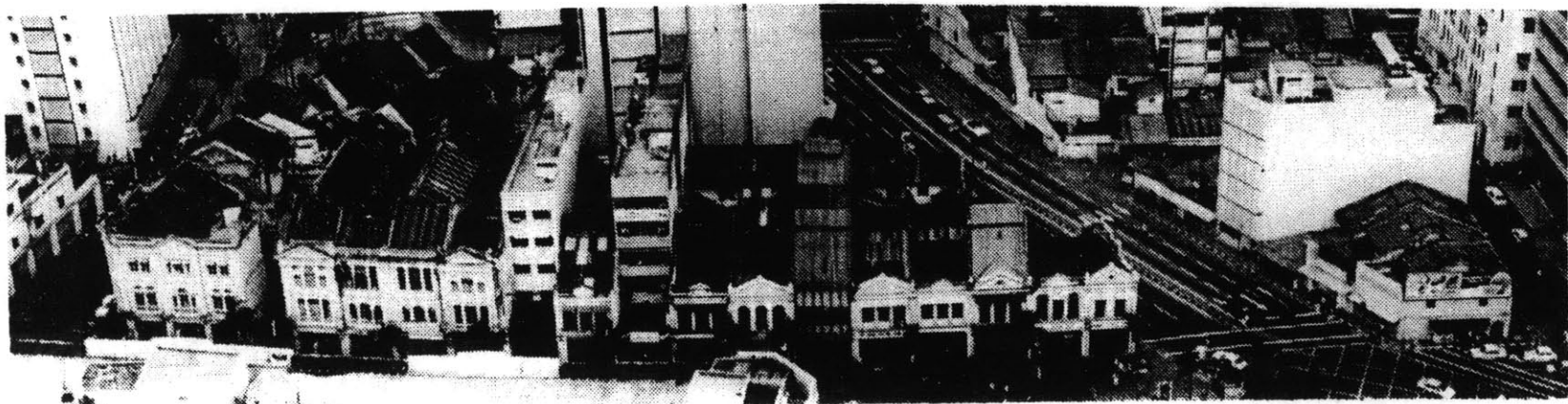
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## **1. INTRODUCTION**

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*"History has shown that ethnic and cultural diversity in Malaysia has not weakened the nation, but has allowed it to achieve one of the fastest rates of development in Southeast Asia. These qualities of the nation and the people need to be further strengthened and mobilized if the challenges that lie ahead are to be overcome."*

**Third Malaysia Plan**



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## 2. BACKGROUND

The purpose of this chapter is to provide background information on the population of Malaysia and on the historical events that contributed to it. This information will then lead to discussions of how each of these major cultures has influenced each other and how much impact cultural assimilation and exchange in the past have had on the lifestyles of the Malaysians today.

It is hoped that these discussions will help strengthen the validity of the supports system which is proposed on the hypothesis that there are many shared elements among these diverse cultures from which the supports can be derived. The hypothesis should be strengthened by the tendency of these groups to merge towards social integration, as the economic factors are pushing income rather than race as the primary social division.

Throughout this chapter, the term "Malaysia" is used to refer to the Peninsula of Malaysia. Sabah and Sarawak form the rest of Malaysia, and are not included in the discussion because their rather unique historical events occurred independent of the events in the Peninsula.

The term "Malaysian" refers to all the citizens of Malaysia of all ethnic backgrounds. It is not to be confused with the term "Malays" which refers to one of the indigenous groups in Malaysia.

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## 2.1 The Malaysian People

The 1980 census of Population and Housing used the term “Ethnic Group” to define persons possessing a common language, religion, and/or customs. The data on ethnic composition show that of the 11.4 million people in Peninsular Malaysia, 6.3 million (55%) were Malays, 3.9 million (34%) were Chinese, and 1.2 million (10%) were Indians. A racially “mixed” population in Malaysia was not a new phenomenon. As the historical centre of trade and shipping routes between China to the East, and India and the Middle East to the West, the Peninsula had historically been a port of call and place to settle for people of diverse cultures and origins since antiquity.

Historical evidence shows that trading contacts were established with both China and India as early as the 7th century B.C. (Rabushka, 1973: 17). By the beginning of the Christian era, there were well developed commercial and trading contacts between the Peninsula and South China, India, and the West (Ministry of Information, 1972). However, it was during period of the British Colonialism (1824-1957) that the present pluralistic structure of the Malaysian population first emerged. While the pre-Colonial settlers tended to mix with the local natives and evolved a unique assimilated culture, the later settlers who were brought in by the British in massive influx, tended to settle among themselves along ethno-linguistic lines. This formed a division of labor among the Malaysian societies along similar boundary lines.

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## 2. BACKGROUND

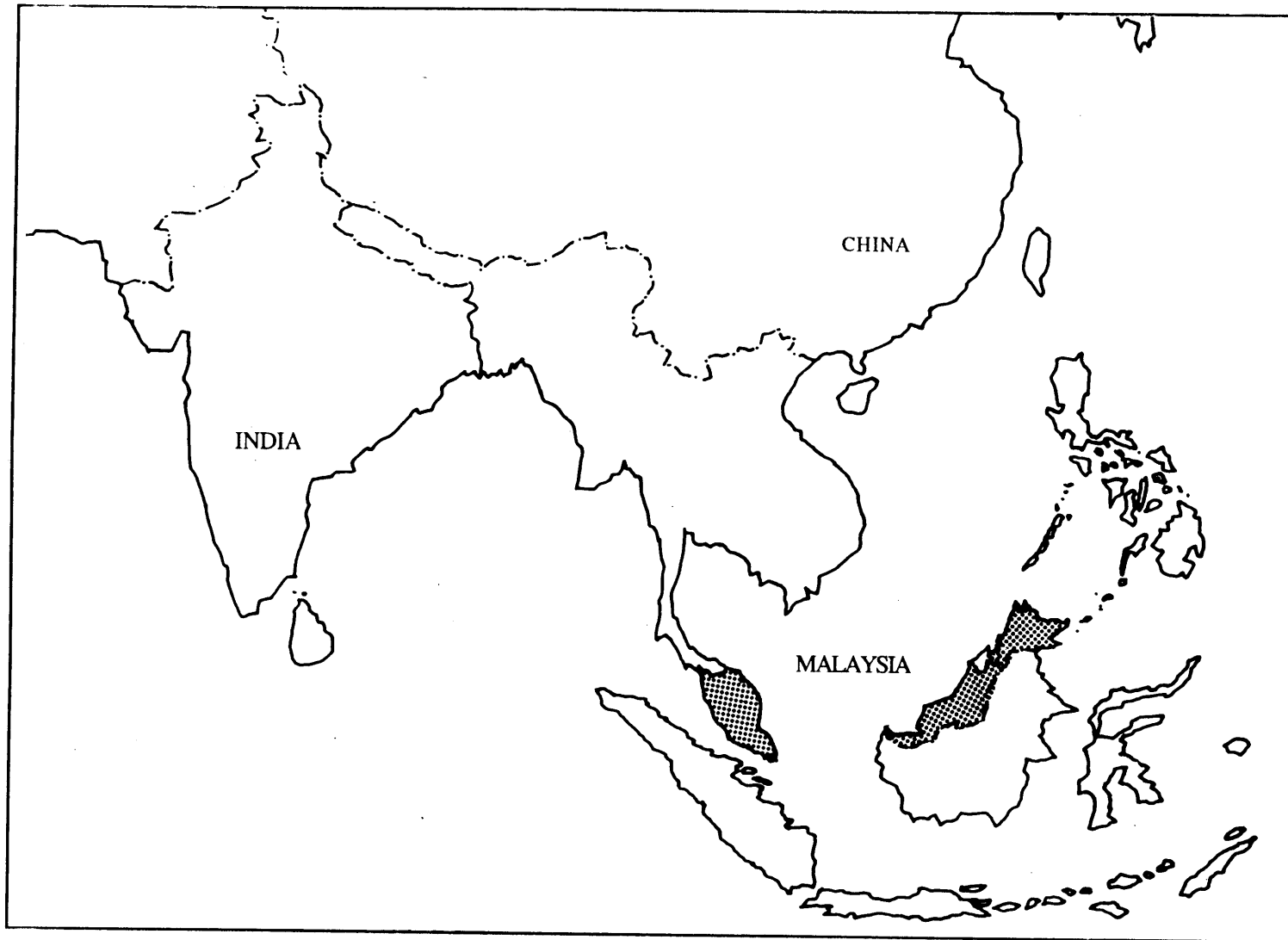
The Malaysian people was described in 1939 by Furnivall:

*“ They mix but do not combine. Each group holds by its own religion, its own culture and language, its own ideas and ways. As individuals, they meet but in the marketplace, in buying and selling. There is a plural society, with different sections of the community living side by side, but separately within the same political unit.. Even in the economic sphere there is division of labor along racial lines. Natives, Chinese, Indians and Europeans all have different functions ...”* (Furnivall, 1939: 304)

Since independence, in 1957, the central theme of Malaysian politics has been to restructure the society by erasing the economic and social differences among these diverse groups. The New Economic Policy (1971-1990) which was a continuation of the Malaya Plan (1950-1970) was launched on the theme:

*“... to reduce and eventually eradicate poverty by raising income levels and increasing employment opportunities for all Malaysians, irrespective of race; [and] ... accelerating the process of restructuring the Malaysian society to correct economic imbalances so as to reduce and eventually eliminate the identification of race with economic function.”*

(Malaysia 1971: 1)



MAP OF SOUTH EAST ASIA, INDIA & CHINA



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## 2. BACKGROUND

### 2.1.1 The Malays

The Malays are the natives of Malaysia, known as the “bumiputras”, or “sons of the soil”. Archaeological evidence showed that the Malays migrated from Asia between 2500 B.C. and 1500 B.C. (Winstedt, 1947:11). The origin of these Mongoloid Indonesians or Proto-Malay has been traced back to the north-west of Yunan. Linguistic evidence showed that they came from the Malayo-Polynesian, also known as Oceanic or Austronesia family (Winstedt, 1947:17). This language family is spoken from Taiwan to New Zealand, and from Madagascar to Easter Island. The modern Malays in Malaysia today are the Proto-Malays plus many foreign strains derived from inter-marriages with Chinese from the Chou period onwards, with Indians from Bengal and Deccan, with Arabs and Siamese. Differences in the mixture in different localities have produced different characteristics, making it possible to distinguish the Malay from different places of origin (Winstedt 1947:15).

### Early History:

Because of its critical location, the Peninsula was the setting for the emergence of several important and advanced civilizations in this part of the world. The earliest known was the Hindu-Malay kingdom of Langkasuka (formed around 100 A.D.) which was situated in Northern Malaysia. Later, a Buddhist Kingdom of Sri Vijaya arose in Palembang, Sumatra which dominated the whole of the Malay Peninsula. A colonist of Sri Vijaya established a settlement in Temasek (now Singapore) which later became a full-fledged kingdom on its own until it was crushed by another Hindu-Malay empire called “Majapahit” of Java. The exiled king of Temasek, Parameswara, fled to Malacca which, by the 15th century became a prosperous kingdom. By 1414, the Malaccan ruler converted to Islam, and as Malacca

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grew in strength, Islam too continued to spread throughout the Peninsula, replacing the old Hindu culture. Before its downfall in 1511 at the hands of the Portuguese, Malacca enjoyed the status of a metropolis, containing a diverse population of many nationalities (Purcell, 1967; Kennedy, 1970).

Through the confluence and conflicts of these various cultures, Peninsular Malaysia also became one of the greatest “melting pots” in the world, having integrated into its own indigenous Malayo-Polynesian culture, some of the most highly ranked and advanced cultures in the world, including those of China, India, and the Middle-Eastern kingdoms (Choo, 1978:20).

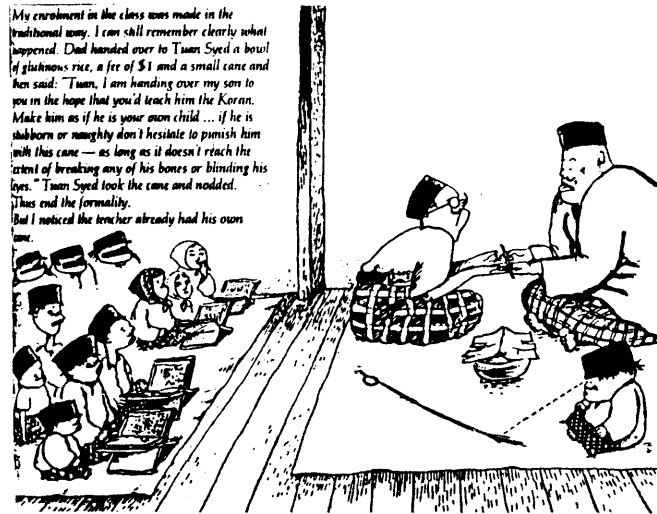
#### Colonization:

The colonial era, which lasted over four centuries (1511 - 1957), under several changes of hands, (first the Portuguese, then the Dutch, and later the British;) virtually eliminated the Malay dominance in the land. Although the Malay Sultans remained as the figure heads of state during that period, the real ruler was the colonial government. Throughout the period, the Malays were kept busy farming and fishing, while immigrant Chinese and Indians were brought in to exploit the land and develop the cities.

The end of the British rule in 1957 marked the beginning of a gradual rise of the Malays' participation in the country's social and economic development. Being the indigenous people, the power of ruling after the Independence was granted to them by the British. Thus today, although they are far behind in the urbanization process, and are the weakest in economic aspects, political power is in their hands.

## 2. BACKGROUND

### Customs and Religion:



from Lat, The Kampung Boy, 1979

All Malays are Muslims, identified by their arabic names, conforming to Islamic Law, and guided by the moral precepts revealed in the Quran. The constitution of the Federation of Malaya distinctly defines a Malay as " *a person who professes the Muslim religion, habitually speaks the Malay language and conforms to Malay customs*". (Article 160 (2)).

Islam permeates everything that is Malay, from the daily greeting to daily meals. The mosque is the heart of every Malay village. In fact, the audio distance of the Prayer call of the mosque was traditionally used as the village boundary marker. The Prayer call, the *muezzin*, which is faithfully chanted through the loud-speaker five times a day becomes an invisible clock that organizes the Malays' lives.

Cleanliness, as taught by Islam, is regarded as a prime virtue by the Malays. A Malay housewife dutifully keeps her houses absolutely clean at all times. Each Malay house has full length windows to catch maximum light, and a water jar at the foot of the front step for washing feet before ascending inside. Ritual ablutions are performed at least five times a day before each prayer and every time the Quran is touched.

Malay children are sent to a religious teacher to learn to read and recite the Quran, long before they are old enough to be sent to secular schools.

Apart from Islam, another important factor that governs the every day life of a Malay is the *adat*, which is a set of customary laws that has been passed on for generations since the pre-Islamic or pre-Hindu era. The *adat* dictates the proper way to dress, to speak, eat, sit, etc. It also dictates the proper posture when addressing someone of a higher rank, or of an older age, or of the opposite sex. The Malays take their *adat* so seriously that they have a proverb saying, "*Biar mati anak, jangan mati adat*" (Let the child perish, but not the *adat* ).

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### 2.1.2 The Chinese

#### Early History:

Chinese presence in the Malay Peninsula possibly dates to the era of the three kingdoms (221 - 265 A.D.), when expeditionary forces were sent overland to Yunan and Burma. It has been theorized that during skirmishes, forces were separated from the armies and eventually wandered into the Peninsula (Kohl, 1984:5).

Langkasuka, a Malay empire mentioned in the previous sub-chapter, was called “Lang Ya Sseu Kia” in Chinese Buddhist chronicles. A prince of Langkasuka sent an envoy to China in 515 A.D. and further missions were dispatched in 523, 531, and 568 A.D. (Purcell 1948:13). The Kingdom of Sri Vijaya which extended throughout the Malay Archipelago, was known to the ancient Chinese as Che Li Fo-Chi (Purcell 1948:13). An ambassador from Fo-Chi was sent to China in 670 A.D. , at which time, over 1000 Buddhist monks were residents of Fo-Chi (Kohl 1984:5). San-Fo-Tsi, which was theorized to be the Empire’s colony in Northern Malaysia, was the oldest Chinese settlement in Malaysia. In 1377, Lin Tao Ming, a leader of San-Fo-Tsi, seized control of Palembang, Sumatra, which remained a centre for Chinese settlement for many years (Winstedt 1951:18).

The kingdom of Malacca (1400-1511), under Parameswara, had close ties with China who came to regard it as its protectorate. Parameswara’s later successor, Sultan Mansur Shah, married a royal princess from China, Hang Li Poh in 1426. She came to Malacca accompanied by 500 handmaidens who, like herself, converted to Islam and married local Malay men. Their descendents were called “Biduanda China”.

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## 2. BACKGROUND

### Chinese Immigration:

Chinese immigration to Malaysia occurred in two phases, each producing a Chinese culture of a distinct nature. The first phase was the era when the Chinese came as traders and merchant men, from the Malaccan Sultanates to early Colonial periods (15th to 18th century). They settled in Malaysia and established themselves as “Straits Chinese”. They intermarried with the local women, since virtually no Chinese woman came to Malaysia until the mid-19th century. The assimilated culture produced by these intermarriages is known as “Baba”. The Babas and the Nyonyas (the term for the Baba’s womenfolk), wear Malay dress and eat Malay food. Although their social structure was based on Chinese habits, their language was based on the Malay language with a few Chinese adoptions.

The second phase of Chinese immigration began during the middle of 19th century, when the lure of tin mining, and later the production of rubber, caused the Chinese to pour into Malaysia from Southern China. They were commonly referred to as “*sinkeh*” (new arrivals) by the established Straits Chinese. Until the post 1860’s, the Chinese in Malaysia had little hope of returning to China because of the antagonistic attitude of the Ch’ing government towards immigrants. As a result, the Straits Chinese who came before the 1860’s tended to settle permanently and regarded Malaysia as their adopted homeland. The *sinkeh*s, on the other hand, retained their relationship and loyalty to China.

A massive influx of these new immigrants came to Malaysia after 1860 to escape hardship in China as a result of the Tai Ping rebellion and other natural calamities (Tregoning 1961: 196). The Chinese composition in Malacca today includes the Hokkiens, the Cantonese, the Hakkas, the Teo Chew, the Hainanese and other small groups such as the Hing Huas, Hok Chew, and the Kwang Sai (1980 Population Census).

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The Hokkien Chinese who originally came from the coastal Fukien districts of Chiang Chiu, Chuan Chin, Chuan Chin, and Eng Chuan, represents the largest group among the Chinese lingo-ethnic subgroups (Tregoning 1961:196). They were historically the most prosperous and the most settled of any Chinese in Malaysia. Today, they dominate a bulk of the trading and shop keeping class in the urban areas.

The Cantonese of Kwantung Province are the other major group represented in Malaysia. They came from the agricultural area of See Kwan, Si Yap, and the coastal districts of Sin Neng, Sin Wee, Seow Keng and Wee Chew (Purcell, 1951: 316). In the earlier days of the Chinese settlements in Malaysia, the Cantonese who were numerous in the interior regions, helped clear the jungle land, worked as carpenters, blacksmiths, artisans, and were involved in tin production and commerce (Kohl, 1984:3).

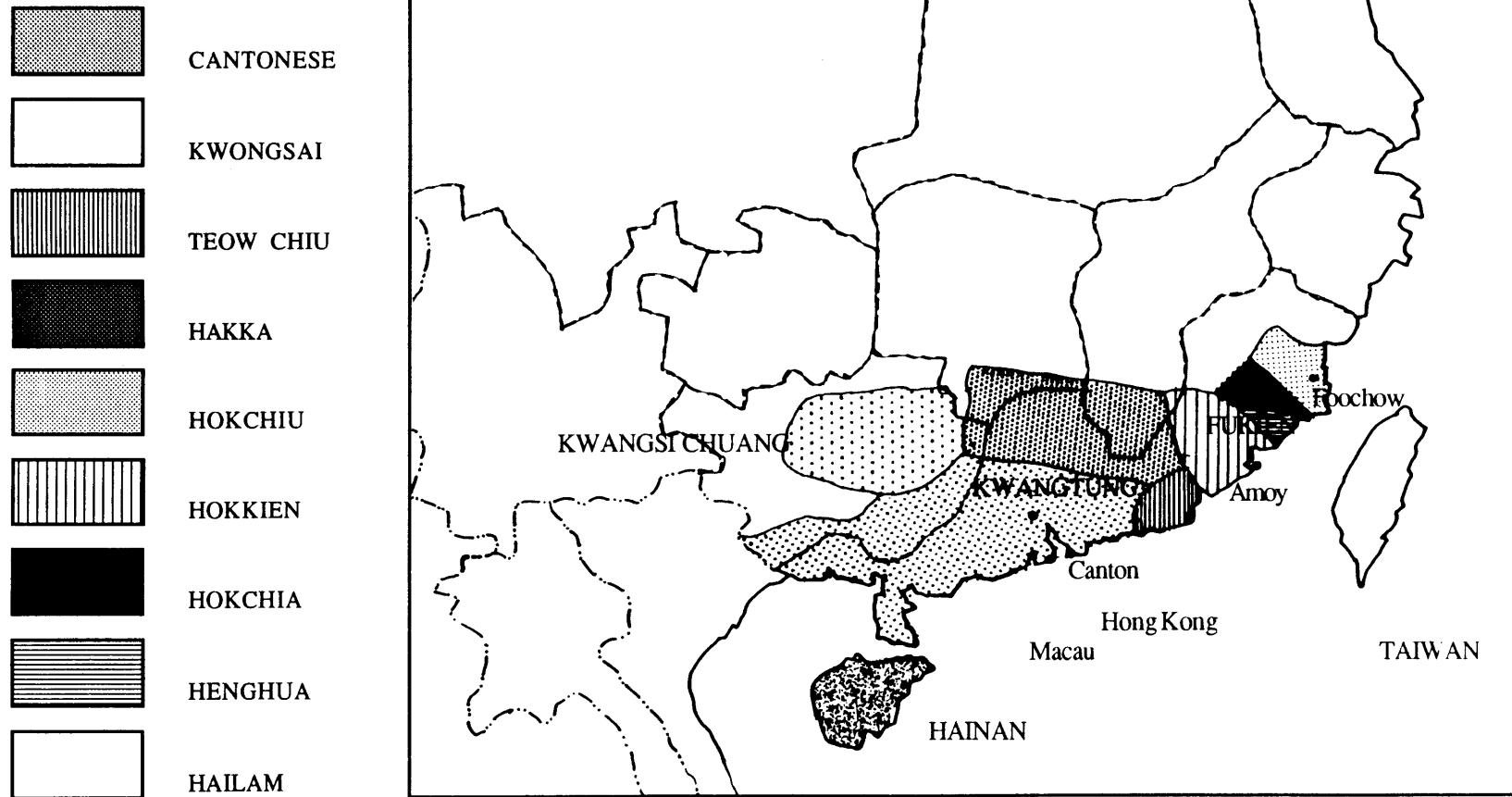
Another group that came from Kwantung was the Hakka. The Hakka people were originally from Northern China, and later migrated to the Southern provinces. Thus, they were regarded as aliens by the Cantonese. The rivalry between them existed in both China and Malaysia. The Hakkas in Malaysia were largely involved in the mining industries and later in rubber plantations.

The Teo Chew people also came from Kwantung, in the city of Swatow. They were the largest Chinese group in early Singapore, participating in fishing activities, as well as trading in gambier and pepper. They also developed market gardening from cleared lands bought from the Cantonese (Kohl, 1984:4).

The Hainanese, or Hai Lam people, came from Chiang Chou and other localities of Hainan island. In Malaysia, the Hainanese functioned as domestic servants or shopkeepers and were famous for their food establishments.

## 2. BACKGROUND

### LINGUISTIC GROUPS AND THEIR PRINCIPAL PLACES OF ORIGIN IN CHINA



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Customs and Religion:

Chinese immigrants brought their customs and habits to the new land and have since then had perpetuated them. The desire to retain Chinese customs and tradition was not just confined to the Sinkeh, but also prevailed among the Straits Chinese, including the Babas, who while absorbing many Malay habits and speaking the Malay language, retained the Chinese customs and religion. J.D. Vaughan commented that,

*“The Chinese are so attached to the habits of their forefathers that notwithstanding an intercourse with the Straits for many generations with the natives of all countries, they had jealously adhered to their ancient manners and customs.”*

(Vaughan, 1879)

However, the Chinese are also known to be the most tolerant in matters of religion as compared to the Malays and the Indians. Although most Chinese belong to either Buddhism, Confucianism, or Taoism; it is common among Chinese to worship deities of any one of these temples. One religious practice that is common among all Chinese regardless of religious affinities is ancestor worship. Most Chinese houses have a special area called Ancestral Hall, where tablets are set up for each deceased individual, to be honored daily.

Like the ancient Malays, the Chinese also believe in spirits, but the spirits they worship are those of heroes who later became deified, because of the good deeds or extraordinary courage. For that reason, different dialect groups may worship different heroes. One deified hero that is worshipped only in Malaysia and Singapore is Sam Po Kung. He is the spirit of the famous Admiral Cheng Ho of the Ming dynasty who, ironically, was a Muslim. He came to Malacca in 1408 and 1414, and helped to establish a relationship between the two kingdoms. Another popular local deity is Toh Peh Kung. However, Toh





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## 2. BACKGROUND

Peh Kung is not a deification of any special person as Sam Po Kung is of Cheng Ho. He is rather, a personification of the pioneer spirit in general. The Chinese worship spirits to bring good luck and to protect them against bad luck. An ancient Chinese saying which is reflective of Chinese belief proclaims, "*the most important factors influencing a person's life are fate first, luck second, feng shui third, virtue forth, and education fifth*". That is why it is not uncommon among the Chinese to abandon one deity that no longer seems to provide good luck and prosperity, for another deity.

Prosperity is an important word in Chinese culture, the word of greetings during Chinese New Year, often written in gold ink to adorn doorways, and is symbolized in a statue of Prosperity God, found in many Chinese living rooms.



Chinese boys during Chinese New Year celebration (from, Hoefler Jalan-Jalan, 1981)

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### 2.1.3. The Indians

#### Early History:

India's contacts with South East Asia can be traced back to the pre-Christian era (Hall, 1955; Sandhu, 1969). Although there are many different variations on the theory of Indianization of South East Asia, one thing is clear: that there existed a two way commercial traffic between India and Malaysia (and the rest of South East Asia) which gave birth to Indianized South East Asia and which has often been described as "Greater India".

Winstedt wrote:

*" ... with little exaggeration, it has been said of Europe that it owes its theology, its literature, its science and its arts to Greece; with no greater exaggeration, it may be said that the Malayan [Malaysian] races that till the 19th century, they owed everything to India: religion, a political system, medieval astrology and medicine, literature, arts and crafts ...*

*... India found the Malay as a peasant of the late Stone Age ... and left him a citizen of the world."*

(Winstedt, 1944: 183)

Until the Islamization of Malaysia in the 14th century, Indians enjoyed a prominent status as aristocrats and priests who helped rule the country (Sandhu, 1969; Hall, 1955). During that period, the arts, religion and customs (practiced, at least, by the aristocracy), were Hindu, and Sanskrit was the sacred language and the means of literary expression. Many words of Indian origin still remain in the Malay language, and the gods of the Hindu pantheon still remains in the Malay folklore. The Malay kings are still honored with Sanskrit titles such as "Duli Yang Mahamulia Sri Paduka Raja".

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## 2. BACKGROUND

The weakening Hindu authority in India, after the establishment of the Mughal empire in the 14th century attenuated the Hindu influence. Indian influence, however, remained strong, as it was one of the agents in the Islamization of Malaysia (Sandhu, 1969: 25). The Indian Muslim merchants who, by the 17th century, far outnumbered their Hindu counterparts, virtually eradicated the Hindu dominance by converting the Malays through inter-marriages. They were the ancestors of the “Jawi Peranakan” - a distinct group of people whose unique culture is an assimilation of the Malay and Indian cultures.

### The Indian Immigration

Other than the Jawi Peranakans, nearly all of the approximately 1.2 million Indians today are either themselves immigrants or descendants of recent immigrants, even though the Indian migration to Malaysia as mentioned earlier, has occurred since antiquity. The period of modern Indian immigration into Malaysia dated from the British founding of Penang in 1786, but it became a significant feature in Malaysian demography only in the later half of the 19th century, following the establishment of British paramountcy in India and the consolidation of British power in Malaysia.

Unlike the earlier Indians who represented a powerful and respected economic and political force, the later immigrants were chiefly illiterate laborers brought in by the British to clear up the jungle lands for rubber plantations, to build roads and railroads, and to serve as clerks and guardsmen in the British administration. The Indians in Malaysia today are locally known as either “Tamils” for all South Indians, or “Bengalis” for all North Indians. However, the actual ethno-linguistic composition of the Indian population in Malaysia is much more complex. It includes Tamils, Telegus, Malayalis, Sikhs, Punjabis, Pathans, Bengalis, Gujaratis, and others (Rajputs, Sindhis, Parsis and Mahrattas - who only



An Indian woman. ( from, Hoefer Jalan-Jalan . 1981)

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make up less than 0.5% of total Indians). Of this composition, a large majority of them are from South India. This is because the government in India only allowed the export of laborers from South India, since “the sturdier North Indians were required for British interests in India itself, in such services as the armed and police forces” (Sandhu, 1969: 63).

Among the South Indians, the Tamil group is the largest of all, representing nearly 80% of the total Indians in Malaysia. For that reason, Tamil is made the official Indian language in both Malaysia and Singapore. The Tamils who were all from Madras state, up to the 1930's, were largely employed in the rubber estates.

The Telegus, the natives of Andhra Pradesh in South India, have also been chiefly connected with the estate economy. They have traditionally been represented mostly in the states of Perak, Johor, and Kedah, mainly on the rubber and coconut estates.

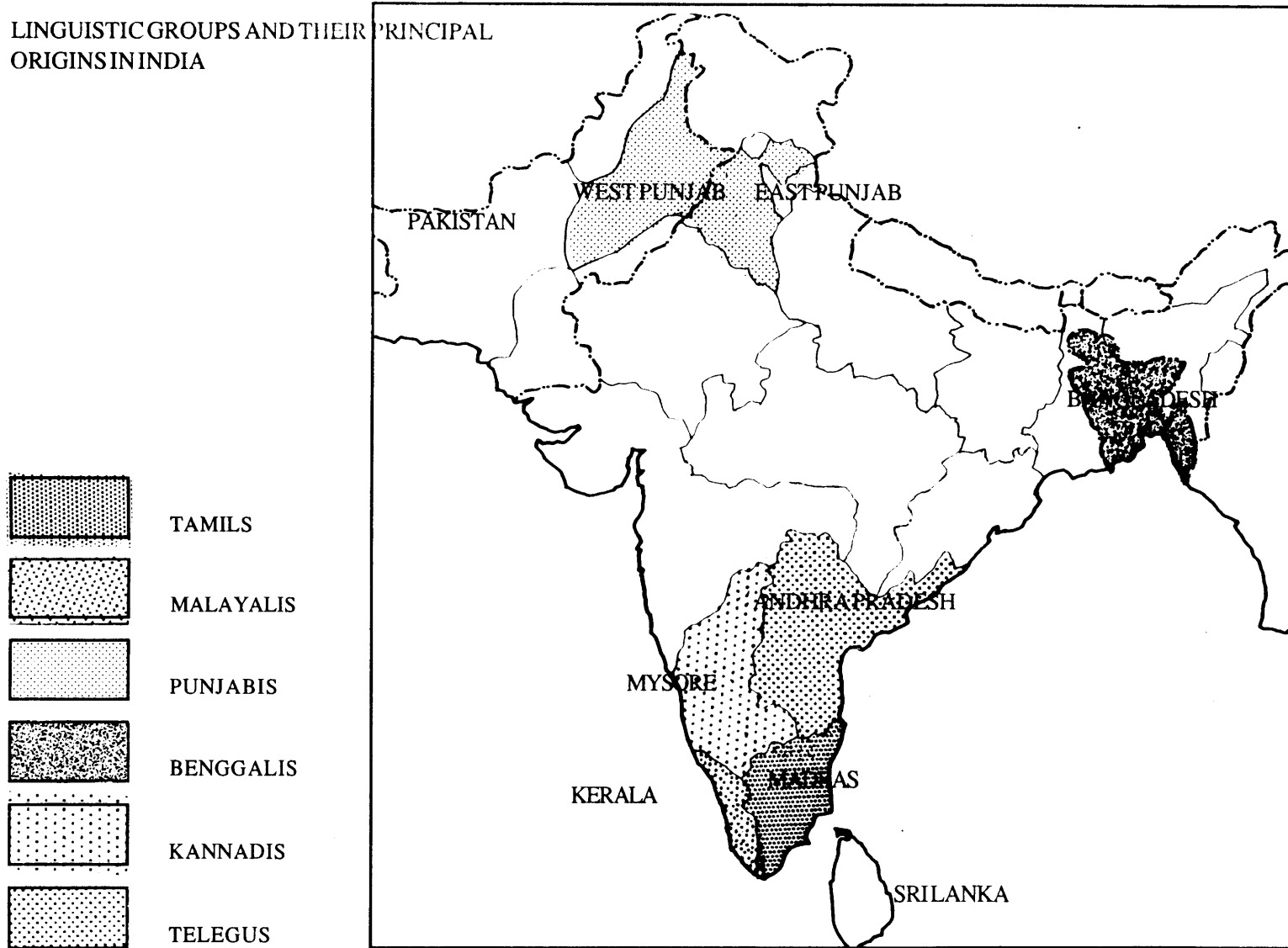
The Malayalis came from the Malabar coast in Kerala state. They were mostly employed in the administrative and clerical jobs. During the first few years of the post-World War Two period, a large influx of the Malayalis arrived in Malaysia to serve the British military bases in which they formed the largest Indian group in 1957 (Sandhu, 1969:65).

Of the North Indians, the Punjabis are by far the most numerous. And of the Punjabis who consist of Muslims, Hindus and Sikhs, the tall and generally bearded and turbaned Sikhs are the most numerous. Initially concentrated in such services as the police and military forces because of their size and build, Sikhs and other Punjabis are today found in almost every sphere of Malaysia's economy.

The rest of the North Indians are very small in number, and generally reside around urban centers, following such occupations as lawyers, doctors, merchants and guardsmen.

## 2. BACKGROUND

LINGUISTIC GROUPS AND THEIR PRINCIPAL ORIGINS IN INDIA



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## Custom and Religion

A large majority of Indians in Malaysia are Hindus, although the number of Indian Muslims in Malaysia is quite significant. With their colorful and elaborate temples, and their festive rituals, the Indians further enrich the Malaysian cultural scene. *Thaipussam* (ritual of purification) and *Deepavali* (festival of lights) are two of the many celebrations of the Hindu devotees, observed by other Malaysians with awe and fascination.

The Hindu faith permeates so deeply into the Indians' lives that the two become synonymous. The daily life of an Indian involves frequent reminders of the traditional norms. Every Indian house has one or more places where *pooja* (literally means "worship") is performed, especially by the women. An image of God is worshipped in this *pooja* area twice daily, at sunrise and sunset.

Mealtimes are religious occasions and observed with silent respect. At night and day, the *baghavadgita*, the holy book of the Hindu religion, is quoted or recited by old and young alike. Like the Chinese, the Indians also pay respect to their deceased family members and ancestors, as celebrated in the *shradda* ceremonies involving offerings for the maintenance of deceased ancestors by the family Brahmin priest.

There are seven stages of life, according to the Hindu beliefs, symbolized by the seven important rituals in the Indian culture - pregnancy, birth, investiture into studentship, marriage, attainment to medicancy and death - all performed by priests in connection with the particular event.

Many traces of Indian Hindu culture can be found in the rituals of the Malays as well as the Chinese. For example, the Chinese celebrate the grand finale of the Festival of the Nine Emperor Gods with an Indian-style fire-walking ceremony. Similarly, the Malay

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## 2. BACKGROUND

wedding ceremony is full of Hindu rituals such as the sitting in state of the couple dressed as Rajas for the day and the feeding one another with rice in front of their neighbors.



Hindu devotee during *Thaipusam* festival

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## 2.2 The Malaysian Scene

Although the multi-ethnic composition of the Malaysian population has existed centuries prior to the colonial era, the present pluralistic structure of the society is a direct result of the British "Divide and Rule" policy. During 133 years of rule, the British successfully suppressed opposition from the indigenous societies, the Malays and other Bumiputras, by "leaving them alone". Thus the majority of Malays were left to do what they had done for generations before - farming and fishing. At the same time, thousands of immigrants from India and China were brought in to provide the labor necessary to exploit the natural riches of the land - tin and rubber. The number of immigrants rose dramatically especially during 50 years of the Colonial era, such that by 1947, the total immigrant population actually outnumbered the local indigenous people. The areas where rubber and tin were produced were the areas most developed in terms of infrastructure, and thus became the urban centres of Malaysia.

Malaysia, at its independence in 1957, saw its people greatly segregated, socially, economically as well as geographically. The Malays, who were left behind in the urbanization process remained as peasants. The 1957 census showed that 90% of the Malays at that time lived in rural areas. Today, despite deliberate efforts by the government to increase Malays' participation in the urban economic sector, only 25% of the total Malay population live in urban areas (1980 population census).

The Chinese, on the other hand, are by far the most urbanized. The threat of Communism in the 1940's forced the British government to resettle nearly half a million Chinese from rural squatter settlements to new urban villages. The relocation helped solidify Chinese dominance in the urban centers. Today, the majority of the Chinese population are urban dwellers.



Posters and sign boards in Malaysia use four languages



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## 2. BACKGROUND

The Indians, who filled the majority of the administrative, clerical, and security services in the British administration, also occupied the urban areas. The decrease in rubber prices during the decades after the end of colonization brought about a rapid increase in the Indian concentrations in the urban centres. This was due to the migration of Indian rubber plantation workers to the city in search of other forms of employment. Today, 40% of all Indians live in urban areas.

The rapid rural to urban migration after Independence contributed to the increase in the squatter population. It was estimated that in 1957, almost half of the total population of Kuala Lumpur were squatter settlers (McGee T.G. 1967:146). This rural migration, instead of producing a greater mix among these three ethnic groups in the urban areas, has in fact exacerbated the existing ethnic segregation in the city because the rural migrants tended to settle in the areas belonging to their ethnic group, thus further strengthening their separate social enclaves. Kuala Lumpur, at that time, was described by McGee as:

*"...a mosaic of social and cultural worlds. The tightly packed shop-house area of Chinatown; the principle area of Malay settlement - Kampung Baru; and the areas of Indian settlements, such as Sentul and Briarfields, were the cultural and occupational foci of a great mass of the city's population."* (McGee 1967: 147))

The unemployment that came hand in hand with rapid urbanization deepened the economic disparity among the diverse ethnic groups, which in turn, caused racial tensions to erupt in the 1969 Racial Riot.

Awakened by the Riot, the Malaysian government finally realized the urgent need to restructure the Malaysian society by erasing existing social and economic boundaries. Suitably motivated, the Malaysian government instituted the New Economic Plan (NEP 1970-90). The immediate result of the NEP was a massive influx of Malays from rural areas into urban

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areas, and a rise of a Malay commercial and industrial community. However, this large scale migration also brought about an acute housing shortage. In Kuala Lumpur alone, it was estimated that in 1980, there were approximately 240,000 inhabitants (22% of the population) who lived in squatter settlements. About 40% of these squatters were Malays. More than 75% of these people were newly arrived migrants from surrounding areas (Leong 1981: 273).

However, the NEP also noted promising growth of new mixed middle class towns in which Malaysians of different ethnic backgrounds live side by side. These new towns, such as Petaling Jaya and Cheras, have grown extensively especially since the formation of Kuala Lumpur as the Federal Territory in 1972.

In the Fourth and Fifth Malaysia Plans (1980-90), the provision of housing and other basic services, the rehabilitation of squatter settlements, and the eradication of poverty and social inequality were the top priorities. The government's approach to meet housing needs has been public housing programs. Of the housing built in urban areas, approximately 35% were low cost walk-up high-rise flats, which were carbon copies of those built all over the world.

The Malaysian scene today is one in which three different groups of people, each with very strong culture and traditional values, meet in the alien environment of modern cities, searching for economic betterment. History has left them segregated into separate enclaves. But gradually, they are merging into a new environment where it is income, rather than race, that sets the social boundaries.

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## 2. BACKGROUND



Typical housing in the new mixed towns

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*"If provision of shelter is the passive function of the house,  
then its positive purpose is the creation of an environment best suited  
to the way of a people - in other words, a social unit of space".*

Amos Rapoport  
House, Form and Culture



Nearly two-thirds of the Malaysian population live in urban centres. In 1970, one out of every third inhabitant of Kuala Lumpur district was a migrant from rural areas (Sidhu, 1978: 62). This indicates that a large percentage of Kuala Lumpur's population today belongs to either the first or second generation of rural migrant whose context and ties to the rural life remain strong.

For that reason, this chapter tries to illustrate the lifestyles and living environment of these people by studying the various types of dwellings they inhabit in the city - namely squatters, public housing and (to a lesser extent) shop houses, and compare them to the lifestyles and living environment in rural areas. The information on traditional and rural houses is gathered from various books and articles on those subjects; whereas those on the squatters and public housing are the result of a survey conducted during the summer of 1991.

#### 3.1 Traditional Houses

A large majority of all the houses in Malaysia are traditional houses. They are rural kampung Malay houses, Chinese farm and fishing village houses, and Indian rowhouses. The Malay kampung houses alone contribute two-thirds of the housing resources in Malaysia. Chinese shophouses, which are traditional houses in urban areas, are ubiquitous in all Malaysian towns, big and small. In Penang, the second largest city in Malaysia, it makes up 85% of all building types in the city fabric. Therefore, the importance of traditional houses on the lives of the Malaysian people cannot be ignored.

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### 3.1.1 The Traditional Malay House

The traditional Malay house has evolved over many generations to adapt to the cultural and climatic needs of the region. Like other traditional houses of South-East Asia, the Malay house is a timber post and lintel structure, raised above ground on timber piles or stilts to provide protection against floods and wild beasts, as well as to allow for air movement to cool down the interior of the house. The walls are either wooden planks or woven bamboo, depending on the means of the owner. The roofs were at one point made exclusively out of thatched palm leaves or *atap*; but today, tiled roofs, first introduced by the Chinese, are more widely used.

One of the characteristics of other vernacular houses of South-East Asia that is also found in the Malay house is the strong emphasis on the roof. In fact, the houses are named according to the roof forms even though there may be no difference in the house form.

These house forms are:

*Bumbung Panjang* (long roof)

*Bumbung Lima* (hip roof)

*Bumbung Berlanda* (Dutch roof)

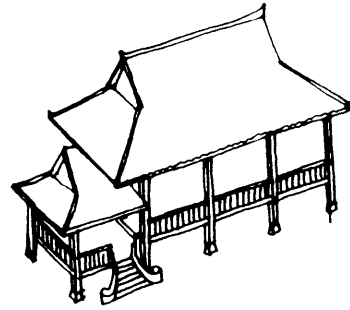
*Bumbung Limas* (Tiered roof)

Apart from the slight differences in appearance resulting from the roof forms, the basic layout of the Malay house is consistent throughout Malaysia. It consists of different components that can be added on depending on the needs and means of the owner. This possibility of gradual growth produces several varieties in the house form of Malay houses, depending on the sequence of additions chosen.

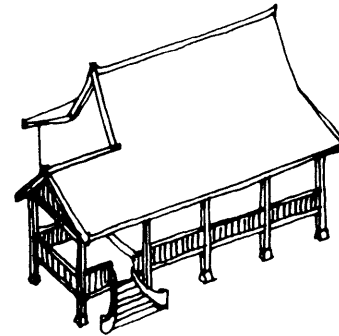


A typical Malay house. (from Lim, J.Y. The Malay House, 1987 )

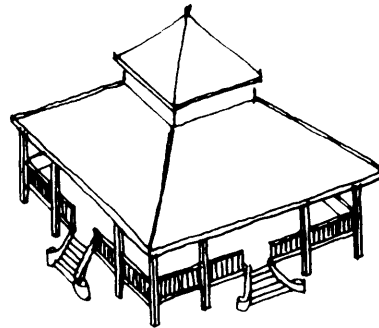
FIGURE 3.1- ROOF FORMS OF MALAY HOUSES



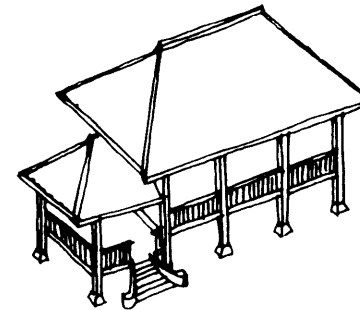
Bambung Lima



Bambung Panjang



Bambung Limas



Bambung Belanda

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Traditional Malay houses do not have rooms as in Western houses. The house, until recently, was free from internal partitions. Internal spaces are differentiated by subtle level changes and are named by zones created by the components in the house form, not by their uses.

The components are:

Anjung (literally, edge)

It is a covered porch at the entrance of most traditional Malay houses. It acts as a transition zone between the public and the private domains. This is the favorite place for male occupants of the house to chat, rest, and watch the activities and passers-by in the village.

Serambi Gantung (literally, hanging veranda)

From the entrance porch (*anjung*), one steps up to the *serambi gantung*, which is a long, narrow area situated next to the main house (*ibu rumah*), with the floor level about seven to ten inches lower than the floor level of the *ibu rumah*, but seven to ten inches higher than that of the *anjung*. This is the drawing room where most guests are entertained.

Ibu rumah (literally, main house)

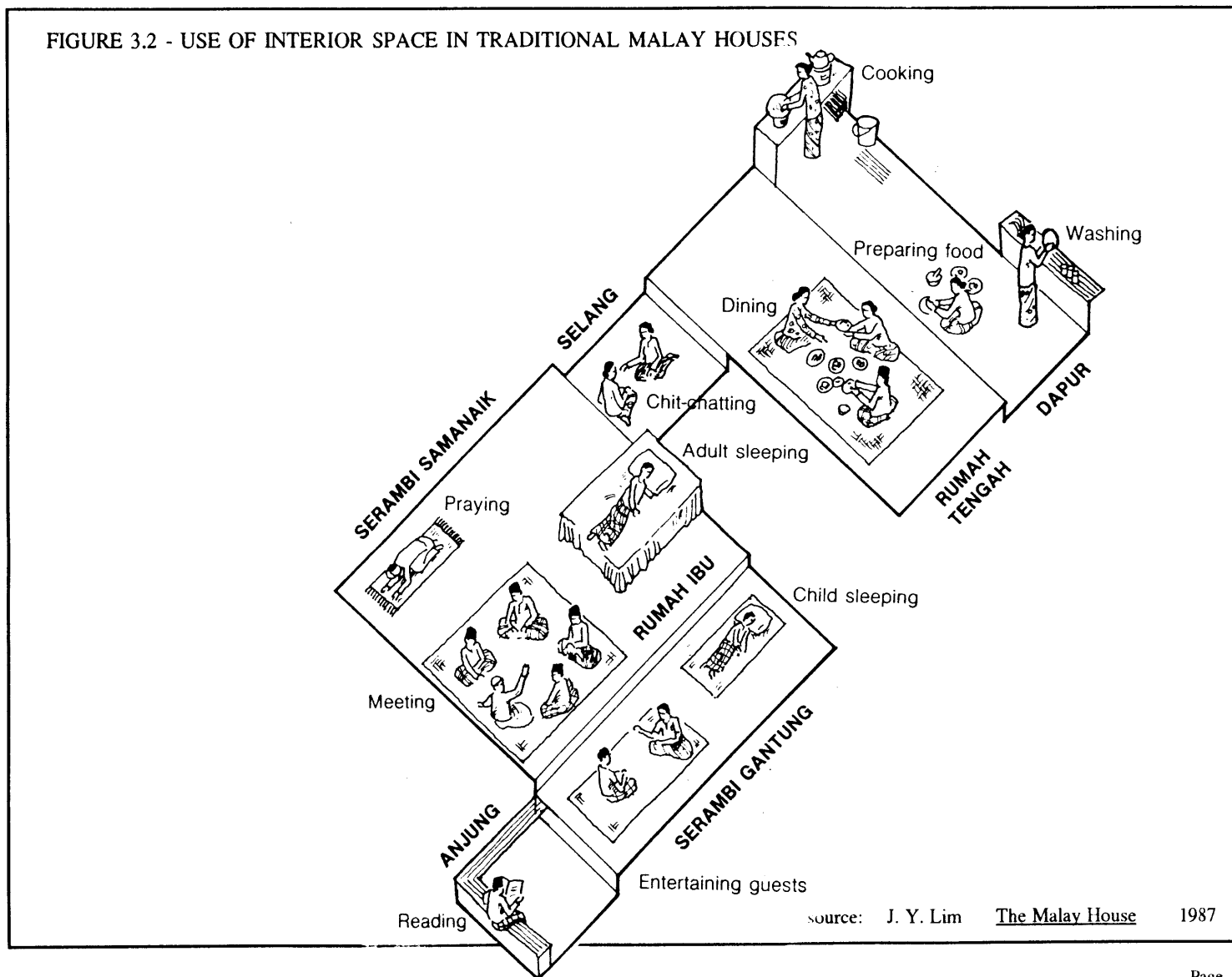
This is the main space where most activities are conducted, including sleeping, entertaining, resting, and family gathering. It is also the area where festivities like weddings and child birth are held. Traditionally, the *ibu rumah* is a big open hall without any partitions, where different activities can take place at different times of the day by simply re-arranging the floor mats (*ikar mengkuang*). The *ibu rumah* is situated in the middle, between the



View of the *anjung* from the *serambi gantung*  
(from Lim, J.Y. The Malay House, 1987 )



FIGURE 3.2 - USE OF INTERIOR SPACE IN TRADITIONAL MALAY HOUSES



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*serambi gantung* and the *serambi samanaik*.. Combined, they make up the *Rumah Ibu* (main house). The *Rumah Ibu* is the basic structure to which other components are subsequently added on. A house composed of only the *rumah ibu* without other components is called *Rumah Bujang* (bachelor's house).

*Serambi samanaik* (literally, same-level veranda)

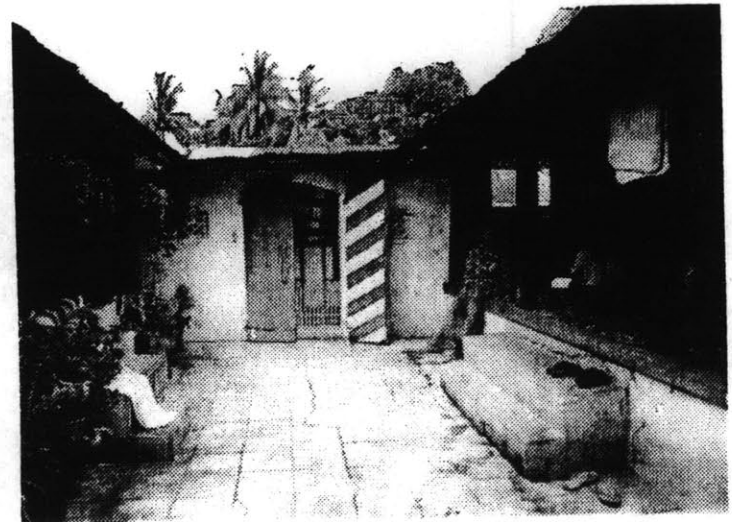
As implied by its name, this component of the house is identical in dimension with the other *serambi*, but at the same level as the main house (*ibu rumah*). It is a relatively private area of the house where activities such as praying and Quran reading take place. Sometimes, one of the floor corners of the *serambi samanaik* is built with gaps to allow drainage. This is for the special religious occasion where the dead is bathed and prepared for burial.

*Selang* (literally, in between)

It is a closed walkway that links the kitchen (*dapur*) and the main house (*ibu rumah*). It is also used as a side entrance to the house by women and children. Besides being a circulation space, it is also used by the female members as an area to chat and socialize. *Selang* is more common in the west coast than the east coast of Malaysia.

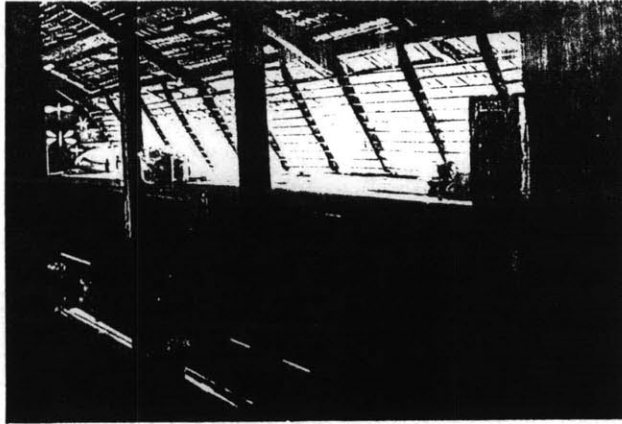
Courtyard

The courtyard provides another option for linking the kitchen and the main house. It serves the same purpose as the *Selang*, but the six feet high walled enclosure gives more privacy. The courtyard is entirely paved with cement flooring and built one to two feet above ground level. It is common mainly in Malacca.



View of a courtyard. (from Lim, J.Y. The Malay House, 1987 )

### 3. RESEARCH



#### Dapur (literally, kitchen)

The kitchen is always at the back portion of the house, and always on the lowest floor level. This area is not only for cooking, but also for washing and dining. In houses that do not have a *selang* or courtyard, the kitchen also becomes the area for entertaining female guests. To accommodate all these functions, the *dapur* is built to be very spacious, sometimes as big as the *iburumah*.

View of a kitchen interior. (from Lim, J.Y. The Malay House, 1987 )



Drawing illustrating the details of kitchen exterior.  
(from Lim, J.Y. The Malay House, 1987 )

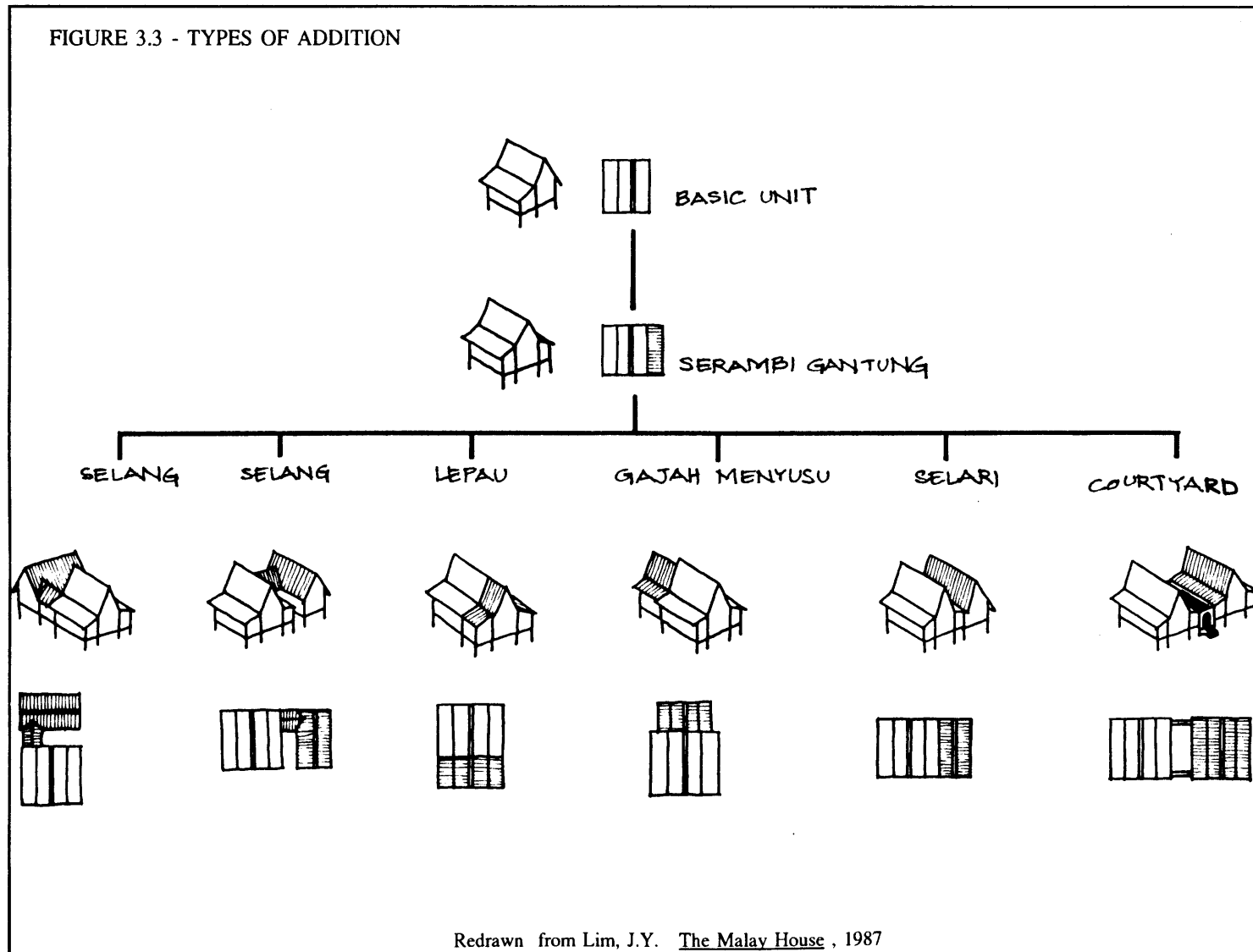
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The traditional Malay house, like other vernacular houses, allows for incremental growth based on the needs of the users. This flexibility is clearly expressed in the addition system, in which new extensions are added to the basic core house. The addition system in the traditional Malay house is a highly developed and sophisticated system, following certain principles that integrate and grow well with the core house. Starting with the *iburumah* as the basic core house, a wide variety of elaborate house forms is possible using various addition combinations and sequences.



View of a fully - built dwelling unit. (from Lim, J.Y. [The Malay House, 1987](#) )

FIGURE 3.3 - TYPES OF ADDITION



Redrawn from Lim, J.Y. *The Malay House*, 1987

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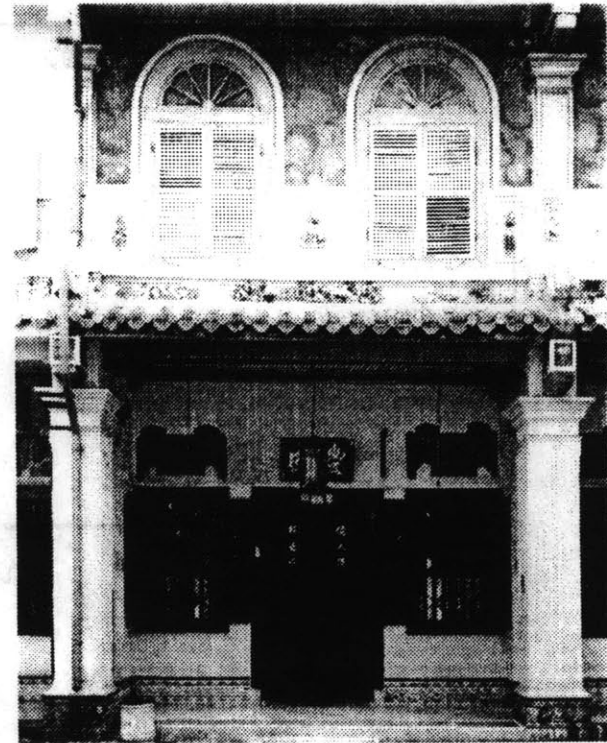
### 3.1.2 Traditional Chinese House

The central theme of Chinese architecture is essential harmony with Nature, which itself is based on the principle that Man cannot be thought of apart from Nature, and that individual man cannot be separable from social man. Chinese building is an "...embodiment of the feelings for cosmic patterns, and the symbolism of the directions, the seasons, the winds, and the constellations" (Ling Yutang, 1977:5). The house is the basic cell in the organism of Chinese architecture, just as the family it houses is the microcosm of the monolithic Chinese society.

The most basic form of the traditional house is a wooden house built upon a stone platform or a plinth. Like the Malay house, the roof is the most dominant visual element of a Chinese house. There are five basic roof forms :

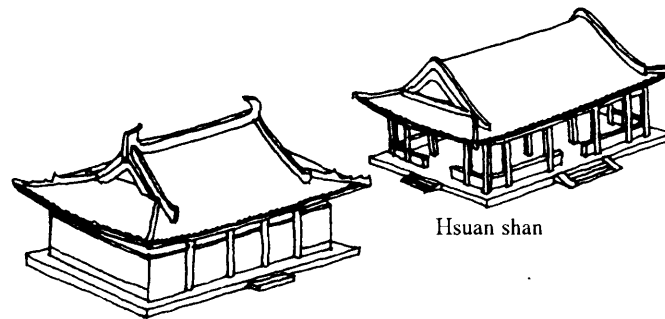
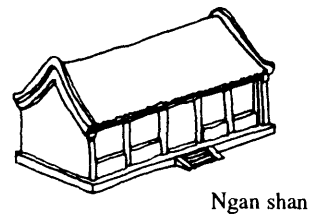
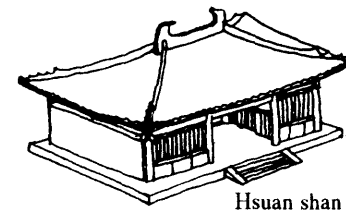
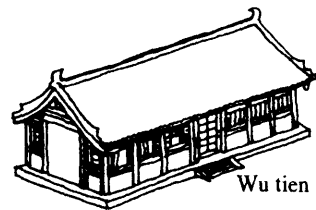
- Wu tien (pitched roof)
- Hsuan shan (half gabled roof)
- Hsuan shan (gabled roof with wooden truss)
- Ngan shan (gabled roof with solid wall)

The traditional Chinese houses of Malaysia evolved from the houses of Southern China, where most Malaysian Chinese trace their ancestral origins. The house types of this region are somewhat different from the typical courtyard houses of the northern region due to climatic differences. Typhoons and torrential rains greatly influence the planning of the dwelling units. Buildings are grouped around systems of ventilating courtyards through lanes, alleys and loggias to allow breezes to penetrate, resulting in a neat, and tight formation which is characteristic of Chinese settlements in Malaysia. These elongated narrow house



Front facade of a Chinese shophouse  
(from Hoefler. Jalan-Jalan 1981)

FIGURE 3.4 - ROOF FORMS OF CHINESE HOUSES



source: Kohl, D . Chinese Architecture in the Straits 1984

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lots with small street frontage result in smaller courtyards. In some instances, they are no more than air wells or light wells set within the building.

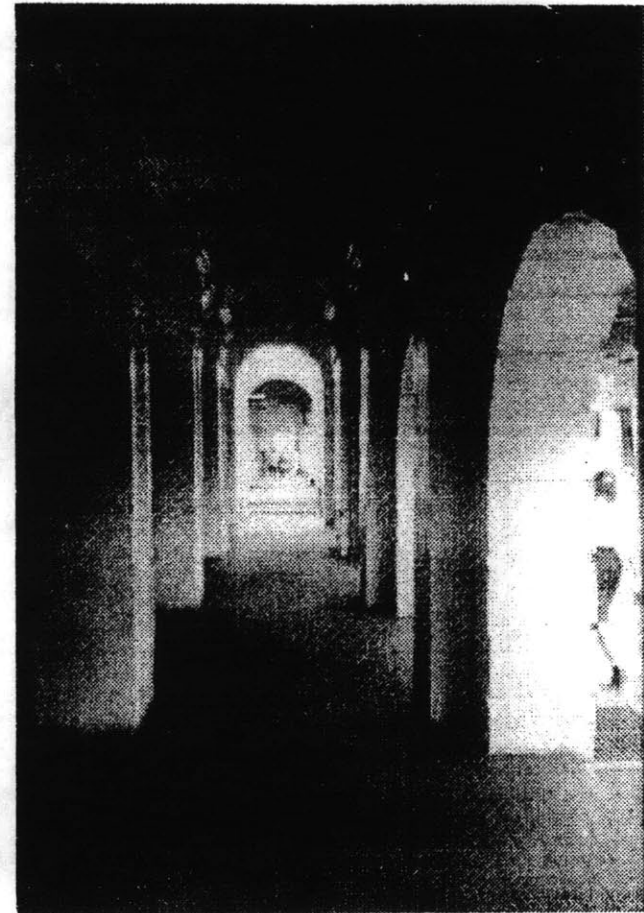
The interior organization of the traditional Chinese house can be classified into basic categories based on special management of areas for shelter, work, and private worship; and on the interactions of domestic, public, and ceremonious nature. Major components of the houses include :

#### Front Porch

Each type of Chinese house has its own version of an entry porch which is protected by the overhanging roof. In shop houses for example, the porch becomes a continuous arcade for public use. In other houses, the porch may simply be the covered entry way to the front yard. Some type of "spirit wall" or *Zhoubi* may be erected behind the entry porch to ward off evil spirits, which are believed to move in straight paths.

#### Shrine

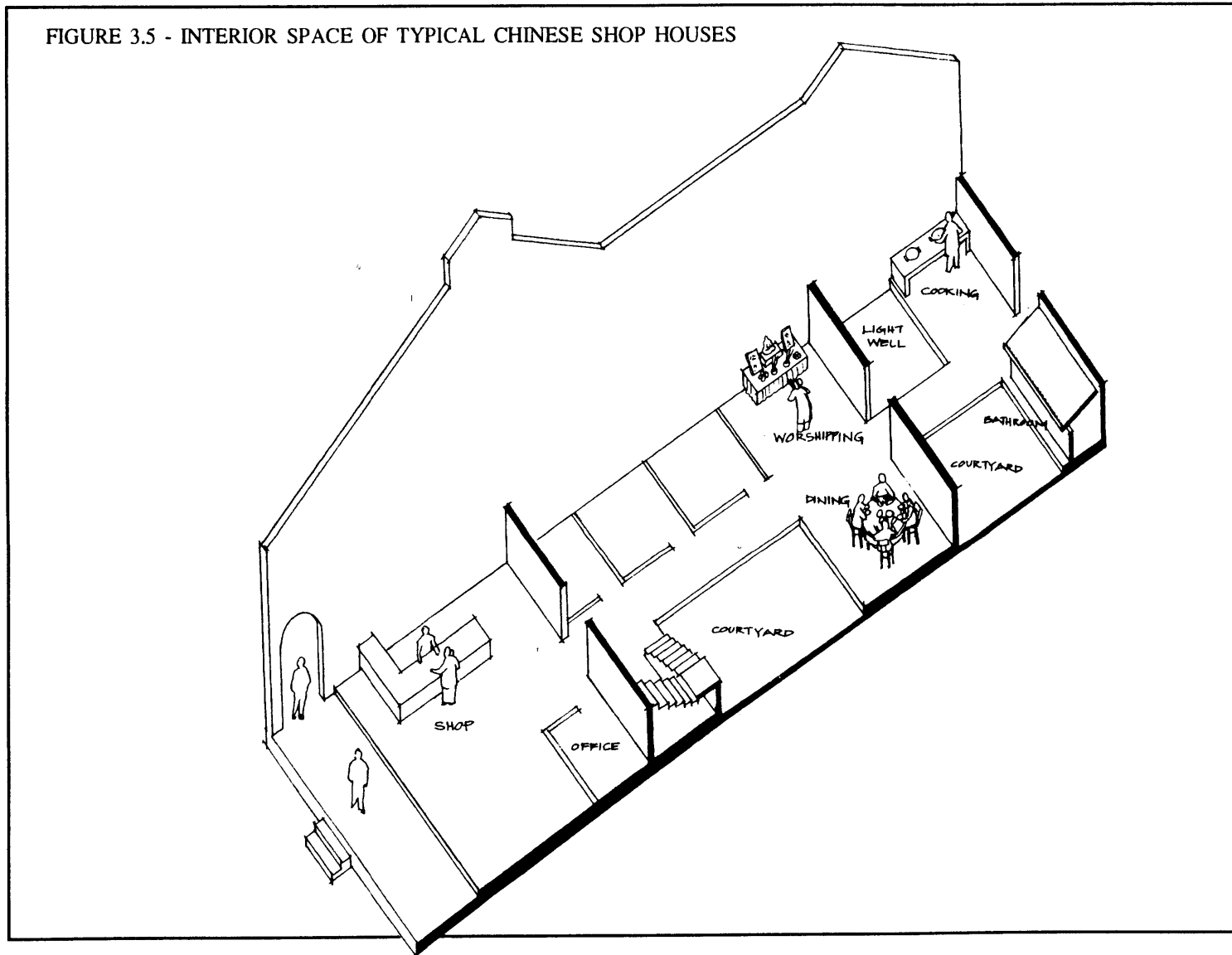
Shrines in Chinese houses are dedicated to the household spirits. Portrayed by images or pictures conspicuously displayed in a special area, they are worshipped on the fifteenth day of the first and twelfth moons with offerings that are then distributed amongst servants and dependents. Unlike the ancestral hall, which is often secluded in the more private part of the house, the shrine is usually a prominent element towards the front of the house.



View of a pedestrian arcade formed by the continuous front porches of the Chinese shophouses



FIGURE 3.5 - INTERIOR SPACE OF TYPICAL CHINESE SHOP HOUSES



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### Ancestral Hall

The ancestral hall is the area where parents and ancestors for counted generations of family history are honored daily, and where tablets for each deceased individual are set up. It is often located in the north-west corner of the house, which is considered the most sacred.

### Courtyard

In traditional Chinese houses, all the house components usually surround a courtyard, but in most cases in Malaysia, the light/air well is the only remnant of the courtyard garden concept of Chinese architecture. Incorporating aesthetic and functional purposes, air-wells admit light, fresh air and rain water into the house interior. The granite or cement paved floor, recessed approximately 18 inches, collects the rain to be drained off to the street drainage.

### Main Hall

Opening into the courtyard is the multi-purpose hall which may serve as a dining area, sitting area or reception hall. Walls and screens are used to delineate the space which is furnished with a table and eight seats, symbolizing the god of longevity and his eight spirits.

### Bedroom

Bedrooms are usually secluded and set far back into the house. If the house has two floors, which is a common tradition of Southern China that has been brought to Malaysia and other regions where the Chinese emigrated to, bedrooms are usually located upstairs.



View of the courtyard/light-well from the second floor level

#### Kitchen

If possible, kitchens are usually separated from the main house, although their location depends on the type of house and configuration of the site. Cooking places, because of the danger of fire to the wooden elements of the house, are usually isolated raised hearth with openings to hold the wok. Within the confines of the kitchen, one invariably finds an image of the kitchen god who is traditionally believed to relay information about the activity of the Gods prior to the Lunar New Year.



View of a Chinese fishing village

#### Types of Traditional Chinese Houses in Malaysia

##### Farm House

Early observers in Malaysia and Singapore noted that humble Chinese farmers lived in temporary huts built out of bamboo and thatched palm leaves (*atap*), similar to Malay houses, except that they were built on earth plinth rather than elevated on timber stilts. These farm houses still exist today on the outskirts of urban areas. Other than zinc roof replacing the *atap* roof, the house form has not changed much.

##### Fisherman's House

Found along the west coast of Malaysia, the Chinese fishing villages display a variation of the Chinese house form; similar to that of the farm house, only perched upon stilts that are piled in the tidal silts. However, the floor plan does not include a front porch or air wells. Presumably, sitting over the cooler coastal environment has made air wells unnecessary.

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### Shop House

Elongated rowhouses on a narrow lot are the most common type of Chinese house, seen all over the urban areas of Malaysia. These shop houses were originally houses of prosperous Baba merchants in Malacca. This prototype is very similar to the plans of the rowhouse in Southern China.

The house is basically divided into three sections:

The front section is the public area where commercial activities are conducted. It is separated from the private area of the house by a partition. In some cases, the entire ground floor area is designated as a commercial area, as in restaurants or retail shops.

The middle section is the main hall of the house. In some shop houses, where rooms are rented out to several tenants, this section is where the main tenant/owner lives. This section also includes the dining area, which opens out to the courtyard or air well separating the middle section from the back section of the house.

The back section is the service area where kitchen and bathrooms are located.

View of a Chinese Shophouses



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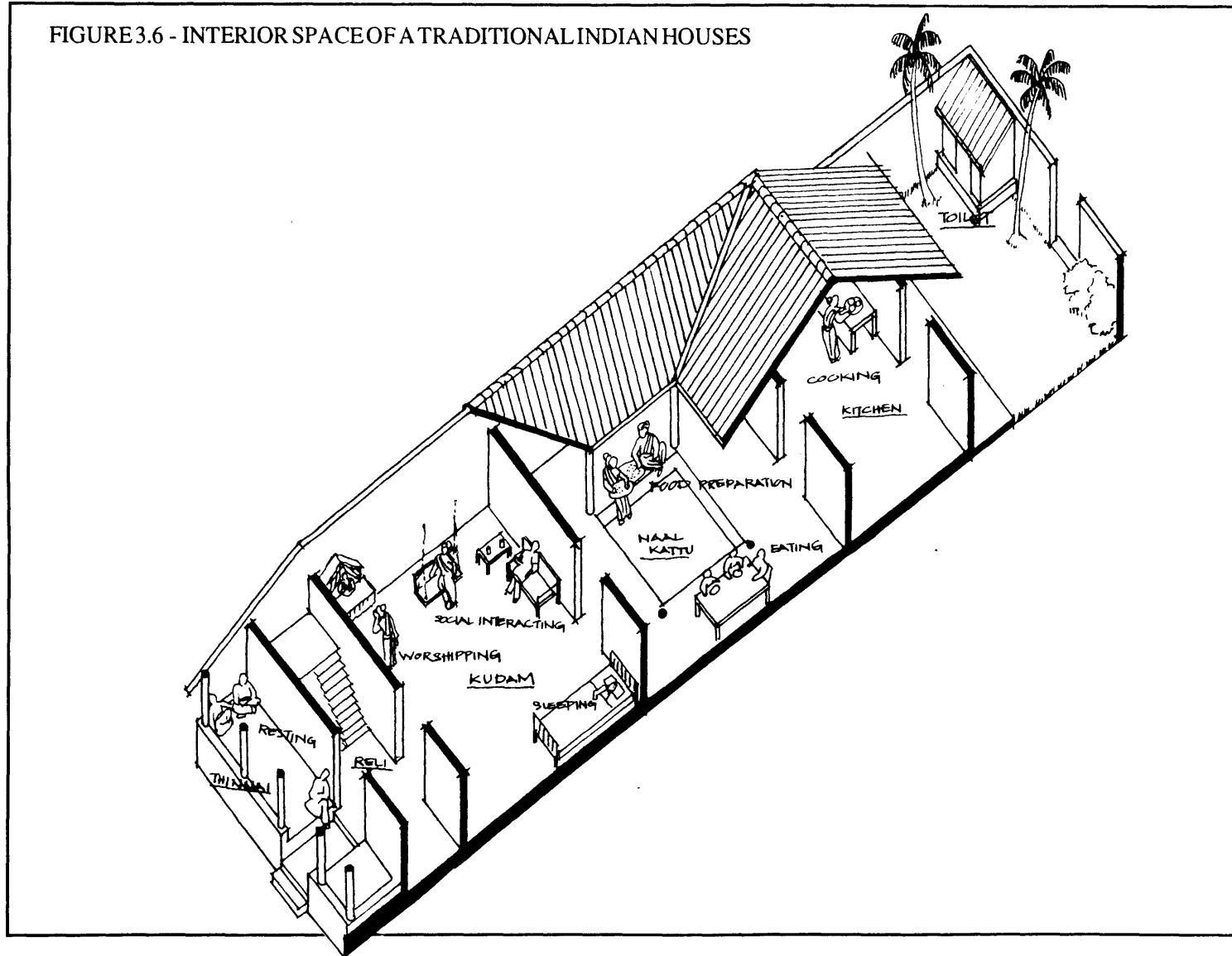
### 3.1.3 Traditional Indian Houses

Architecture in the Indian language is described as *Vastu Vidya*, "the science of the dwelling of the gods", and therefore cosmology is the divine model for structuring spaces - cities, temples, and houses. The planning of houses is based on the diagram of the *Vastu Purusha Mandala* according to which, when *Vastu* (environment), *Purusha* (energy), and *Mandala* (astrological chart) are brought together in a balanced manner, the solution implicitly relates to the place and the lifestyles of the place (Kumar & Sreenivas, 1990: 5). For example, the *Vastu Purusha Mandala* chart attributes the central place to the Lord of the Cosmos, *Brahman*. This implies that the center of the house should be a courtyard, a common space for family interactions. A house is analogous to the human body where the courtyard is the eternal soul, thus *Brahman*.

The Indian concept of the house as a representation of the human body suggests that the house itself be in an elongated form, similar to the Chinese row house. As in Malay and Chinese houses, roofs with deep overhangs form the most prominent feature of Indian houses. The house is also elevated above ground like the houses of Chinese and Malays, but on a plinth or platform 2 to 3 feet high.

The interior layout of Indian houses is basically divided into a series of passageways and open spaces, which may coincide with the division of family grouping in the case of extended family living. The number of divisions and repetitions of a basic unit depends on the needs and means of the owners. The components that make up this layering of spaces include *Thinnai* (front porch), *Kudam* (main hall), kitchen, and courtyards, whereas the components that form the passageways include *Reli* (entrance hallway), *Pooja* (worship room), and rooms.

FIGURE 3.6 - INTERIOR SPACE OF A TRADITIONAL INDIAN HOUSES



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### Thinnai

It is the front porch which is comprised of a raised platform and built-in seating, with columns supporting the overhanging roof. Some *Thinnais* opens out to the front courtyard called *munril* (literally, the front of the house).

### Kudam

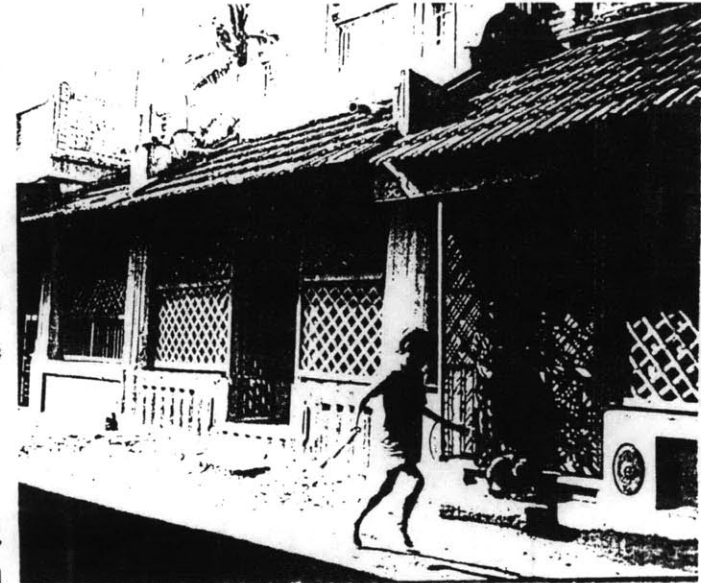
It is the most important space in the house. This multi-functional space is most actively used as a family room. It is lit and ventilated by means of a clearstory, which enhances the importance of this space. All important ceremonies, such as weddings, are performed in the *kudam*.

### Kitchen

It is usually located at the back portion of the house, facing an open space called *Kottil*, which is basically a secondary *Kudam*. Sometimes, the kitchen is located next to a central courtyard called *mittam* or *vayil*. Being located off open spaces like the courtyard or *kottil* allows the kitchen activities to spill out into a larger area. This area therefore becomes the female area for entertaining close friends and relatives.

### Courtyard

Other than the two courtyards mentioned previously, the *munril* (front yard) and *vayil* (interior courtyard), there is also the third courtyard at the back portion of the house, separating the house from the cow shed and toilets. It is called *Pulai* (literally, the small way), and is used as the backyard, connecting to the back alley. Besides keeping animals, it is also an area for washing and drying clothes.



View of the *Thinnais* of Indian rowhouses



#### Reli

It is the transition space which connects the *kudam* (family room) with *thinnai* (front porch). In two storey houses, this area is where the staircase to the second floor is located.

#### Pooja

It is a room for worship. It is usually located in the front portion of the house, in between the *thinnai* and the *kudam*. Unlike other rooms in the house, the *pooja* is usually provided with a window which opens out to the front porch. In some houses, the *pooja* is simply located in an alcove in the *kudam*, and screened off by a curtain.

#### Rooms

Rooms in traditional Indian houses are located in between the main spaces, creating passageways connecting the different portions of the house. These rooms, although formed as compartments, may not necessarily be designated for a particular function, but are instead determined by the occasions and needs of the users. However, there is one room meant only for women to use during menstruation, when they are isolated from the rest of the household. Like the *pooja*, this room is located in the front portion of the house, accessible through the *thinnai*.

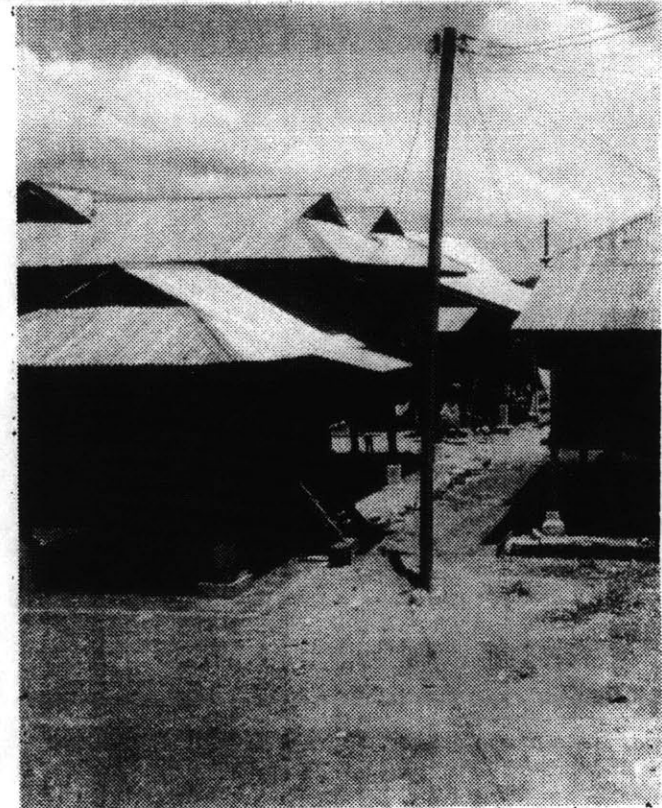
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### 3.2 Squatter Houses

Squatter settlers make up about one third of the total population of urban centers in Malaysia. In Kuala Lumpur, 22% of the population live in squatter areas located along railway lines, river banks, and on abandoned mining lands. The settlements are either racially segregated, or dominated by any one of the three ethnic groups. About 45% of the squatter areas in Kuala Lumpur are Chinese dominated, 41% Malay dominated, and only 4% Indian dominated. The remaining 10% are racially mixed (1980 Population Census).

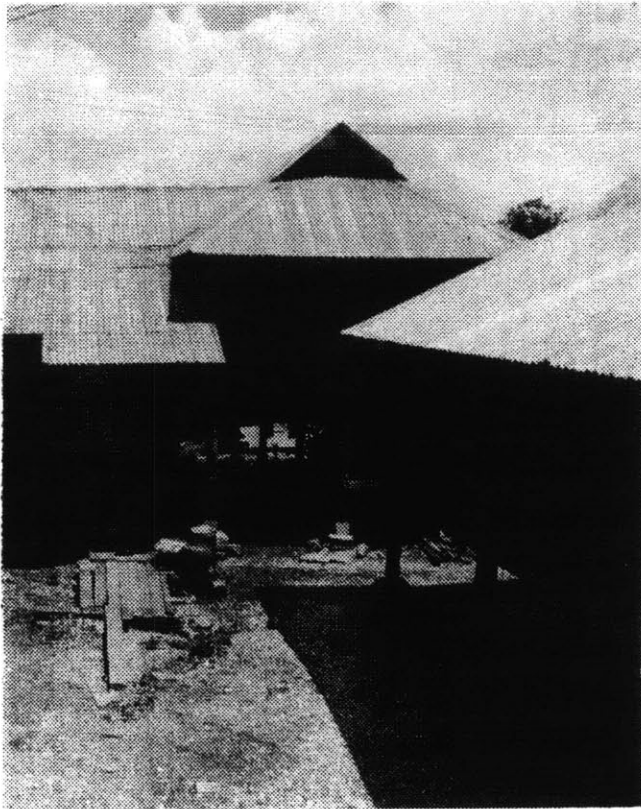
Kampung Sentosa is one of the racially mixed squatter settlements in Kuala Lumpur. It is situated along the Kelang River, at the fringe of the urban centers of Kuala Lumpur and Petaling Jaya.

The houses of Kampung Sentosa resemble squatter houses found throughout Malaysia. The basic construction material is wood with corrugated zinc roofing. Although the houses of the Malays, Chinese, and Indians are distinctive from one another from the exterior appearance, the basic configuration of the floor plans is not very different. Like traditional houses, the interior spaces of the squatter houses are also linearly arranged into three zones: front/public, middle/family living, back/service spaces.



View of typical Malay squatter houses  
(from Lim, J.Y. The Malay House, 1987 )

### 3. RESEARCH



#### 3.2.1 The Malay Squatter House

Of the three, the Malay house is often the most distinctive. Unlike Chinese and Indian houses, which are built elevated on concrete plinth, most Malay squatter houses, like their traditional counterparts, are elevated on wooden stilts. The wall panels are made mostly out of wood, and the roof is usually made of corrugated zinc. Both materials are the cheapest and most readily accessible materials of their kind available to squatter settlers.

Like the traditional house, the squatter house is also comprised of separate components, namely, the *anjung*, *rumah ibu*, and *dapur*. While the *anjung* remains the same physically and functionally, the *rumah ibu* and *dapur* differ somewhat due to the physical constraints of squatter conditions. Unlike the traditional *rumah ibu*, which is an unpartitioned hall made up of the *serambi gantung*, *iburumah*, and *serambi samanaik*, the *rumah ibu* of the squatter house usually does not include the *serambi*s. It is the main space of the house where living, entertaining, sleeping and sometimes, dining take place. Part of the space is usually partitioned off for private functions, such as sleeping and praying. The *rumah ibu* and the *dapur* are not separated by a walkway (*selang*) or a courtyard, like in traditional houses. The *dapur* is usually built on the ground with cement flooring, and therefore, the separation is indicated by a difference of 4 to 5 feet in floor level. The walls of the *dapur* are usually built out of bricks up to the window height (3 feet), with the remainder built out of wood. The toilet and the bathroom are often built as an extension of the *dapur* area, which is unlike the traditional house.

However, on the whole, the Malay squatter settlement look like a typical Malay kampung, only denser.

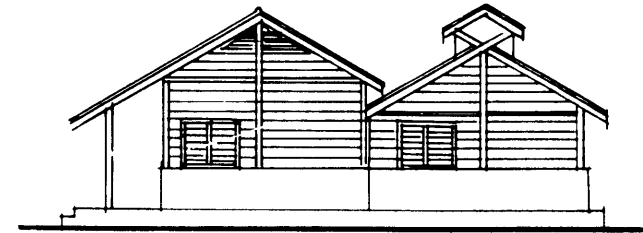
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### 3.2.2 The Chinese Squatter House

Chinese squatter houses resemble the traditional farm houses in rural areas more than the traditional shophouses in urban areas. They are mostly one storey wooden houses, built on a concrete slab 6 to 18 inches above ground. The common materials for the wall are wood planks, with a three foot brickwork base to prevent corrosion of the wood material at the ground level.

The basic spatial organization of the house is similar to that of traditional Chinese houses. The front section of the house is the main hall, which serves the function of living activities, visitors receptions, family entertainment and sometimes, work-related activities. The middle section contains the bedrooms and an unpartitioned area which is usually used for dining and religious worship. The back section of the house contains support areas, such as kitchen, bathroom, and toilets. Often a light well is provided in this section of the house; a remnant of the courtyard concept of traditional Chinese architecture.

Unlike the Malay house, which mostly exists in a singular detached form, Chinese squatter houses are often built in rows, up to six units in a row. The compound of the house is usually fenced off, unlike the open and undefined exterior spaces of Malay squatter houses.

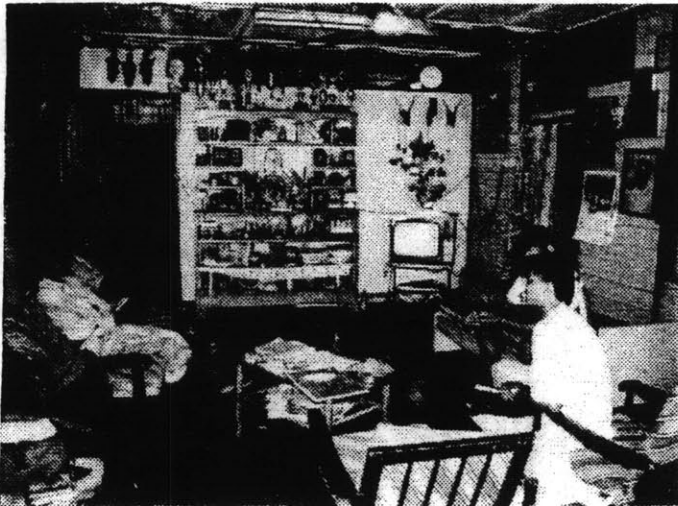


#### 3.2.3 The Indian Squatter House

From the exterior, the Indian squatter house looks very similar to the Chinese house. It is also built on a concrete slab, 6 to 18 inches above the ground. For the same climatic reasons, the walls of Indian squatter houses are also made of wood planks with a three foot high brickwork base. The only difference is that the Indian house tends to have a lower roof line and deeper overhang than the Chinese house. Unlike the Chinese front porch, which is usually used as a storage area, the Indian front porch is generally kept clean and actively used as an informal socializing area, similar to the *anjung* of the Malay house. One can also tell Indian and Chinese houses apart by the exterior religious motifs, such as the leave garland hanging above the front entrance and the chalk drawing on the floor of the entrance porch.

The spatial organization of the house differs considerably from traditional Indian houses. Although the spaces are still organized in a linear progression of public to private similar to the traditional house, the spatial elements are different. The front porch is not as enclosed as the traditional *thinnai*, and the main space of the house does not have a clearstory or a courtyard, unlike the *kudam*. There are no passageways that spatially divide the house into separate zones. Instead, the house is divided into the public zone, family zone and service zone, either by the arrangement of furniture, or by means of wall and doorway. The interior spaces are usually ornately decorated with religious items and images on the walls, floors, as well as ceiling.

Like Chinese squatter houses, Indian houses are often built in rows, but no more than four units per row. The house compounds are also fenced, like the Chinese squatter house, creating a very well defined pathway unlike the meandering paths found in Malay squatter houses.



Interior view of an Indian squatter dwelling.

### 3.3 Public housing

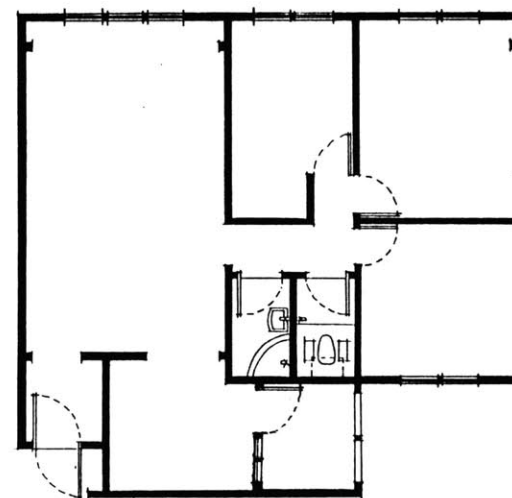
The Malaysian's government present approach to providing adequate shelter for urban dwellers is the "full approach" - i.e., to provide a complete package of dwelling units, usually in the form of high rise, walk-ups (flats), or rowhouses (rumah murah). In urban areas where the land is scarce and expensive, high density planning with the use of multi-storey structures is often the solution used in public housing, especially in Kuala Lumpur and Penang. These 10 to 15 storey structures are largely occupied by Chinese and Indians. The Malays, on the other hand, tend to occupy the low-rise rowhouses which are usually built at the city periphery. Of these three types of public housing, the 4 to 5 storey flats are by far the most common. They are built all over Malaysia, in both urban and rural areas.

Sri Sentosa housing is a squatter resettlement scheme that relocates the squatters from Kampung Sentosa into the 5 storey flats which are part of the larger mixed income housing development project. Because Kampung Sentosa is a racially mixed squatter settlement, the overall ethnic composition of the Sri Sentosa flat dwellers is also similarly mixed. However, the actual distribution of dwellers within each block falls along racial lines. Each housing block, which comprises 60 units, is dominated by one of the three ethnic groups.

The floor plan of the unit is typical of low income housing anywhere in the world. The construction method used is cast-in-place concrete frames with brick in-fills. Since the project is relatively new (built in the mid 80's), and due to the inflexibility of the building itself, there is little variation among the units occupied by the diverse cultural groups. The only element that differentiates the units of one cultural group from another is the religious item displayed at the entrance door, for example, the shrine or the red banner at the doorway of a Chinese unit, the leave garland or a picture of God above the doorway of an Indian unit, or a sticker with Quran verses on the door of a Malay unit.



View of low cost flats of Sri Sentosa housing development



Floor Plan of a low-cost housing unit of Sri Sentosa flats

#### 3.3.1 The Malay Dwelling Unit

The design of public housing contrasts traditional Malay houses in almost every aspect. The fundamental difference is the basic concept of the house itself, which according to the Malay tradition, is a composition of several components which themselves are "houses" or *rumah*; for example, the entrance steps + *anjung* (*rumah tangga*), *serambi + iburumah* (*rumah ibu*), the kitchen area (*rumah dapur*). In public housing, the house is a 40' x 40' space which is partitioned into smaller spaces.



View of a woman cooking in the balcony which has been converted to a kitchen

The 8' x 6' *anjung* is reduced to a tiny 4 x 4 entry foyer. This space accommodates the Malay custom of taking off shoes before entering, but stops short of being the informal socializing area, which is one of the few traditional functions of the *anjung*. Unlike traditional and squatter houses, where the interior spaces become more private as one progresses further inside the house, in public housing, a visitor is exposed to the overall spaces of the house upon entering. The fact that the kitchen is next to the living room is also an alien concept to the Malays, who regard the kitchen as a female zone, and therefore, should be at the back of the house.

Unlike traditional and squatter houses, the entire floor of the public housing unit is at the same level. There are no level changes between the entry foyer and the main hall, and between the main hall and kitchen. Responding to this condition, some of the dwellers have actually built another layer over the existing flooring of the main hall, which results in a 4 to 6 inch level difference between the main hall, entry foyer and kitchen.

Another common transformation is the use of the balcony as the cooking area, and the existing kitchen as the family dining area and a female socializing area.

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### 3.3.2 The Chinese Dwelling Unit

In general, the design of public housing is more acceptable to the Chinese than to the Malays and Indians. First, the concept of partitioned rooms is not alien to traditional Chinese houses, although the rooms in traditional houses are non- function specific. Second, the Chinese do not have a religious or cultural requirement regarding male-female separation. Therefore, the location of the kitchen next to the livingroom is acceptable, and in fact, it merges the traditional family activities, which evolve around the kitchen/dining area, with modern ones which evolve around the television set in the living room. Like the Malays, the Chinese also tend to use the balcony as a cooking area. However, this is done to enlarge the kitchen area, rather than to increase the separation between the kitchen and the livingroom.

The lack of a transition zone between the public and private, as represented by the front porch of traditional houses, also does not affect the Chinese as much as it does the Malays and Indians. While Malays and Indians traditionally use the porches actively as a social transaction area, the Chinese use the front porch only as a storage area and for taking off shoes. Therefore, the 4'x4' entrance foyer adequately replaces the traditional front porch.

However, like the Malays and Indians, the Chinese also find the fact that a visitor is exposed to the overall space of the house upon entering, to be in contrast to the traditional concept of linear hierarchy of space from public to private, which is prevalent in both traditional shophouses and squatter houses. Therefore, a curtain is usually furnished between the living room and the rest of the unit to provide a visual barrier.

Religious items, such as shrines, are usually located outside the front door, or inside the living room, or sometimes, even in the kitchen. The living room also accommodates another religious activity, ancestral worship, which traditionally occurs in the ancestral hall.



View of an altar for ancestral worship



#### 3.3.3 The Indian Dwelling Unit

The spatial organization of the public housing unit is as alien to the Indians as it is to the Malays. The traditional Indian house is organized based on the diagram of *Vastu Purusha Mandala*, which relates the house to the human body. It regards the center of the house as the most important space, for it represents *Brahman*, the soul of the body, thus the heart of the house. In this public housing unit however, the sacred location is occupied by the toilet and bathroom, which traditionally is allocated for a family area or a courtyard.

The *Vastu Purusha Mandala* diagram also dictates that the entrance level be lower than the main space of the house. So, like the Malays and some of the Chinese, the Indians also tend to build another layer of flooring over the existing floor of the living room, to provide a 4 to 6 inches level difference between the entry foyer and the living room. And also like the Chinese and the Malays, the Indians use the entry foyer as the area for taking of shoes before entering. However, this 4 x 4 space does not quite accommodate the functions of the *thinnai* which like the Malay *anjung*, serves as an informal socializing area.

The Indians also traditionally separate the male and female in the use pattern of the house. Therefore, the position of the kitchen in relation to the living room in this public housing is rather awkward for the Indians. As a response, a curtain is usually placed over the opening leading to the kitchen and dining. It is also common among Indians to use the kitchen balcony as the cooking area, as it is for Malays and Chinese.

Religious activities take place either in the living room or in the bedroom. The *pooja* in the public housing unit is relatively inconspicuous compared to the elaborate alcoves or the special room dedicated for the *pooja* in the traditional and squatter houses. In fact, the overall space of the unit is less ornamented than the traditional and squatter houses.

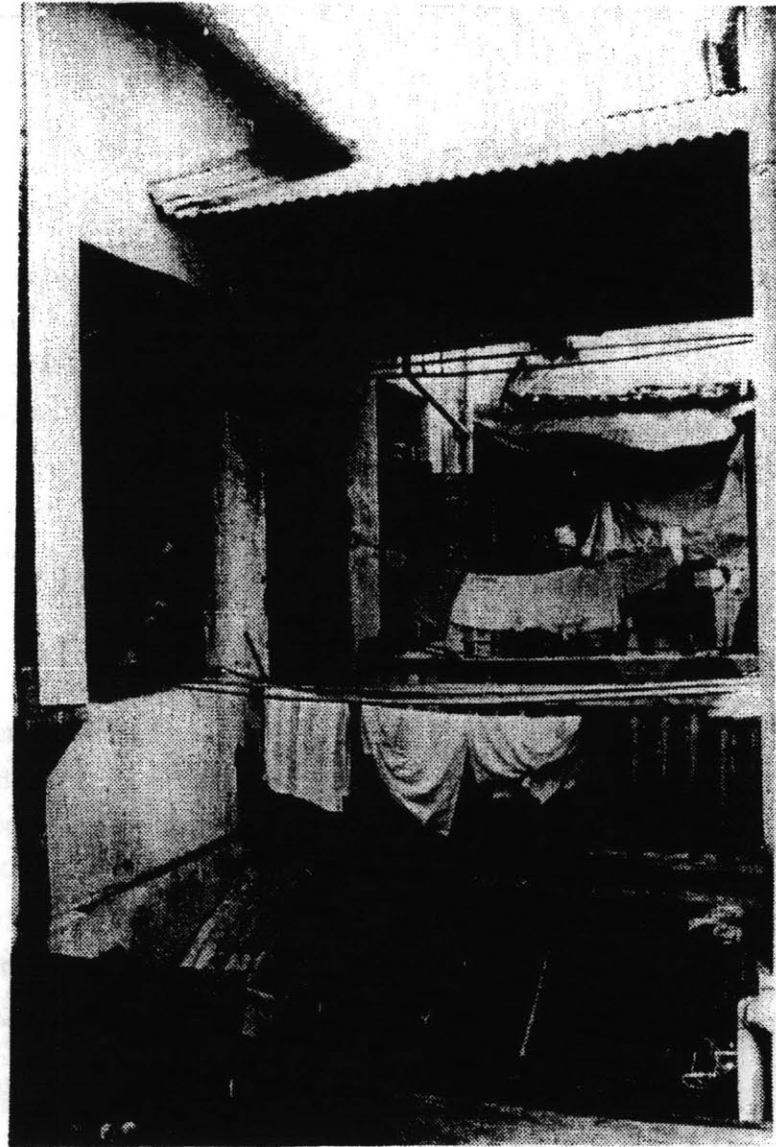
View of a *pooja* which was located in a bedroom



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*"It is the social situation that influences people's behavior, but it is the physical environment that provides the cues".*

A. Rapoport  
The Meaning of Built Environment



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## 4. ANALYSIS

This chapter provides a comparative analysis of traditional houses, squatter houses and public housing. The purpose is to understand the relationship between the built form and the living patterns - in traditional houses, where for generations, the built form has been generated to accommodate an accepted norm of living patterns; in squatter houses, where certain aspects of the traditional built form are retained or transformed to accommodate the changing living pattern of the urban condition; and in public housing, where certain aspects of the traditional living pattern are transformed or abandoned altogether to adapt to the given constraints of the built form. By comparing squatter and public housing to traditional houses, one can determine which aspects of the traditional built form the people carry on when they have the freedom to do so within the constraint of the urban squatter setting, and which important aspects of the traditional living pattern they hold on to regardless of the physical limitations of the public housing.

The analysis is done both at the inter-cultural level, by comparing the houses of the Malays, Chinese and Indians in general, and within each cultural group itself by comparing the examples of traditional houses, squatter houses, and public housing of that particular group.

Throughout the chapter, only the example that best illustrates the points in the analysis of each housing type is chosen .

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#### 4.1 Patterns of Use

In comparing the patterns of use of the three groups, the most obvious common characteristic is the flexibility in the use of space. The Malay *ibu rumah*, the Indian *kudam* and the Chinese main hall are all multi-function areas, where a whole range of activities from formal social interaction to sleeping take place. This idea of flexibility is retained even in modern public housing, where the living room is translated as the *ibu rumah* (for Malay houses), *kudam* (Indian), and main hall (Chinese), and serves as the socializing area during visits, the eating area during meal time, and the sleeping area at night.

There are many common behaviors among the three groups that result in similar patterns of use. For example, all three groups do not wear shoes inside the house. Therefore, the act of taking off ones shoes is an important part of visiting and greeting that requires a special zone, like the Malay *anjung*, Indian *thinnai*, and Chinese front porch. Another common behavior is group sleeping. Unlike Western cultures, it is quite common among Malaysian societies for children up to the age of 6 or 7 to sleep with their parents. It is also common to have children with large age gaps, sometimes up to 15 years, sleep together.

The use pattern of Malay and Indian houses is largely determined by the traditional idea of separation between male and female. This idea affects the socializing pattern, as well as sleeping and eating patterns. All three groups share the same value of respect for their elders, and taking care of one's aging parents is not simply an obligation, but a sacred duty. Therefore, extended families are common, and become an important factor in the patterns of use of the house.

## 4. ANALYSIS

	Malay	Chinese	Indian
<b>Entering</b>	<p>Take off shoes and wash feet</p> <p>Men enter through front porch, women enter through back porch or courtyard</p>	<p>Take off shoes.</p> <p>Both men and women enter through front porch.</p>	<p>Take off shoes.</p> <p>During formal visits, both men and women enter through front porch.</p> <p>During informal visits, men enter through the front while women enter through the back.</p>
<b>Socializing</b>	<p>Informal socializing with neighbours takes place in the anjung (for men), and dapur (for women).</p> <p>Formal visits are received in the serambi (for men), and dapur (for women).</p> <p>Large ceremonies are held in the ibu rumah.</p>	<p>Both informal and formal socializing take place in the reception hall / living room.</p> <p>General ceremonies are held in the reception hall / living room.</p> <p>Family ceremonies are held in the ancestral hall and dining room.</p>	<p>Informal socializing takes place in the thinnai (for men), and courtyard (for women).</p> <p>Formal visits are received in the kudam.</p> <p>Large ceremonies are also held in the kudam.</p>
<b>Sleeping</b>	<p>Married couples sleep in the rooms.</p> <p>Children and older women sleep in the ibu rumah.</p> <p>Young unmarried women sleep in the loteng.</p> <p>During the day, rooms are for storing mattresses, pillows, etc.</p> <p>Pre-schoolers may sleep with their parents.</p>	<p>Married couples sleep in the rooms..</p> <p>Grandparents usually sleep in the living room with the grandchildren.</p> <p>Daughters sleep in a separate room.</p> <p>Bedrooms are for storage during the day.</p> <p>Pre-schoolers may sleep with their parents</p>	<p>Married couples sleep in the rooms.</p> <p>Children and older women sleep in the kudam.</p> <p>Daughters sleep in a separate room.</p> <p>Menstruating women are isolated in the menses room.</p> <p>Bedrooms are for storage during the day.</p> <p>Pre-schoolers may sleep with their parents.</p>
<b>Dining</b>	<p>In large extended families, men eat first in the ibu rumah, and women and children eat in the dapur.</p> <p>Otherwise, the whole family dines in the dapur.</p>	<p>Family dines together in the kitchen / dining area, usually facing a courtyard or light well.</p>	<p>In large extended families, men eat first in the kudam, and the women, in the kitchen.</p> <p>Otherwise, family dines in the kudam.</p>
<b>Cooking</b>	<p>Takes place two to three times a day.</p> <p>Daily cooking is done by women, but men cook for big feasts which are held outdoors.</p> <p>Food preparation is done throughout the day in the kitchen verandah while entertaining female friends.</p> <p>Cooking area is always in the back zone.</p>	<p>Takes place two to three times a day.</p> <p>Cooking may be done by either men or women.</p> <p>Activities that occur in the kitchen include cooking, preparing food, watching TV and family transactions.</p> <p>Cooking area is always in the back zone.</p>	<p>Takes place two to three times a day.</p> <p>Cooking is done by women, both daily and for feasts as well.</p> <p>Cooking activities sometime spill out into the courtyard.</p> <p>Cooking area is always in the back zone.</p>

TABLE 4.1: PATTERNS OF USE

DESIGN IMPLICATION: PATTERNS OF USE

	Malay	Chinese	Indian		Comments	Implications
<p>Front Porch</p> <p>As a social space</p> <p>As a storage area</p> <p>Built-in furniture/seating</p>	<p>●</p> <p>○</p> <p>●</p>	<p>○</p> <p>●</p> <p>○</p>	<p>●</p> <p>○</p> <p>●</p>	<p>Malay:</p> <p>Indian:</p>	<p>Built-in wooden bench.</p> <p>Built-in masonry platform.</p>	<p>Actual physical form should be part of infill, but dimensions should be implied in Supports.</p>
<p>Living Room</p> <p>Multiuse</p> <p>Religious use</p> <p>Used as family interaction area</p>	<p>●</p> <p>●</p> <p>●</p>	<p>●</p> <p>●</p> <p>○</p>	<p>●</p> <p>●</p> <p>○</p>	<p>Chinese:</p>	<p>Usually in dining area.</p>	<p>Supports: A large general-purpose space in the front zone.</p>
<p>Dining Room</p> <p>Adjacent to kitchen</p> <p>Adjacent to courtyard</p> <p>Used as family interaction area</p>	<p>●</p> <p>○</p> <p>○</p>	<p>●</p> <p>●</p> <p>●</p>	<p>●</p> <p>○</p> <p>○</p>			<p>Supports: A large general-purpose space in the back zone.</p>
<p>Kitchen</p> <p>Separate from the main house</p> <p>Adjacent to courtyard</p> <p>Level change</p> <p>Located at the back of the house</p> <p>Used as female interaction area</p>	<p>●</p> <p>○</p> <p>●</p> <p>●</p> <p>●</p>	<p>○</p> <p>●</p> <p>○</p> <p>●</p> <p>○</p>	<p>○</p> <p>●</p> <p>○</p> <p>●</p> <p>●</p>	<p>Malay:</p> <p>Chinese/ Indian:</p> <p>Malay:</p> <p>Malay: Chinese/ Indian:</p>	<p>Separated either by courtyard or selang</p> <p>Partition (wall).</p> <p>Actual cooking area is not adjacent to the courtyard.</p> <p>Up to 5".</p> <p>4" to 18".</p>	<p>Supports: Should be located in the back zone.</p> <p>Infill:</p> <p>M: A large general-purpose space.</p> <p>C: A service space.</p> <p>I: A special-purpose space.</p>

## 4. ANALYSIS

		Malay	Chinese	Indian		Comments	Implications
Bathrooms and Toilets	Separate from the main house	●	●	●			Supports: Should be located in the back zone.
	In the end zone of the house	●	●	●			
	Male/Female	○	○	●	Indian:	In Brahmin's house.	
Level Changes	Entry to front Porch	●	●	●			Supports: see page 165.
	Porch to livingroom	●	●	●			
	Livingroom to courtyard	●	●	●			
	Livingroom to kitchen	●	●	●			

● YES

○ NO

● MAYBE

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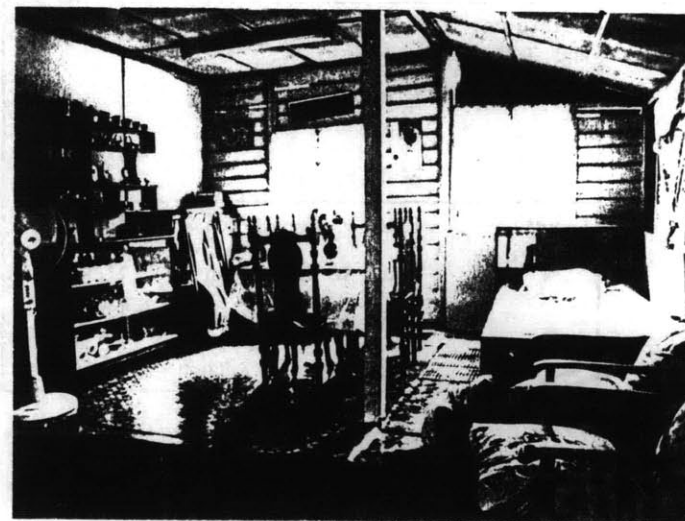
#### 4.1.1 Malay

A basic Malay house is an open plan structure in which different activities occur at different times of the day. Other than the subtle level changes to denote the private from the public section of the house, spatial partitioning only exists conceptually through the chronological pattern of use of the space. For example, the *ibu rumah* is used as a sleeping area at night, a dining area during meal time, socializing area during formal visits and other special occasions, and during periods in between, as a family resting area.

This flexibility of use can be seen in both traditional and squatter houses. Although the introduction of furniture suggests a specific function to the space, the uses of the furniture itself are flexible. In figure 4.2, a bed is included among the living room furniture, which is used both for sleeping by an elder man of the house during nighttime, and for seating by the female members of the house when entertaining their female friends.

In public housing, the unit layout provides enclosed rooms for different purposes, i.e. living room, bedroom, kitchen, etc.; in most cases the relationship of the functions and the rooms designated for those specific functions is ignored. For example, sleeping takes place in the living room where, at night, mattresses are laid out after the chairs and tables are cleared to the side. The bedrooms are used as storage for pillows and mattresses during the day instead.

It is the Malay custom to take off one's shoes before entering the house. In traditional and squatter houses, a big jar of water (*tempayan air*) is usually provided at the front steps for washing one's feet. In public housing, a small area immediately beyond the front door inside the house is used for keeping shoes.

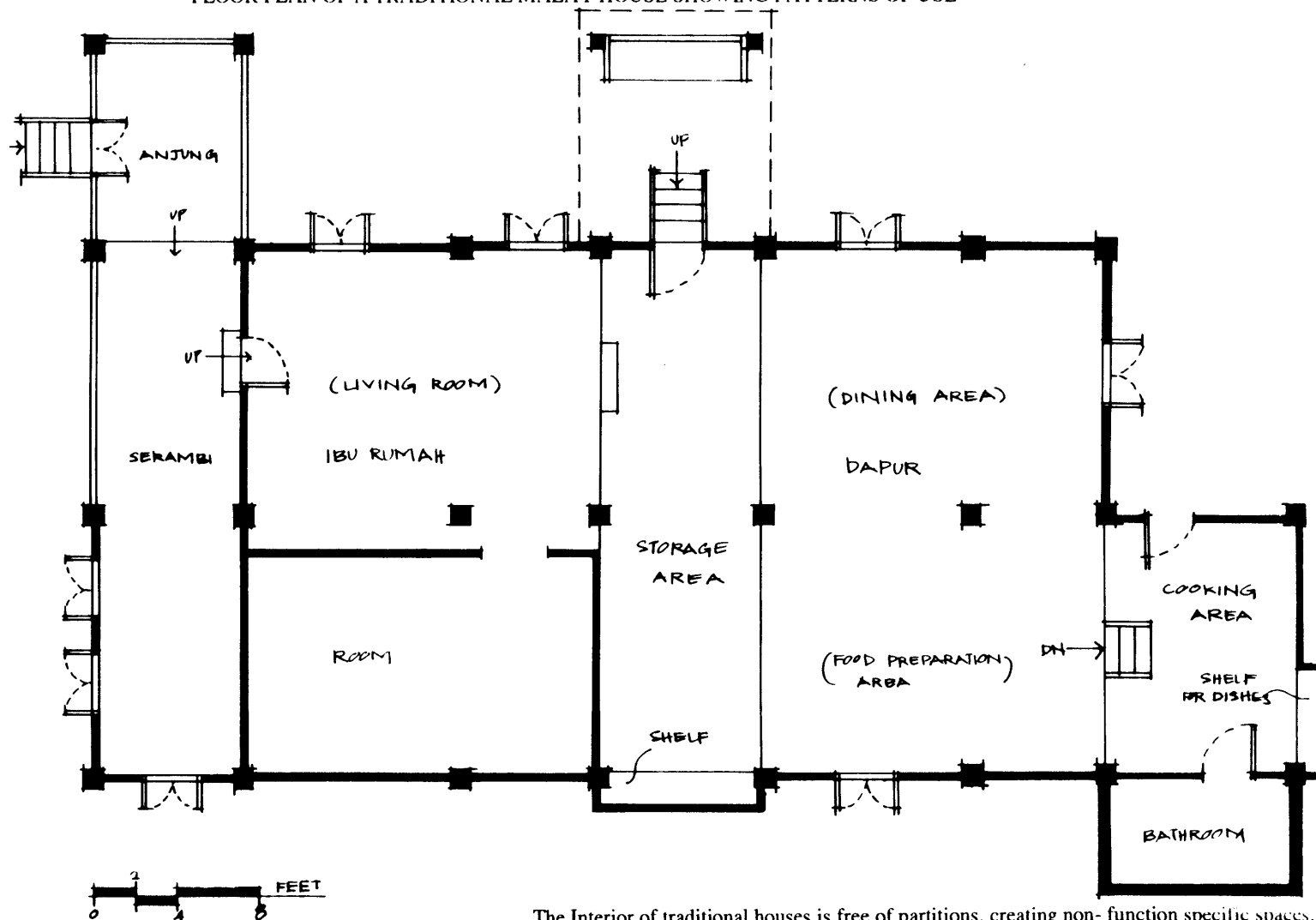


Living room of a squatter house used for sleeping and socializing



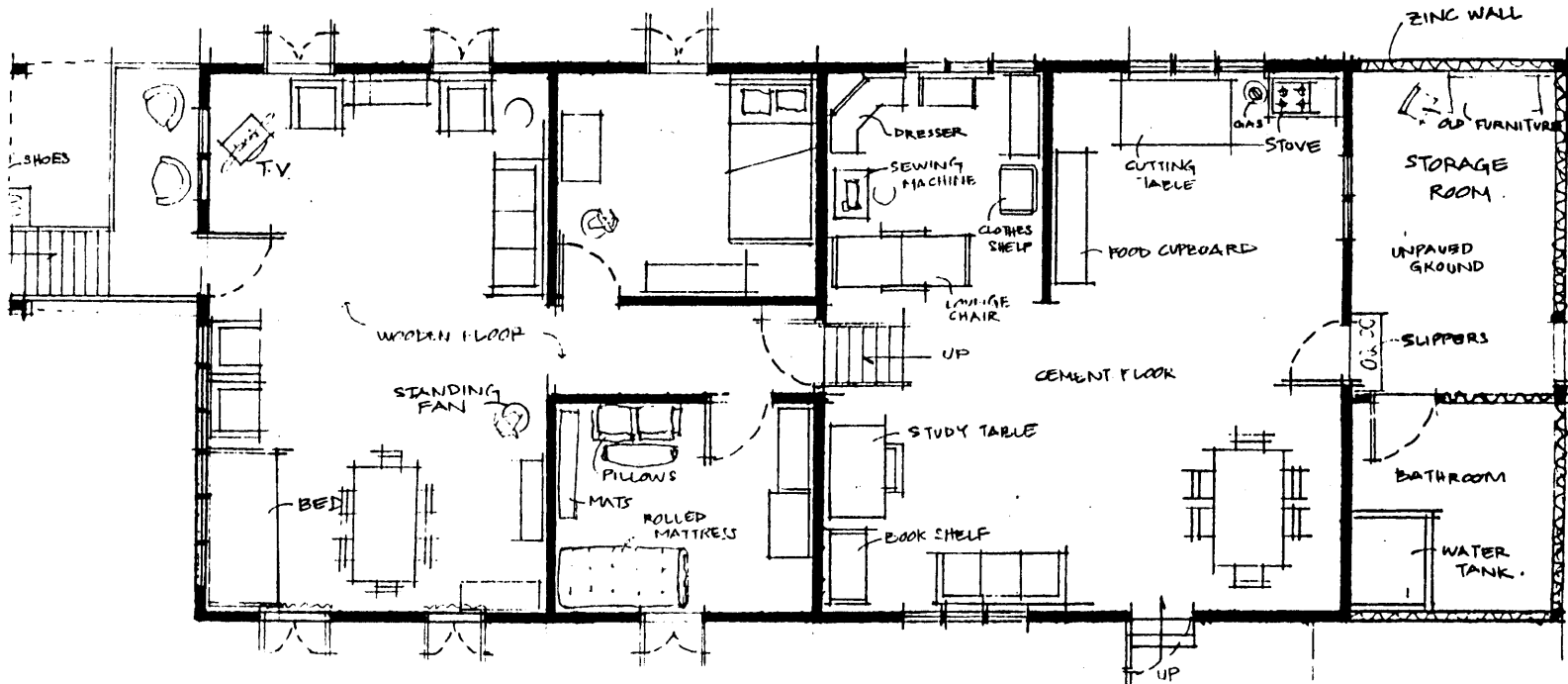
## 4. ANALYSIS

FLOOR PLAN OF A TRADITIONAL MALAY HOUSE SHOWING PATTERNS OF USE



The Interior of traditional houses is free of partitions, creating non- function specific spaces.

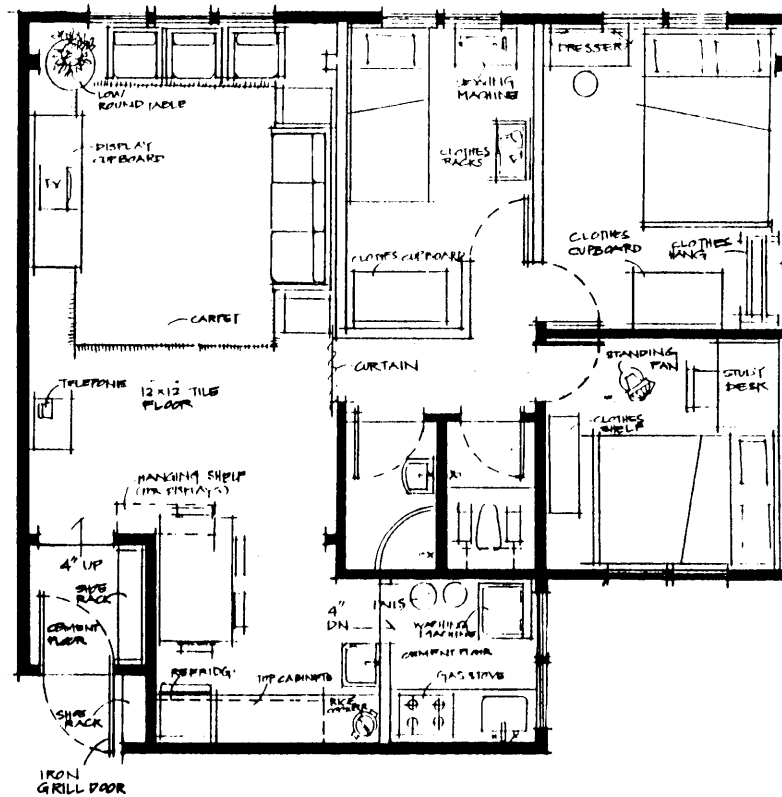
FLOOR PLAN OF A MALAY SQUATTER HOUSE SHOWING PATTERNS OF USE



Both the living room and the kitchen are multi-purpose spaces.

## 4. ANALYSIS

FLOOR PLAN OF A MALAY PUBLIC HOUSING UNIT SHOWING PATTERNS OF USE



The balcony is used as a cooking area, so that, the kitchen can accommodate social interactions among the female members of the household.

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It is also the custom that men and women use separate entrances to the house. Therefore in traditional and squatter houses, there are two entrances to the house that denote both male/female and formal/informal zones. In public housing, because the custom cannot be accommodated, the women simply use the entrance less frequently. The socializing pattern also separates men and women (see 4.5). Men usually meet and socialize in the *anjung* while women meet and chat in the *dapur* or the *selang* porch. If the visitors come from distant places for formal visits, or if there are important matters to discuss, they usually meet in the *serambi* or living room. During ceremonial events, such as a wedding, the shaving of a baby's head (*bercukur kepala*), the circumcision of male adolescents (*bersunat*), the completion of Quran reading classes (*khatam Quran*), or the Haj pilgrimage farewell and welcome (*sambut Haji*), socializing takes place in the *ibu rumah*. In squatter and public housing, the living room functions as both the *serambi* and the *ibu rumah*.

Traditionally, sleeping takes place in the *ibu rumah* for most family members, where mattresses are laid out on the floor and private areas defined by the mosquito nets or cloth screens. In squatter houses the same pattern remains except that the *ibu rumah* usually has partitioned sleeping rooms for married couples, which during the day, are used for storing mattresses, pillows, and mosquito nets. The same pattern is also observed in public housing. It is common among Malay families to have young children under the schooling age sleep with their parents.

Eating takes place in both the *ibu rumah* and the *dapur*. Men and women may eat separately, as in the case of extended families, or during ceremonial functions. Otherwise, the whole family dines in the *dapur*.

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## 4. ANALYSIS

### 4.1.2 Chinese

Like Malay houses, Chinese houses are also flexible in terms of uses for the spaces. The traditional farm house and fisherman house are very similar to the squatter houses, in that the living room is a multi-function room where most family activities, such as sleeping, relaxing, socializing, and also other non-family oriented activities, including those related to work, take place. Example 4.1.2b shows a house whose owner is a tailor who uses the living room as her workplace. The same is true in Chinese shophouses, where it is difficult to separate the work space from the living space. Although the house layout clearly divides the house into three sections, each connected by a doorway, work related activities are not confined to the shop front only. In most cases, they spread out to the entire house, especially when the house is rented out to several families.

Like the Malays, the Chinese also take off their shoes before entering the house. In squatter and some traditional houses like the farm and fisherman's houses, they keep the shoes on the front porch. In shophouses, however, they may wear their shoes on the ground floor level, and take them off at the steps leading to the second floor.

The front porch of Chinese houses, unlike those of Malay and Indian houses, are not used much for socializing activities. Other than serving as a physical separation between inside and outside, and public and private, it is used to store items such as shoes, bicycles, tires, mops, and other unused item. In the case of farm houses and fisherman's houses, it is also used to store work equipment. Occasionally, it is used by old ladies of the house for relaxing and watching passers-by.



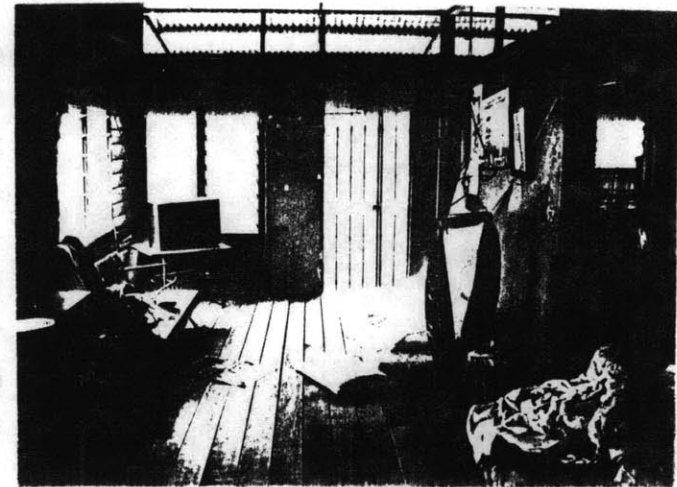
A view of a livingroom of a Chinese squatter which is also used as a working area by the owner who is a tailor

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Socializing in Chinese houses takes place in the living room for both men and women. Sometimes, it occurs in the kitchen dining area, especially among close friends and relatives, regardless of gender. In a post-occupancy study of a housing project in Setapak (Thay K. S. 1985: 15), it is observed that, compared to the Malays and Indians, the Chinese spend the least time socializing among neighbors.

Eating is the main event of Chinese family activities. Kitchen and dining are usually combined in one large space, facing out to the courtyard. Cooking is done by both men and women., in the cases where both parents are bread winners. In the case of extended family, it is usually done by an old, dependent relative such as the grandmother, or a widowed aunt.

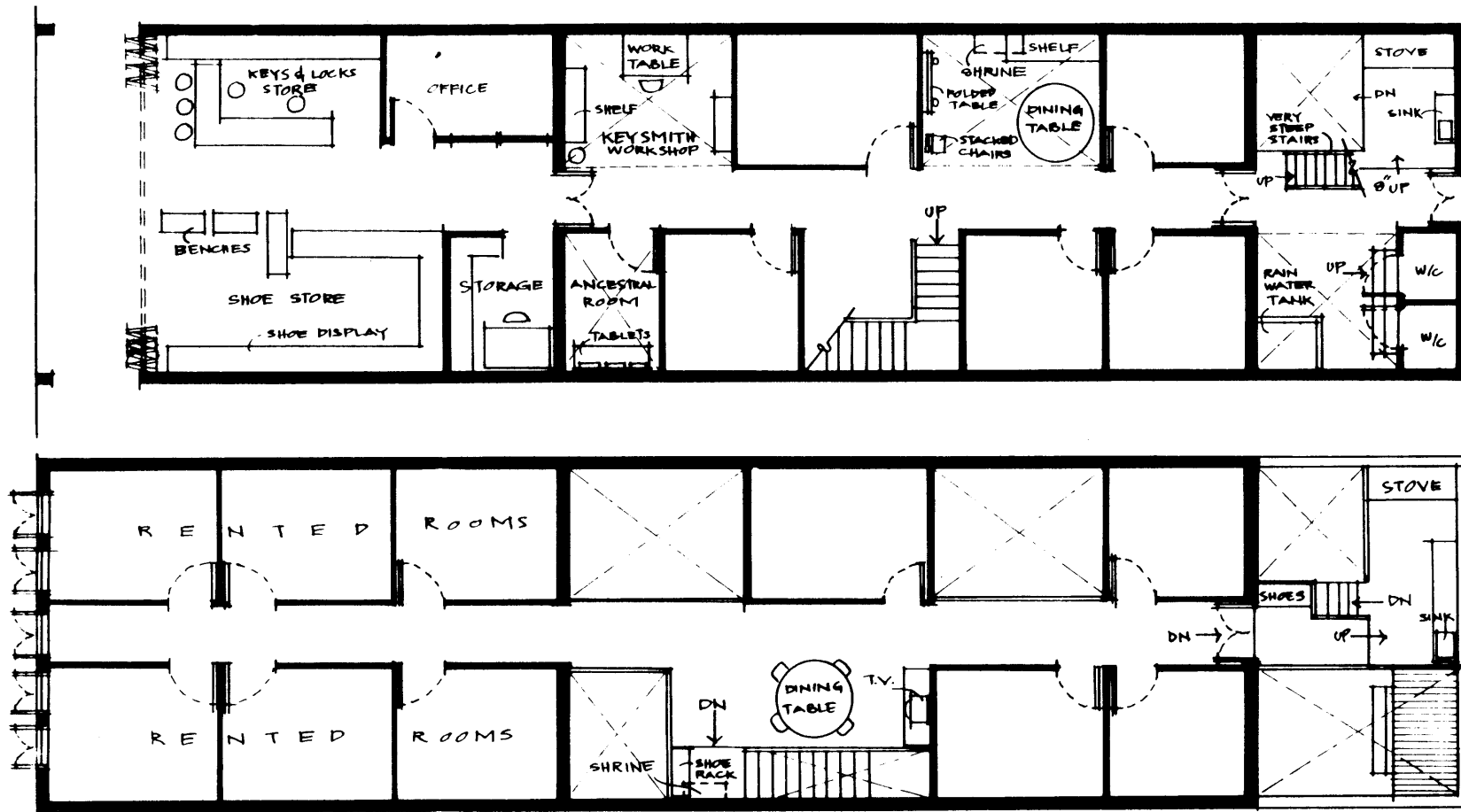
Like in Malay and Indian houses, sleeping in Chinese houses takes place both in the living and sleeping room. It is also common among Chinese families to have pre-school age children sleep with their parents.



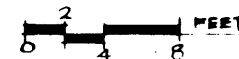
View of a living room of a Chinese Squatter which contains a mattress with mosquito net for sleeping

## 4. ANALYSIS

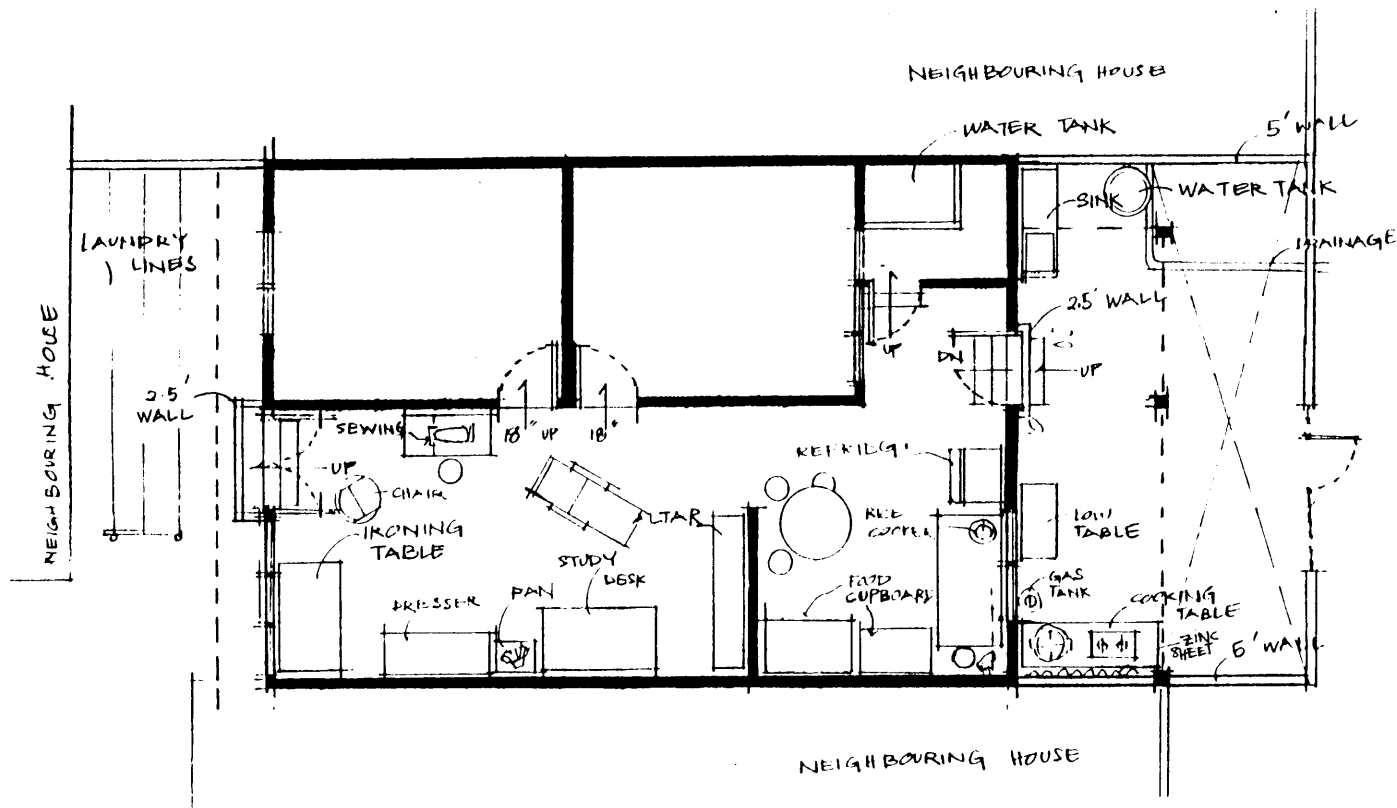
FLOOR PLAN OF A CHINESE SHOPHOUSE SHOWING PATTERNS OF USE



In Chinese shophouses, the multi-purpose interior spaces are often subdivided into separate rooms to be rented out.



FLOOR PLAN OF A CHINESE SQUATTER HOUSE SHOWING PATTERNS OF USE

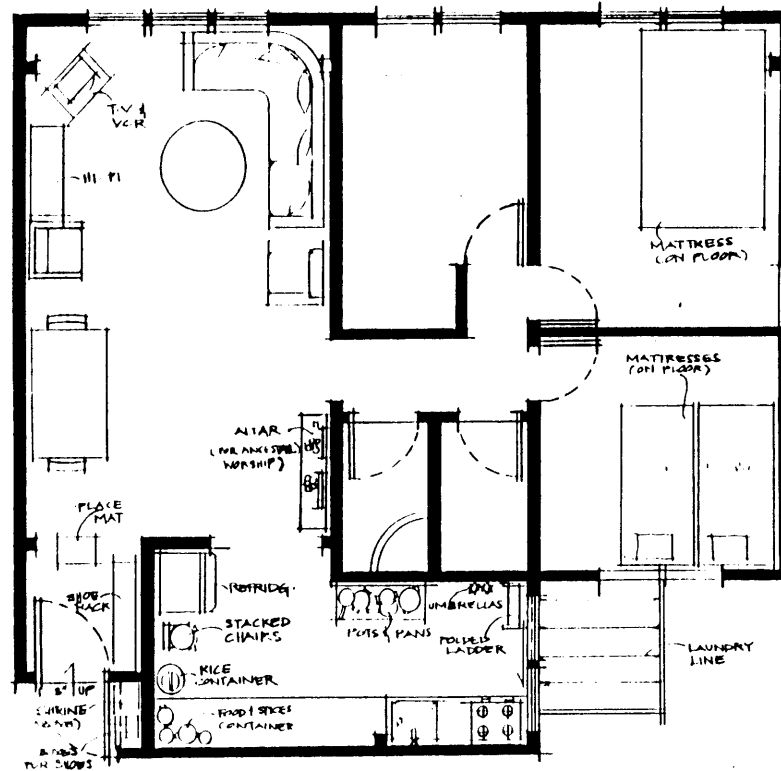


Typical of Chinese squatters, the main hall of this squatter house serves as a place to work, rest, worship, and sleep.



## 4. ANALYSIS

FLOOR PLAN OF A CHINESE PUBLIC HOUSING UNIT SHOWING PATTERNS OF USE



In Chinese public housing units, dining often takes place in the livingroom

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#### 4.1.3 Indian

Like in Malay and Chinese houses, the spaces in Indian houses are also flexible and non-function specific. The use pattern of these spaces varies at different times of the day. Partitioned rooms, unlike those of Western houses, are not function specific. They are used for different purposes, depending on the needs of the dwellers.

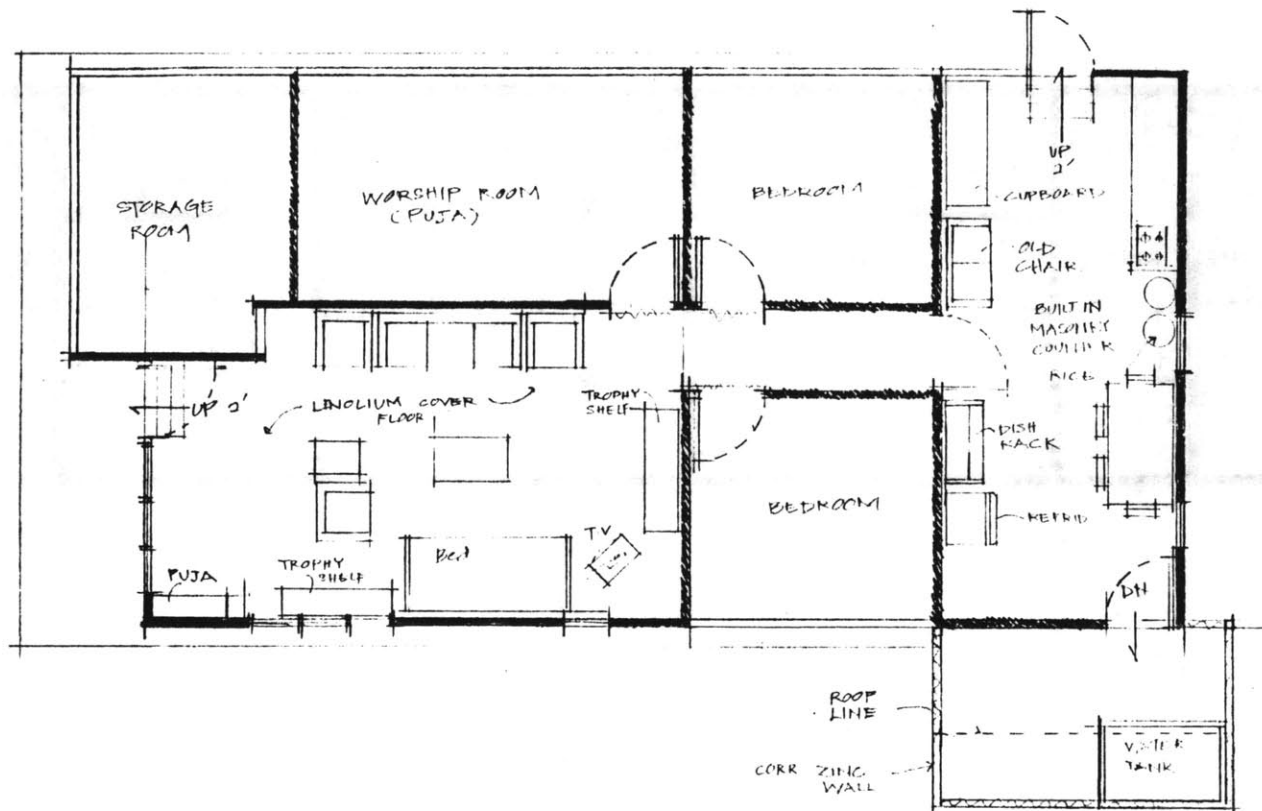
In both traditional and squatter houses, there are two entrances to the house. The men always use the front entrance and are either entertained in the *thinnai* area, or in the *kudam*. The women may use the front entrance during formal visits and be entertained in the *kudam*, but normally close female friends or relatives use the back entrance and socialize in the kitchen area, adjacent to the courtyard. In any case, both men and women take off their shoes at the entrance, either front or back, before entering the house.

Sleeping patterns in Indian houses are also very flexible. Anybody may sleep anywhere in the house, but the children and older women usually sleep in the *kudam*. The rooms are usually used by married couples, or by the elder man of the house. Young unmarried women usually sleep in a separate room, near the kitchen area. During menstruation, they are isolated in the menses room.

Dining also takes place in the *kudam*, or in the dining area, adjacent to the central courtyard. In large extended families, men would eat first in the *kudam*, and the women follow later, in the kitchen area. Cooking is usually an elaborate affair. Between preparing for breakfast, lunch and dinner, cooking is a long continuous activity. Therefore, socializing among the women folk often evolves around the kitchen area and cooking activities may spill out into the courtyard area.

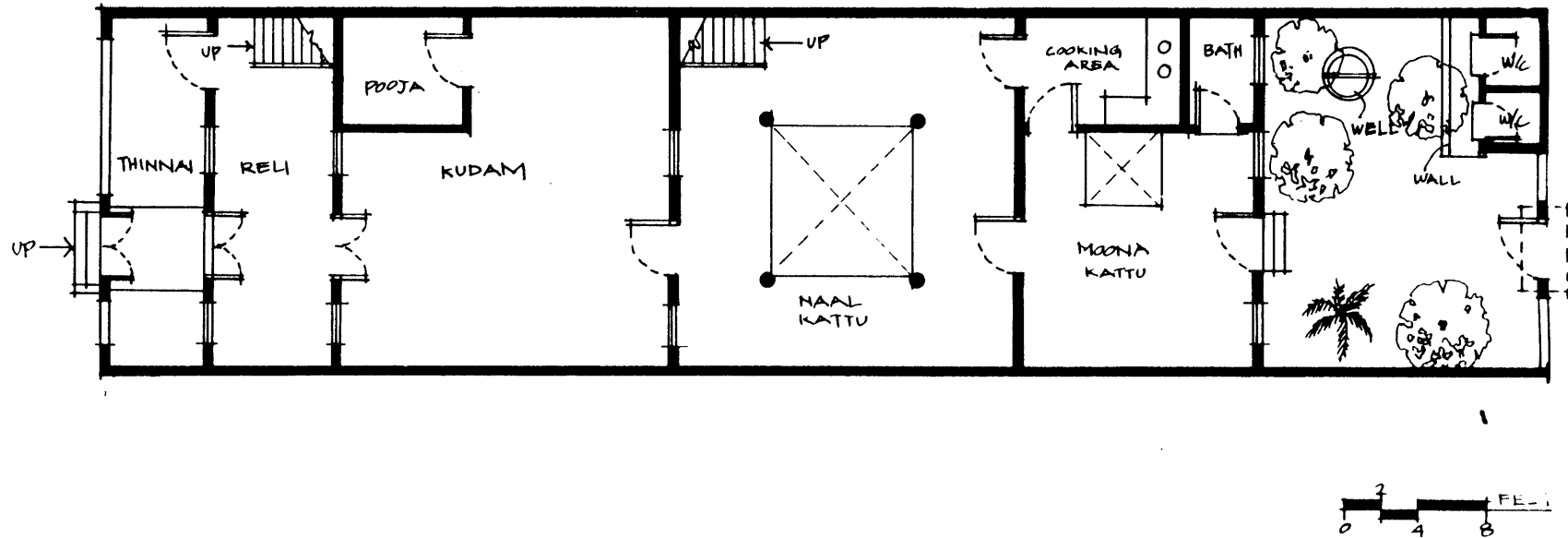
## 4. ANALYSIS

FLOOR PLAN OF A TRADITIONAL INDIAN HOUSE SHOWING PATTERNS OF USE



Other than the kitchen, bathroom, and the worship room the interior spaces is non function specific

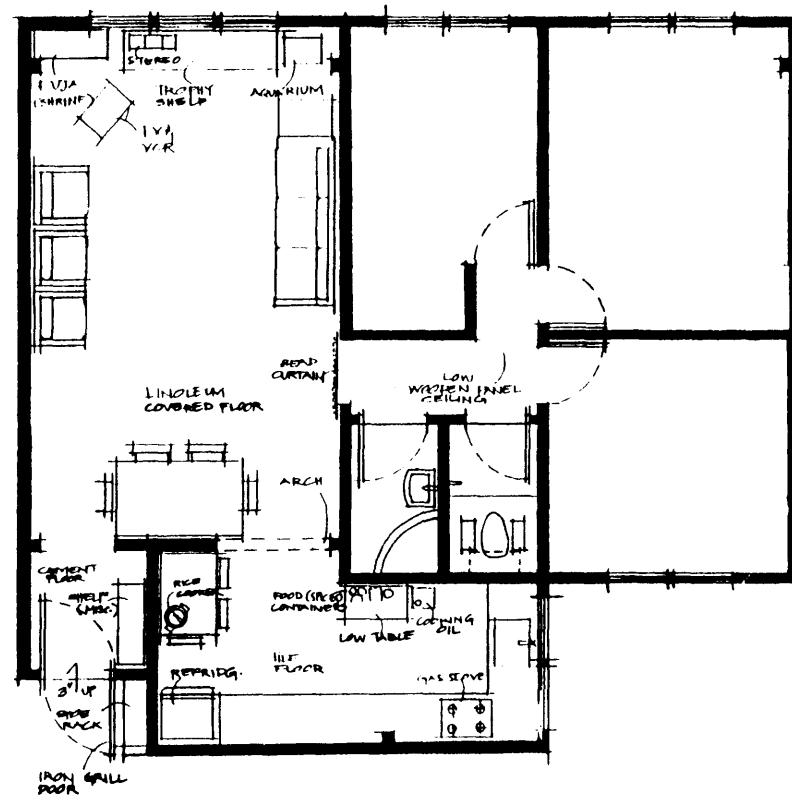
FLOOR PLAN OF AN INDIAN SQUATTER HOUSE SHOWING PATTERNS OF USE



Like in other squatter houses, the interior of an Indian squatter is also multi-purpose.

## 4. ANALYSIS

FLOOR PLAN OF AN INDIAN PUBLIC HOUSING UNIT SHOWING PATTERNS OF USE



In contrast to the traditional house organization, the dining room in this public housing unit merges with living room.

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## 4.2 Religious Concerns

Perhaps the second most important factor dividing the Malaysian societies, after race, is religion. Each ethnic group in Malaysia belongs to a separate religion, or group of religions: Malays are Muslims, Indians are generally Hindus, although there are quite a significant number of Muslims as well, and the Chinese are either Buddhists, Taoists, Confucianists, or a synthesis of all the three. Because culture and religion are inseparable, these differences in religions mark the fundamental differences in the culture and the way of life of these three ethnic groups. In fact, in homogenous public housing units, religious items are the most visible indicator identifying the units belonging to the different cultural groups.

Of the three, the Malay houseform has the least to do with the religion. This is perhaps due to the fact that Islam did not become part of the Malays' lives until the 15th century, unlike the Indians and Chinese, whose religious beliefs evolved over thousands of years. Many of the symbolic associations of the Malay house, such as the symbolic rituals of house building, are the remnants of the pre-Islamic animistic beliefs. The Chinese and Indians, on the other hand, have elaborate rules and religious diagrams to determine the orientation and spatial organization of the house.

Although there are many similarities in the religious teachings, as far as values are concerned, there are also conflicts resulting from the differences in religious practices. For example, Islam considers anything pertaining to pigs and dogs, taboo, and therefore these animals are offensive to Malays. This causes problems when there are Chinese or Indian neighbors who own dogs and cook pork. Similarly, the Hindu Indians believe cows to be sacred and find beef cooking offensive.

## 4. ANALYSIS

	Malay	Chinese	Indian
<b>Worship</b>	<p>No worshipped object, or specific place of worship.</p> <p>5 times a day, prayers are done in quiet and clean areas of the house - usually the bedroom, and serambi samanaik - facing the direction of Mecca (in Malaysia, facing west).</p>	<p>Shrines are placed in the front porch and kitchen; worshipped every 15 days.</p> <p>Deceased relatives are worshipped in the ancestral hall where tablets of each deceased individual are displayed.</p>	<p>Shrines or Pooja are worshipped twice daily, either in a special room called Pooja, or in a corner of the living room, usually displayed on a high shelf.</p> <p>A sacred Basil plant - "tulasi" - is commonly placed in the center courtyard to be worshipped for prosperity.</p>
<b>Prohibitions</b>	<p>No alcoholic drinks, or pork and dogs in the home.</p> <p>No objects (statues) depicting human forms in the house.</p>	<p>Doors should not be aligned in a straight axis.</p>	<p>Front door should not face south.</p>
<b>Requirements</b>	<p>Separation between male and female.</p> <p>Cleanliness of the floor at all times, because prayers are performed on the floor.</p>	<p>Depending on Feng Shui.</p>	<p>Decorations on the floors, walls, and columns to appease gods.</p> <p>A separate room with an access from outside for menstruating women.</p>

TABLE 4.2 : RELIGIOUS CONCERNS

DESIGN IMPLICATIONS: RELIGIOUS CONCERNS

	Malay	Chinese	Indian	Comments	Implications
Orientation	●	●	●	Malay: Prefer west. Chinese: According to Feng Shui. Indian: East/west, never south.	Should be determined by the context of the site.
Doors					
Centrally located	●	●	○	Malay: No preference. Indian: Door should be slightly off to one side.	Supports: The opening dimension in the walls should be wide enough to allow a range of possible locations of doorways.
Aligned	●	○	●	Malay: No preference. Chinese: If aligned, screen wall is needed to ward off evil. Indian: Should be aligned for the house to "breathe".	
Religious Space					
Specific (fixed) location	○	●	●	Malay: Prayer can be performed anywhere. Chinese: Shrines usually in kitchen or livingroom. Indian: Pooja is either in livingroom or in a special pooja room.	Infill: As required by each religious group.
Specific routine	●	●	●	Malay: Prayer 5 times a day. Chinese: Every 15 days, but worship can occur anytime. Indian: Worship twice a day, can occur anytime.	

● YES

○ NO

● MAYBE





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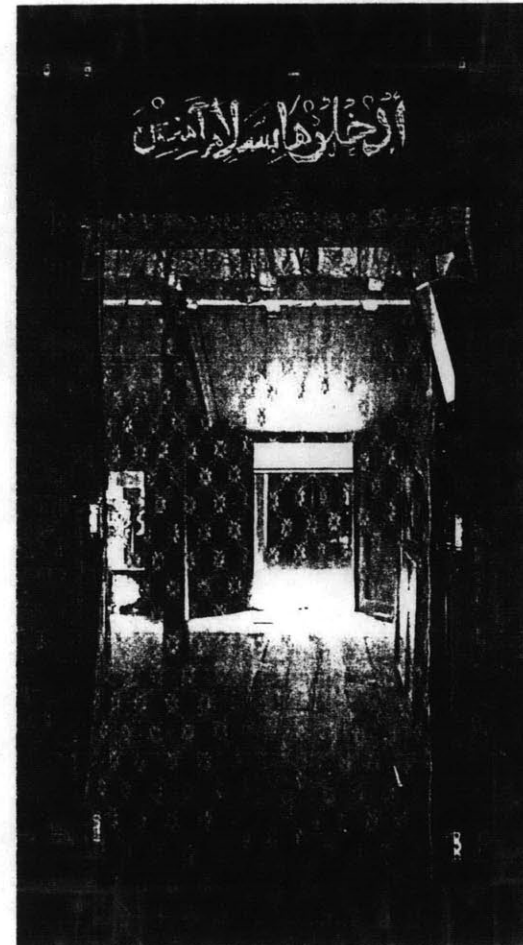
#### 4.2.1 Malay

Unlike Chinese and Indian houses, the Malay house is not built according to any religious diagram or building code. There is no sacred rule determining the direction of the house. Although the Malays prefer to build their house facing West, the direction of Mecca to which they pray five times a day, it is not a sacred direction. Instead there are other profane factors to determine the orientation of the house, such as sunlight, views, access, etc.

In traditional houses, praying usually takes place in the *serambi samanaik*. In squatter and public housing, individual prayer is performed in the bedroom, while group praying (*sembahyang jemaah*) occurs in the living room after the furniture are cleared to the side. Since the act of praying involves prostrating (*sujud*) and kneeling (*ruku'*), the floor of the houses must be clean at all times. For this reason, a large jar of water (*tempayan*) is placed at the entrance for washing one's feet prior to entering the house.

Traditionally, the religious ritual of bathing and preparing the dead for burial is normally performed in the *serambi samanaik* where a corner of the floor area is built with split bamboo to allow drainage. Today, this ritual is mostly performed in the mosque instead.

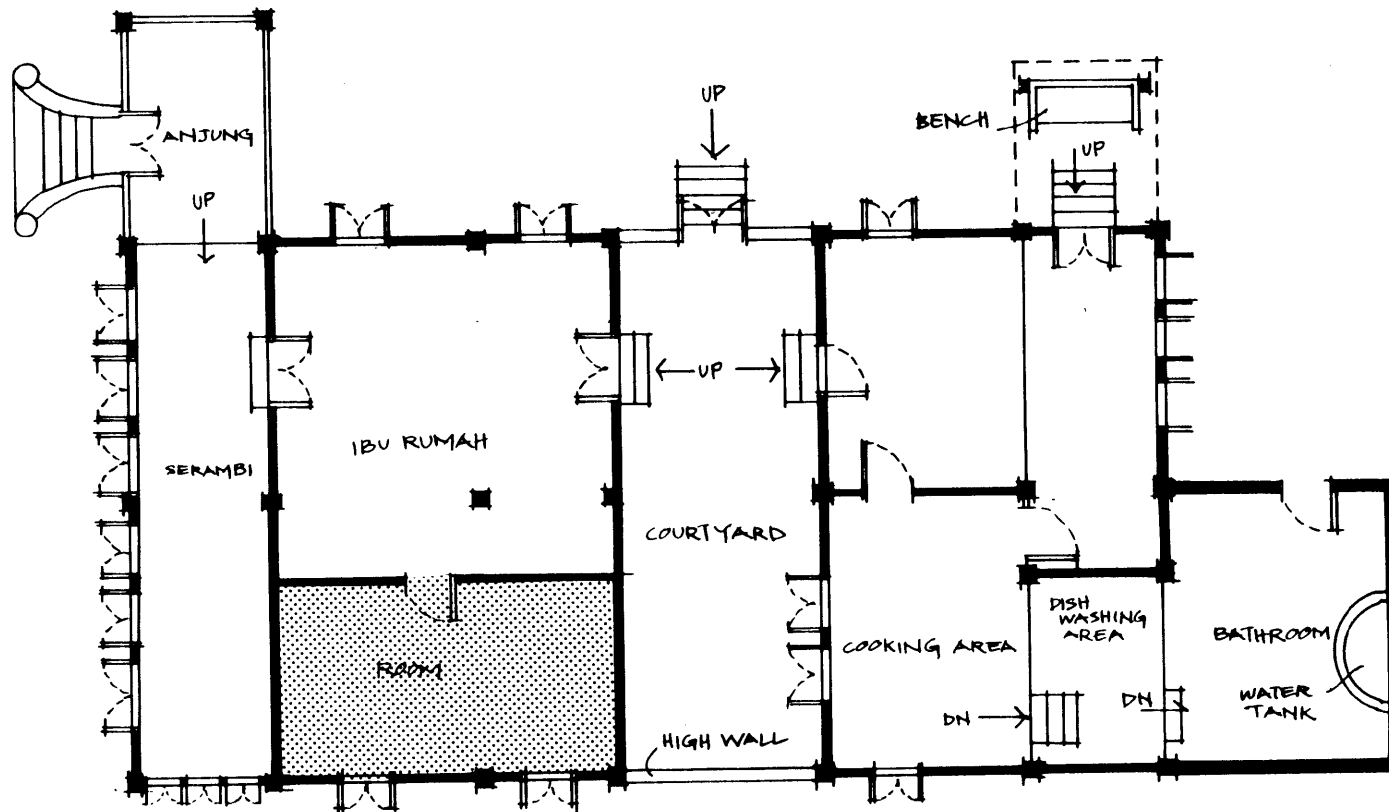
In public housing, the Malay units can be easily identified by the display of Quran verses framed above the doorway, which is believed to guard the house from burglars.



View showing a doorway of a Malay traditional house adorned with Quran verses

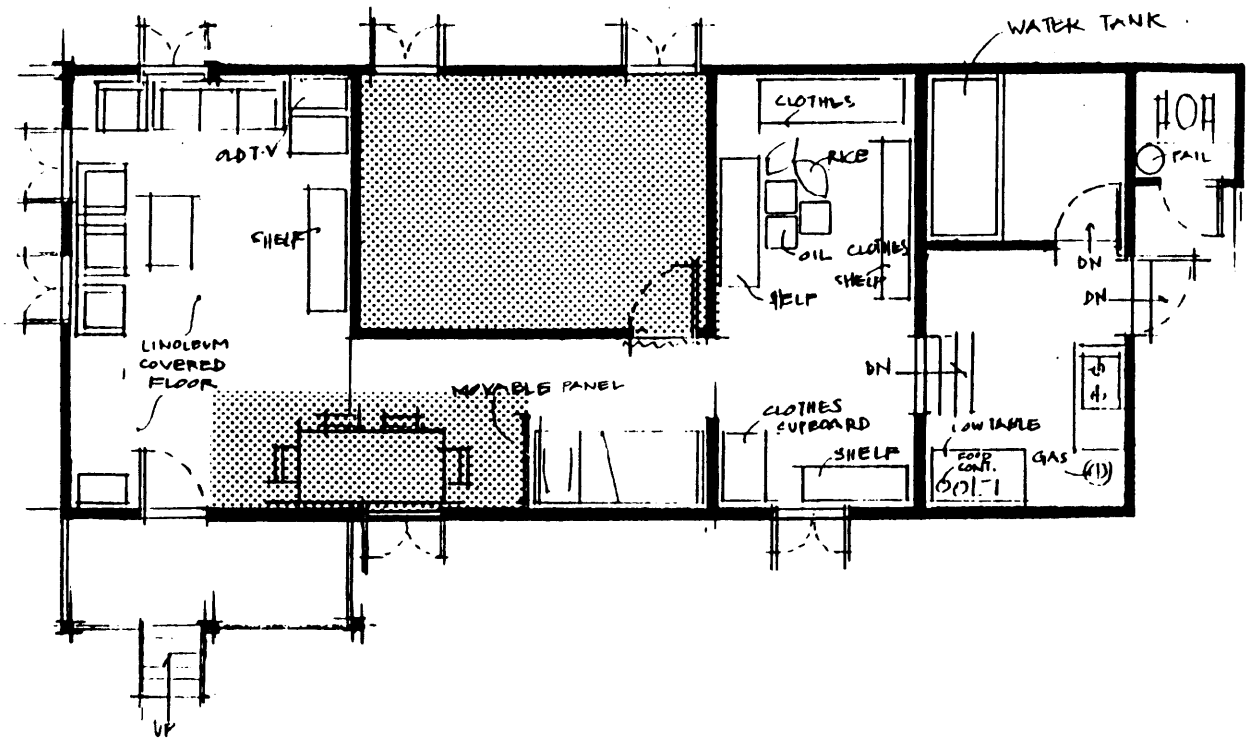
## 4. ANALYSIS

FLOOR PLAN OF A TRADITIONAL MALAY HOUSE SHOWING RELIGIOUS SPACES



Malay houses do not have a specific place of worship. Instead praying can be performed anywhere inside the house, but normally they are carried out in the living room.

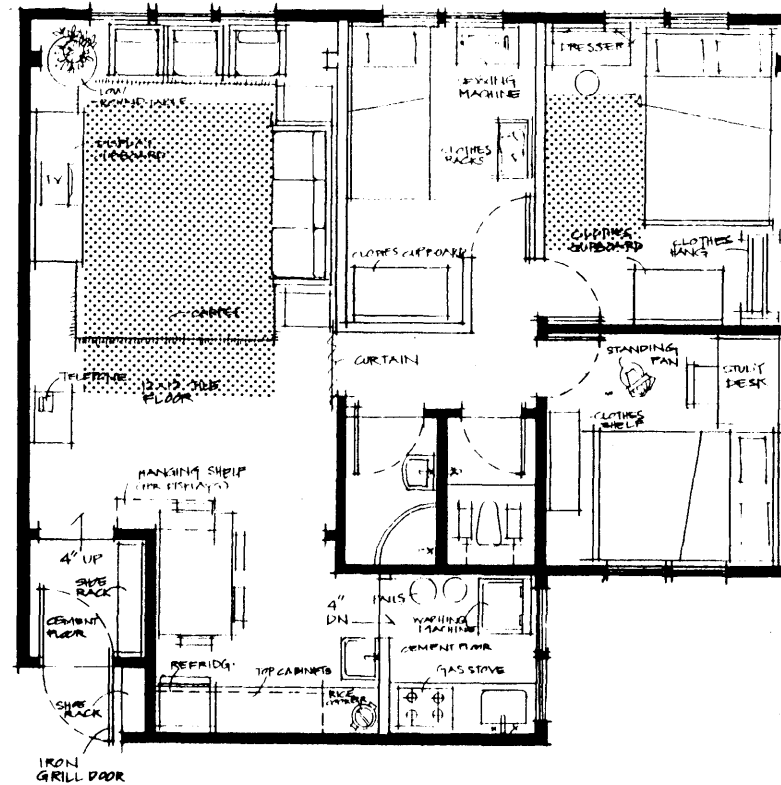
FLOOR PLAN OF A MALAY SQUATTER HOUSE SHOWING RELIGIOUS SPACES



In this house, Quran reading classes are held in the dining area, while praying is performed in the bedroom

## 4. ANALYSIS

FLOOR PLAN OF A MALAY PUBLIC HOUSING UNIT SHOWING RELIGIOUS SPACES



In this dwelling unit, praying is performed individually in the rooms during the day, while at night, it is performed in the living room together with the family.

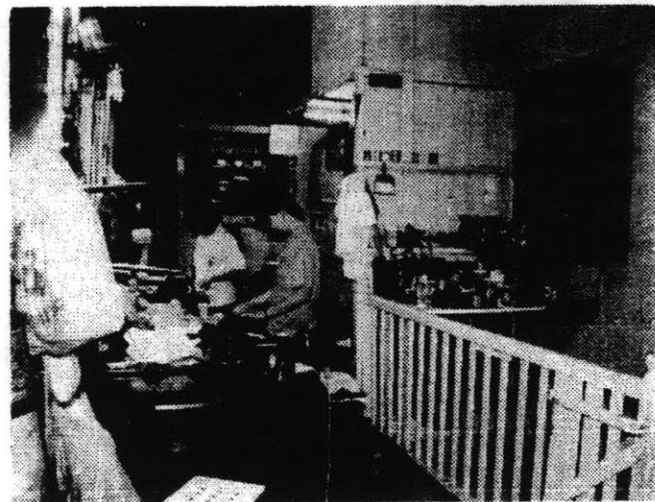
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#### 4.2.2 Chinese

It is very difficult to define the religious elements in the complex Chinese system of beliefs. For example, *Feng Shui*, which determines the layout and orientation of the house, is an ancient science rather than a religious practice, but the science itself does not make any sense without an understanding of the Chinese concept of harmony of the five basic elements (water, fire, earth, wood and metal) and the balance of the *yin* and *yang*. *Feng Shui* determines the best location for the family room and the master bedroom, as well as the best direction for the front door, based on the basic elements and the animal association indicated by the owner's year and time of birth, as well as the basic elements and animal association of the surrounding site.

One religious practice that unites all Chinese of different religious affiliations is ancestral worship. In traditional houses, an altar where the ancestral tablets are displayed and honored daily is usually located in a special ancestral hall, often in the north west wing of the house. In squatter and public housing the altar may be in a corner of the living or dining room. Ancestral worship evolves from the Confucian teaching of respect for the elderly. In Chinese family, as in Malays and Indians, it is the duty of the eldest son to take care of his parents. Therefore, extended families are very common.

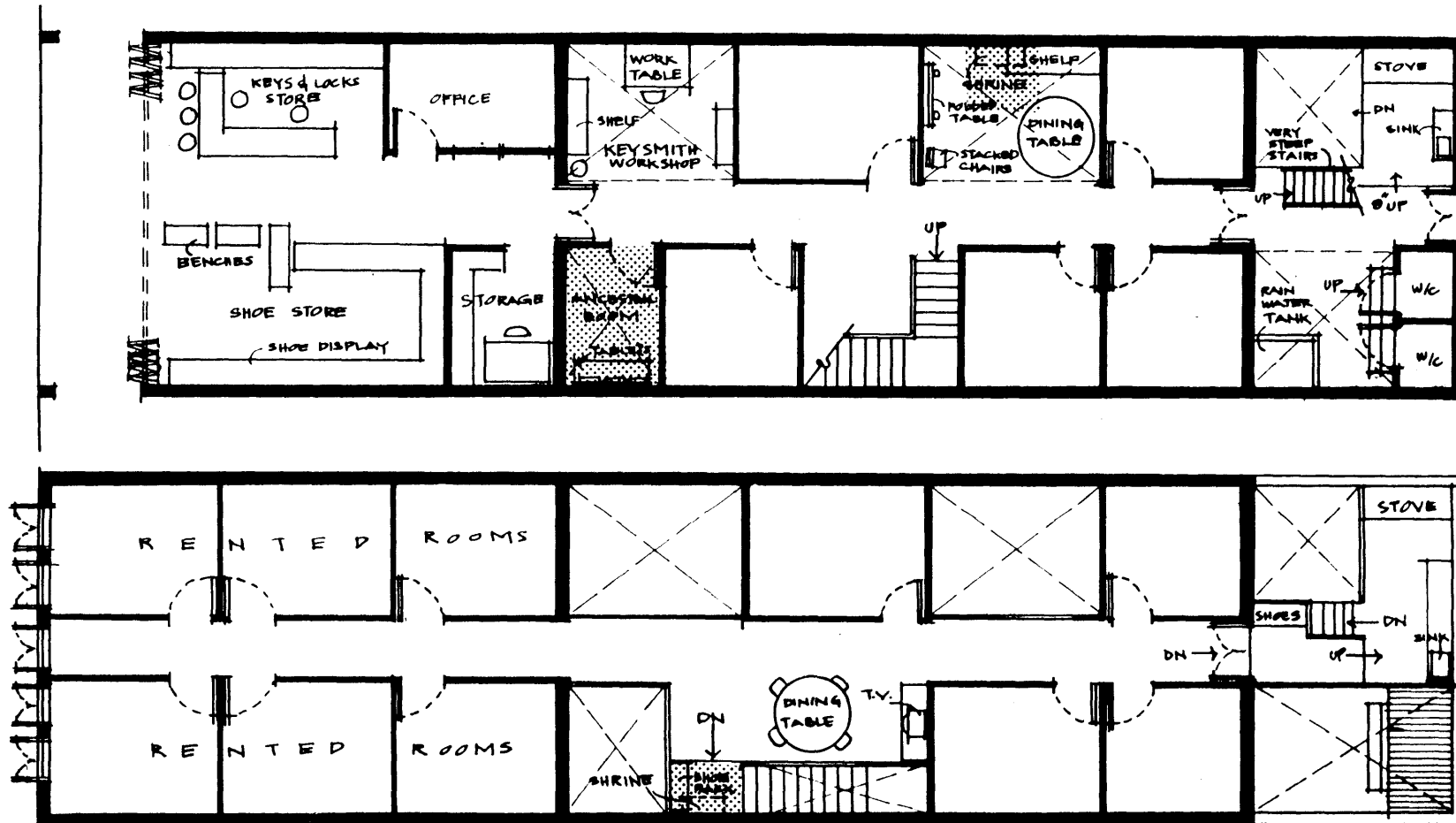
Chinese houses can usually be identified by the conspicuous shrines in the front porch or at the doorway. The shrine is dedicated to a protector god who differs from one clan to another. The god is worshipped and food offerings are made every 15 days. Another shrine is usually located in the kitchen area for the kitchen god, who reports on the family activity at the end of the lunar year.



View of an altar of a Chinese shophouse

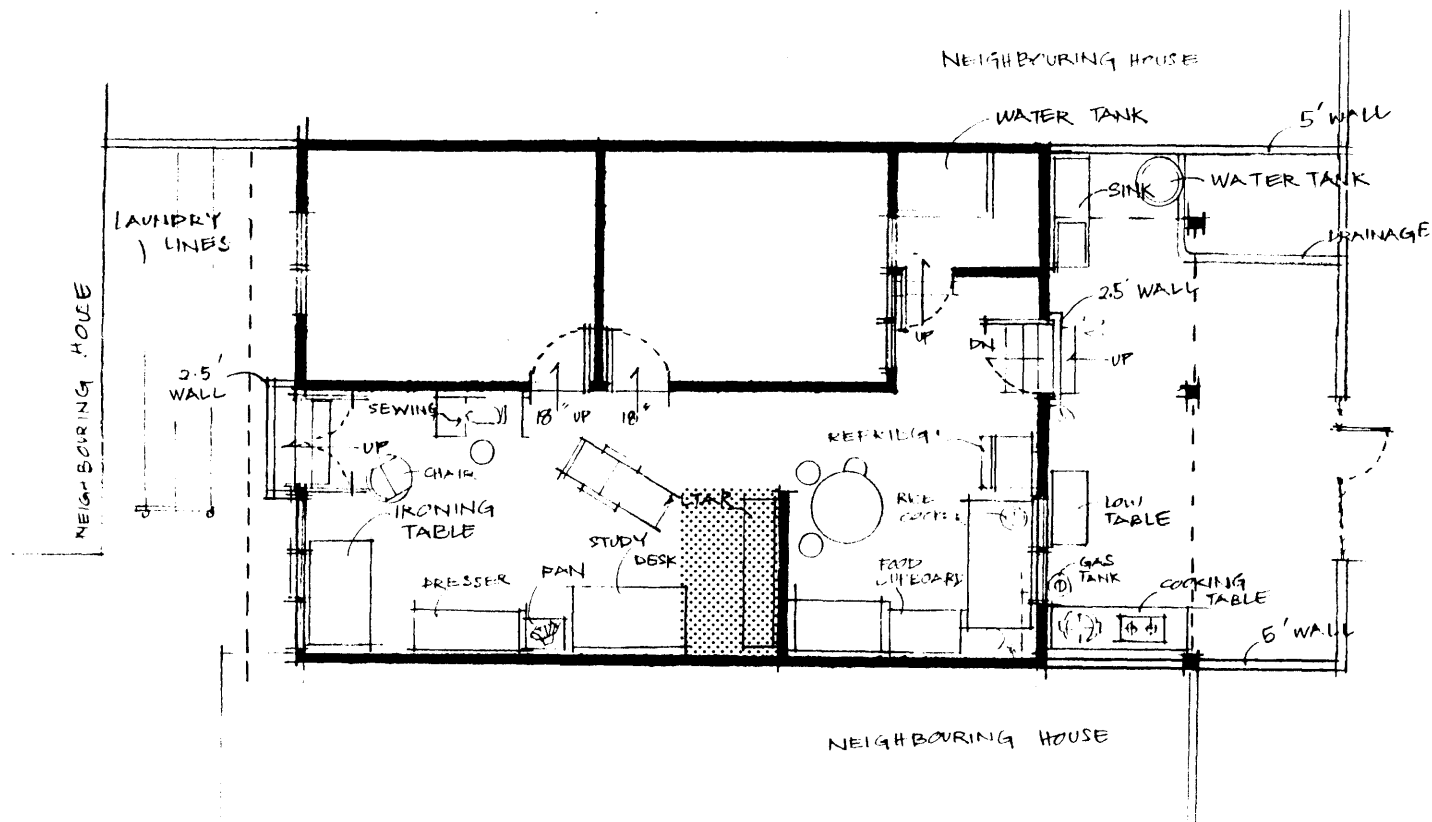
## 4. ANALYSIS

FLOOR PLAN OF A CHINESE SHOPHOUSE SHOWING RELIGIOUS SPACES



In shophouses, there may be more than one shrines and altars because the houses are often occupied by more than one family

FLOOR PLAN OF A CHINESE SQUATTER HOUSE SHOWING RELIGIOUS SPACES

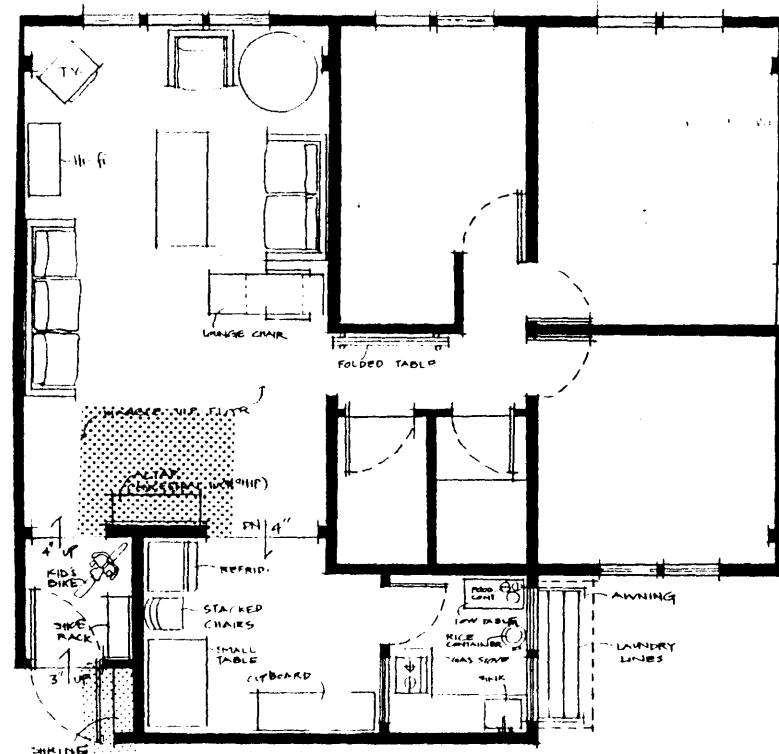


Ancestral altar is usually located in the living room.



## 4. ANALYSIS

FLOOR PLAN OF A CHINESE PUBLIC HOUSING UNIT SHOWING RELIGIOUS SPACES



Chinese units are easily identifiable by the conspicuously displayed shrines at the entrance.

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#### 4.2.3 Indian

The organization of the traditional Indian house is based on the sacred astrological diagram of the *Vastu Purusha Mandala*, which relates the house to the human body.

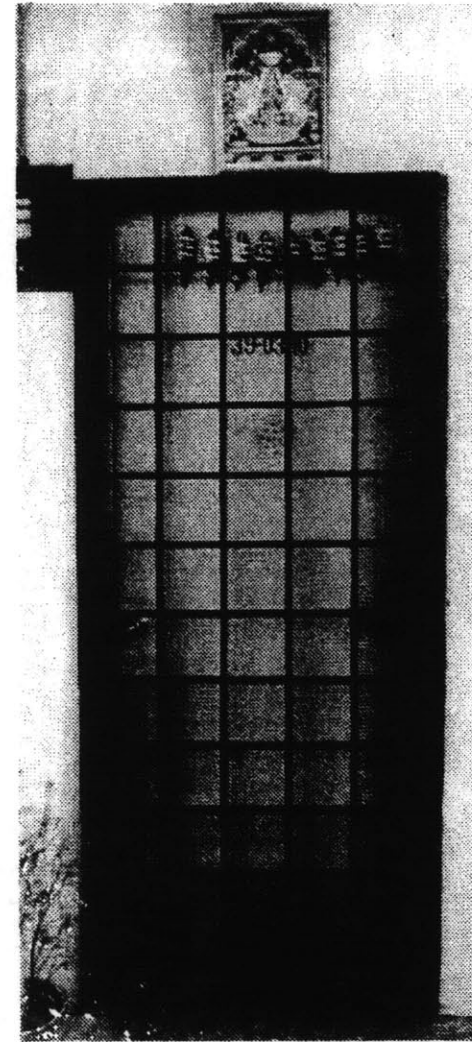
For example, it attributes the center of the house to *Brahman*, the soul of the body. This suggests a courtyard in this space to be used as a common area for the family's transaction. Therefore, in the linear spatial organization of the Indian house, the middle zone should be the family zone. Like Malays, Indians also perform a sacred ritual before occupying the house, in which the relationship of the central courtyard with *Brahman*, the eternal soul, is invoked, thus recognizing and establishing friendship with the whole cosmic order.

As in the Chinese house, orientation is also very important in traditional Indian houses, and is determined by the diagram of *Vastu Purusha Mandala*. For example, the south is attributed to the Lord of Death, therefore entrance from the south is generally not acceptable for Indians.

In the central court of Hindu houses, it is common to find the "*Tulasi*" (literally, "sacred"), which is a Basil plant, on a small, elaborately decorated platform. This area is kept absolutely clean, because the plant is worshipped as the Goddess of Prosperity.

Another place of worship in Indian houses that exists in traditional, squatter, as well as public housing is the *Pooja*, which is either in a special room, or a special alcove. There is no specific routine for the *pooja* worship - however, devout Hindus usually perform the worship twice daily, during sunrise and sunset.

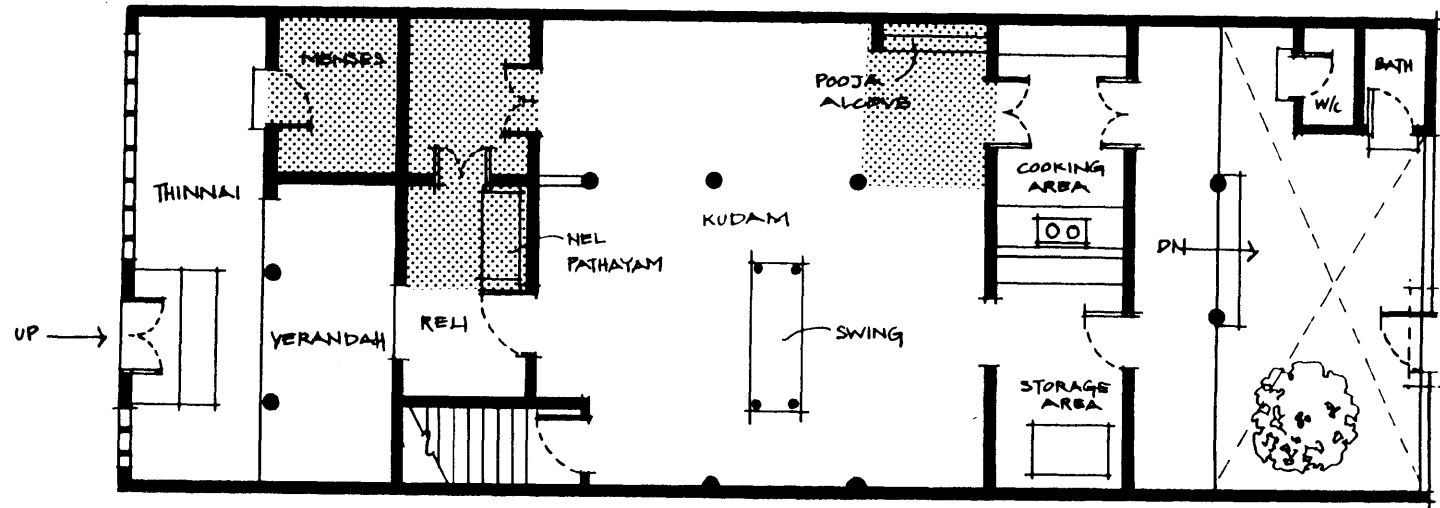
Some Indian houses have a special room which is accessible from the *thinnai*, used by menstrual women who are prohibited from entering the house.



A religious garland often decorates an entrance of an Indian dwelling

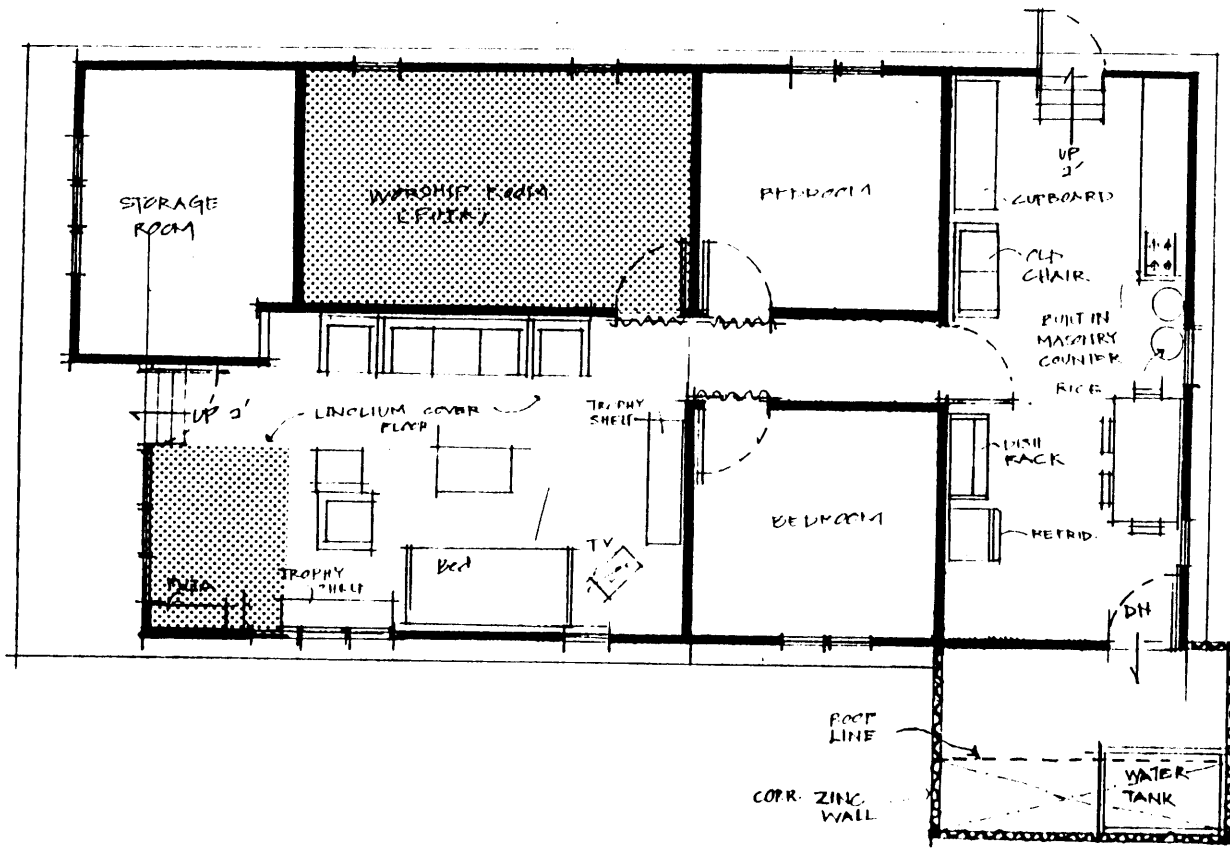
## 4. ANALYSIS

FLOOR PLAN OF A TRADITIONAL INDIAN HOUSE SHOWING RELIGIOUS SPACES



Traditional Indian houses are full of religious items and often elaborately decorated to please the Gods.

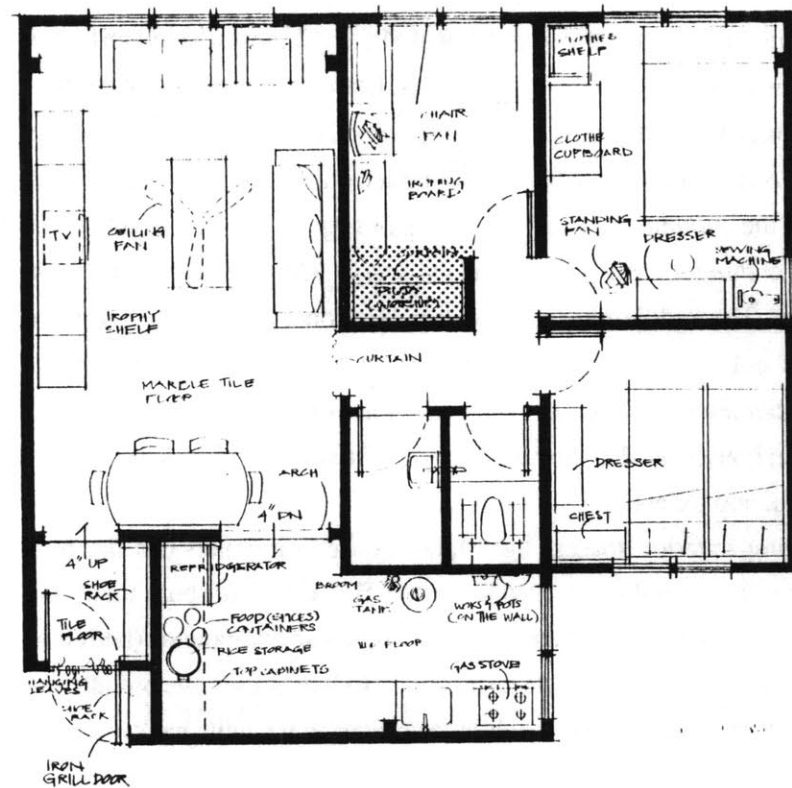
FLOOR PLANS OF AN INDIAN SQUATTER HOUSE SHOWING RELIGIOUS SPACES



Like many of the Indian squatter houses, this house has two places of worship.

## 4. ANALYSIS

FLOOR PLAN OF AN INDIAN PUBLIC HOUSING UNIT SHOWING RELIGIOUS SPACES



In public housing, the *pooja* is usually in the bedroom.

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### 4.3 Public / Private

One common characteristic of traditional Malay, Chinese and Indian houses is the linear progression of public to private zones, from the front porch to the back kitchen. All the three types of houses have a similar spatial organization that divides the house into 3 zones. The front zone is the public zone which, in Malay houses, is composed of the *anjung* and the *serambi gantung*. In Indian houses, it is composed of the *thinnai* and the verandah, and in Chinese shophouses, the commercial front. The middle zone is the semi-public zone, which is the *ibu rumah* in Malay houses and the *kudam* in Indian houses. In Chinese houses, this zone is semi-private, rather than semi-public. The back zone is the private zone, which in Malay and Indian houses, is also the female zone. This zone includes the kitchen, dining, bathroom, and toilets.

Comparing exterior spaces, the Malay house compound has the most ambiguous definition of public and private zones. This is true for both traditional and squatter houses. On the other hand, the Chinese house compounds (both front and back) are most well-defined private territory. In Indian houses, the private zone in the front is left open and undefined, while the private zone at the back is usually walled off, similar to the Chinese house.

## 4. ANALYSIS

Public / Private	Malay	Chinese	Indian
Public Zone	<p>In the front zone.</p> <p>Includes the anjung and the serambi. is where informal socializing occurs</p> <p>Anjung - totally open. Serambi - partially open.</p> <p>is also the male zone.</p>	<p>In the front zone.</p> <p>Includes the front porch. In shop houses, the shop area.</p> <p>is where visitors stop to take off their shoes and be greeted in.</p> <p>is closed by front wall of fence.</p>	<p>In the front zone.</p> <p>Includes the thinnais and the verandah. is where informal socializing occurs.</p> <p>May be totally open or partially closed, by lattices.</p>
Semi-Public Zone	<p>In the middle zone, and in the exterior back zone.</p> <p>Includes the ibu rumah, the selang (middle) and the kitchen porch (back).</p> <p>is where guests are entertained (ibu rumah).</p> <p>is also the family area (middle), and the female socializing area (back).</p>	<p>In the middle zone.</p> <p>Includes the living room.</p> <p>is where visitors and guests are entertained.</p> <p>is also the family area.</p>	<p>In the middle zone.</p> <p>Includes the kitchen or the living room.</p> <p>is where visitors and guests are entertained.</p> <p>is also the family area.</p>
Semi-Private	<p>In the back zone of the house.</p> <p>Also the female zone.</p> <p>Activities include cooking, dining and family resting.</p>	<p>In the middle and back zone of the house.</p> <p>is the family zone.</p> <p>Includes the ancestral hall, kitchen and dining areas.</p>	<p>In the back zone of the house.</p> <p>Also the female zone.</p> <p>Activities include cooking, dining and family resting.</p>
Private	<p>Includes the service spaces - rooms, bathroom and toilet.</p>	<p>Includes the service spaces - rooms, bathroom and toilet.</p>	<p>Includes the service spaces - rooms, bathroom and toilet.</p>

		Malay	Chinese	Indian	Comments	Implications
Spatial Organization	Linear progression from public to private	●	●	●	Chinese: Only the master bedroom.	Supports: Interior space is divided into 3 zones by level differences.  Infill: M/C/I: Interior partitioning depending on needs and occasions.
	Level changes as public/private indicators	●	○	●		
	Walls as public/private partitioning	●	●	●		
	Use of rooms as private spaces	○	●	○		
	Separate entrances for public and private use	●	●	●		

● YES

○ NO

● MAYBE



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## 4. ANALYSIS

### 4.3.1 Malay



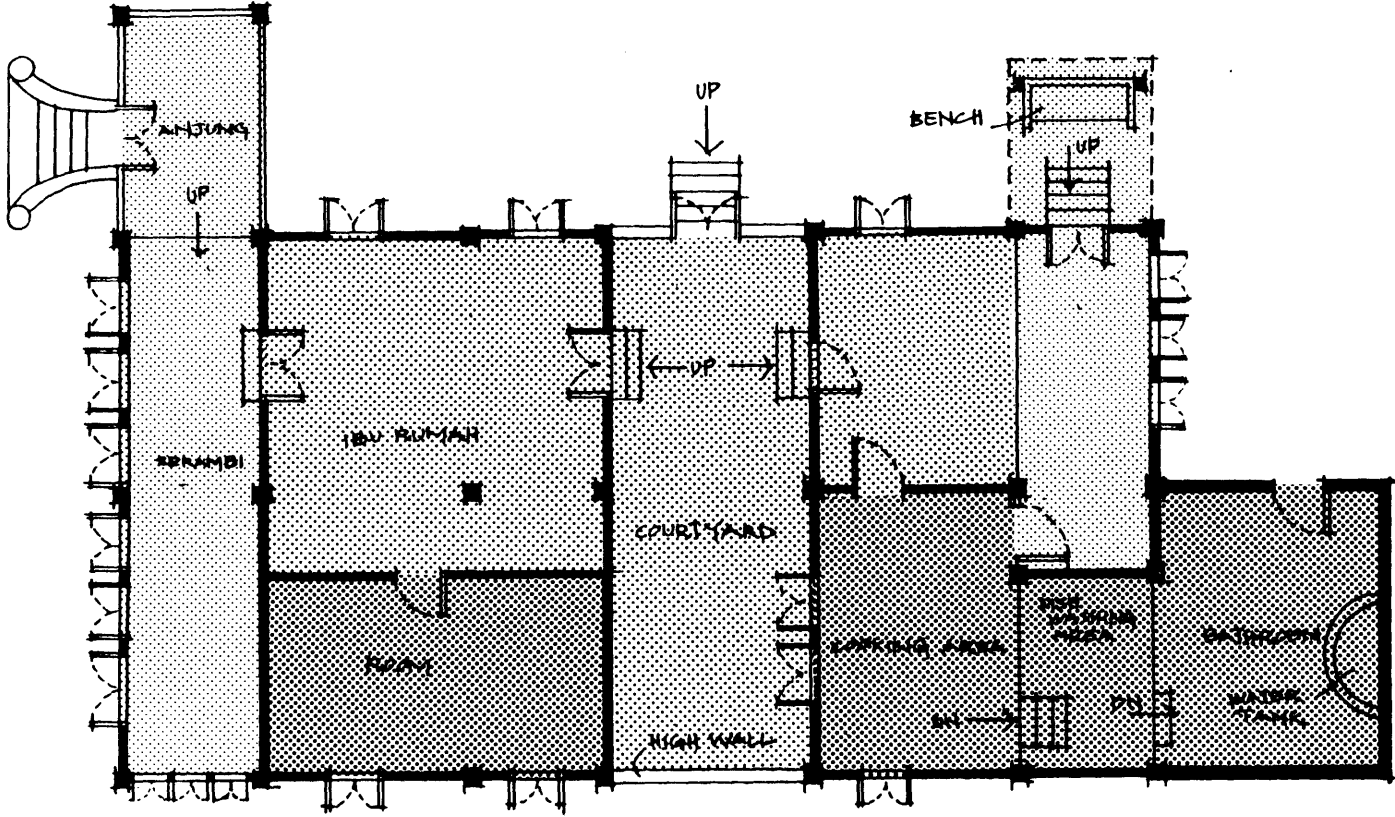
View of a Malay village showing the lack of public/private definition in the exterior spaces

In Malay culture, there is no concept of privacy. The word "privacy" itself did not exist in Malay language prior to British rule. The closest Malay word to privacy is *kesunyian*, which has a negative connotation of "loneliness". Since the Malay culture stresses community intimacy rather than personal privacy, the Malay house compound is very loosely defined and most often unfenced, making the public and private spaces merged and undefined.

Similarly, the interior spaces of the house are traditionally very open, with no partition to demarcate privacy. Nobody in the house has their "own room", unlike Western houses. This lack of privacy is also true in squatter houses and public housing. Although the concept of an enclosed room is adapted in squatter houses, the rooms do not denote privacy in the Western sense. They are private as far as outsiders are concerned, but among the members of the family, the rooms are public to all. Generally, everybody in the family has access to every room in the house.

However, relative to outsiders, the public/private hierarchy does exist. Beginning with the *anjung* as the most public space, the spaces becomes more private as one ventures further inside, with the kitchen as the most private space if one is a male visitor. To a close female visitor, the reverse is true. The most public space is the kitchen porch or the *selang*, and it becomes progressively more private as one moves towards the male zone. In public housing, this gradual progression from public to private no longer exist. The only public space in the unit is the living room, the rest of the space is private.

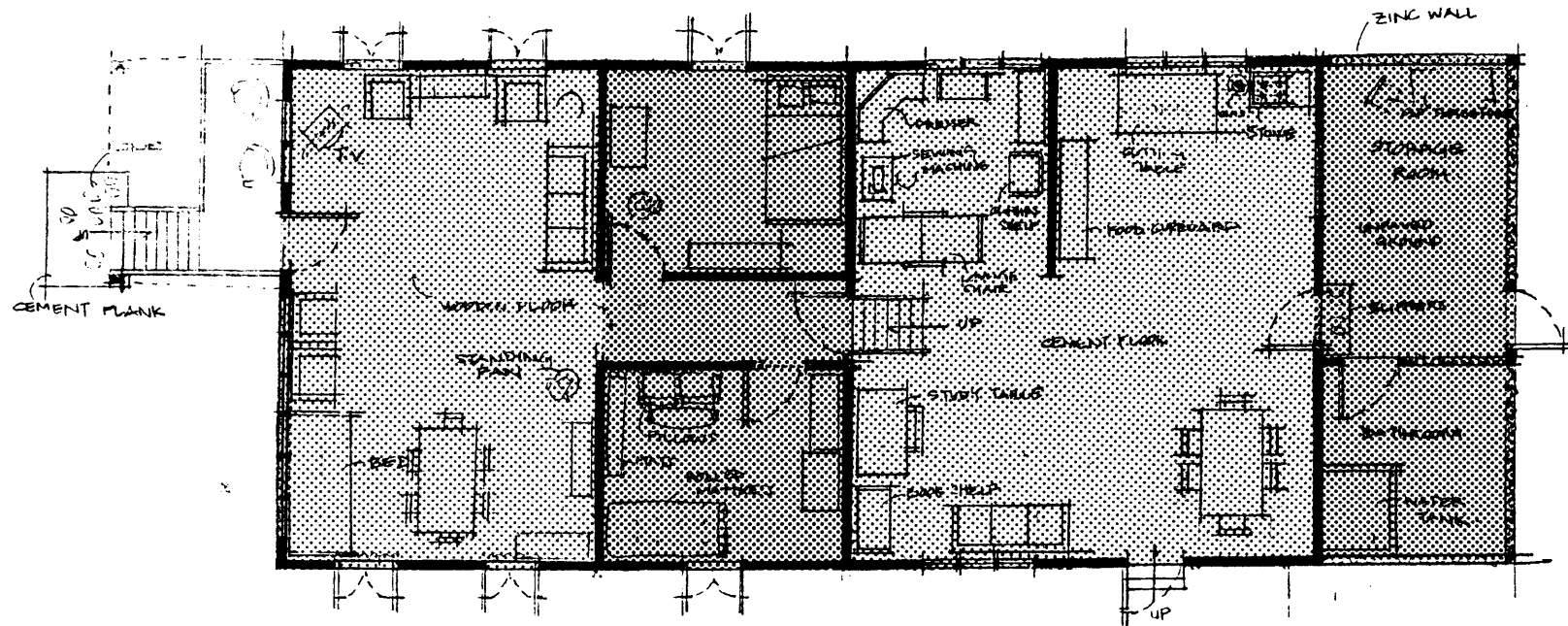
FLOOR PLAN OF TRADITIONAL MALAY HOUSE SHOWING PUBLIC/PRIVATE ZONES



This house has two public zone, one in the front (the male entrance area), and the other is at the back (the female entrance area)

## 4. ANALYSIS

FLOOR PLAN OF A MALAY SQUATTER HOUSE SHOWING PUBLIC/PRIVATE ZONES





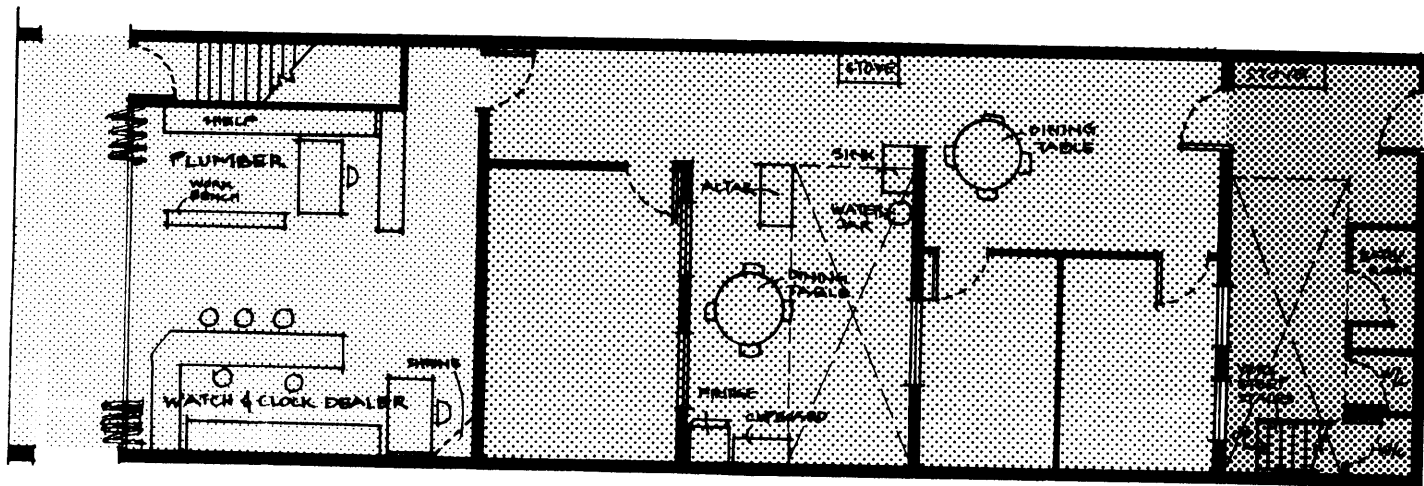
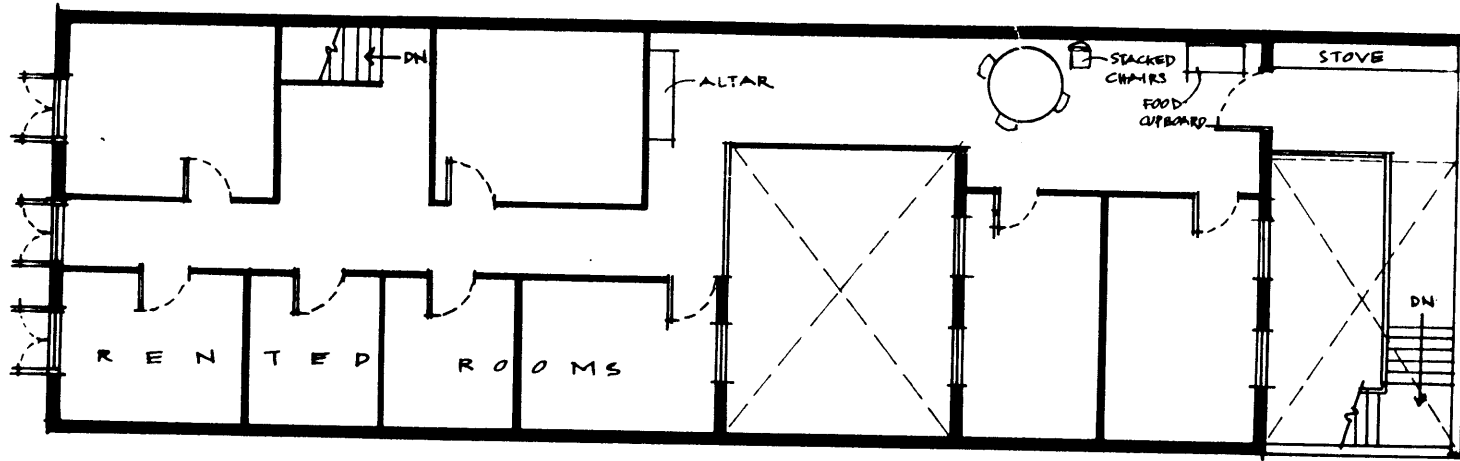
### 4.3.2 Chinese

Among the three cultures, Chinese houses, both traditional and squatter, tend to be the most private. With the exception of the shophouse, Chinese houses usually do not have a public front zone. The transition from the public spaces to the private zone is abrupt, because both the front and back yards are usually fenced or walled. The Chinese front porch cannot be considered a public zone because it is not normally used as a social transaction area, unlike the *anjung* of the Malay house, or the *thinnai* of the Indian house.

This lack of transition zone is characteristic of the interior spaces as well. Between the public zone of the living room and the private zone of the kitchen/dining and service spaces, is the ancestral hall or bedroom area, which are also private zones.

Unlike Malay and Indian houses, where the back entrance is a public entrance used by female friends and children, the back entrance to Chinese houses is private and used only by family members.

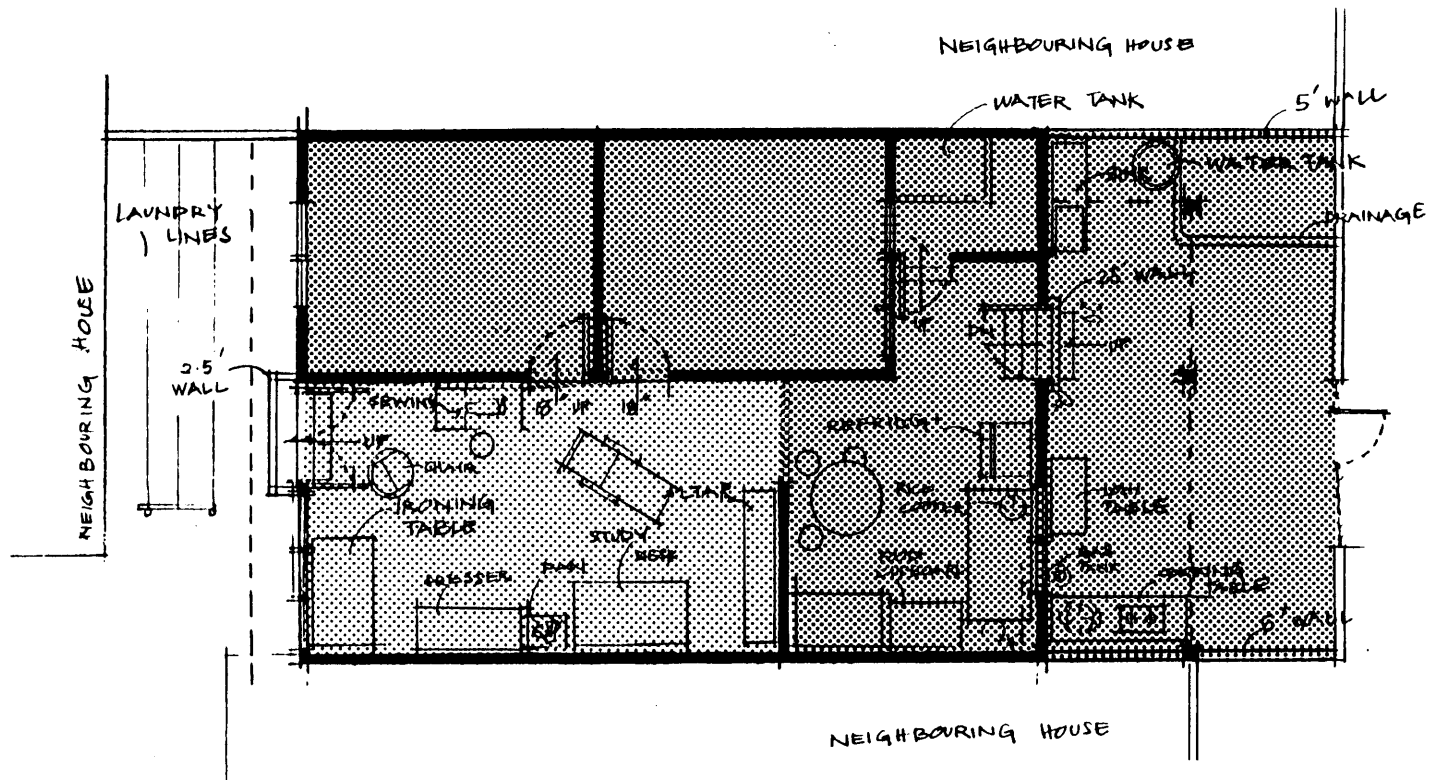
FLOOR PLAN OF A CHINESE SHOPHOUSE SHOWING PUBLIC/PRIVATE ZONES



In Chinese shophouse, the front porch forms part of the continuous arcades, used by the general public.

## 4. ANALYSIS

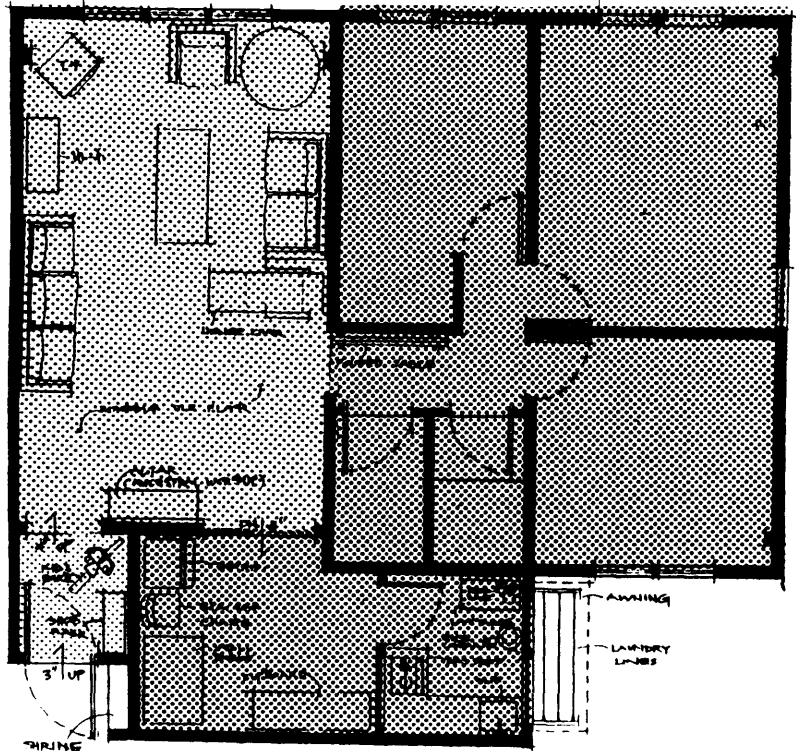
FLOOR PLAN OF A CHINESE SQUATTER HOUSE SHOWING PUBLIC/PRIVATE ZONES



The compound of a Chinese squatter house is usually very private and is often walled at both front and back.

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FLOOR PLAN OF CHINESE PUBLIC HOUSING UNIT SHOWING PUBLIC/PRIVATE ZONES



The only public zone of a public housing unit is the 4'x4' foyer.



### 4.3.3 Indian

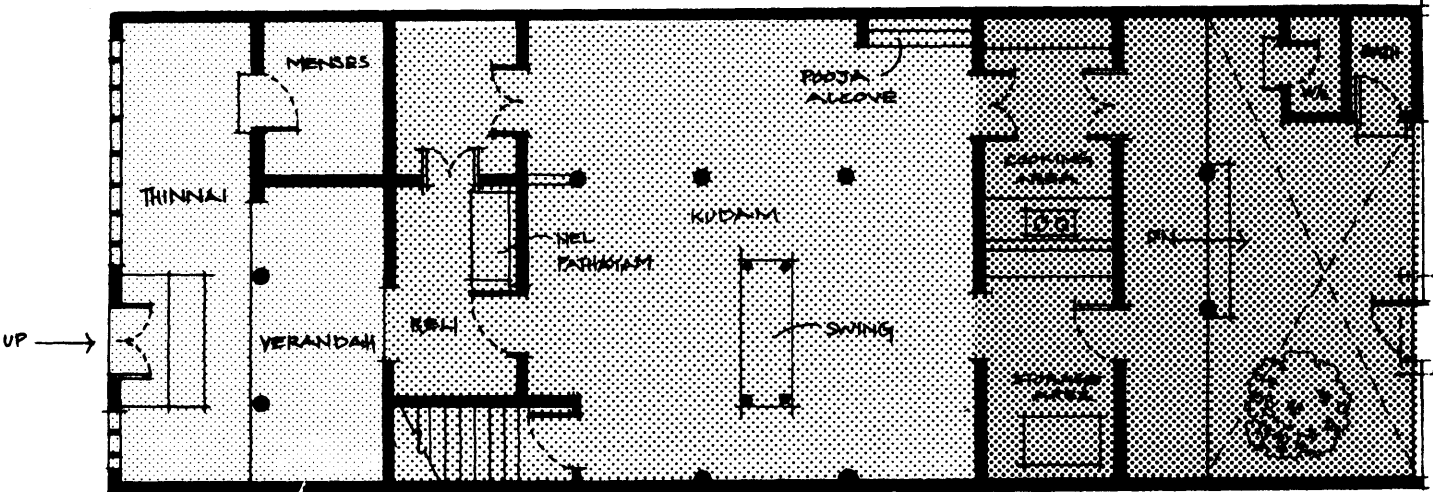
Since most traditional Indian houses are built right up to the street front, usually with no front yard, the front porch of Indian houses, the *thinnai* is very public. In fact, it is traditionally intended as a shelter for vagabonds who may stop for a night without notice.

The public/private definition of the interior spaces of Indian houses is similar to that of Malay houses. The linear organization of the interior spaces divides the house into three zones which progressively become more private towards the back of the house. The public zone of the house is the living room. The middle zone, which is the family area, is a semi-public zone and the kitchen/dining and service spaces, such as storage, bathrooms and toilets, are the private spaces at the back of the house.

However, the exterior spaces at the back of the Indian house, unlike the Malay house, is private. The compound is usually walled, like the Chinese house, but the entrance through this area is a semi-private entrance used by female family members and their female friends and neighbors.

Like the Malay house, the bedrooms in the Indian house are not considered as private zones in the Western sense, because they are not strictly used as sleeping areas. The rooms are not places of privacy, claimed by individual members of the family.

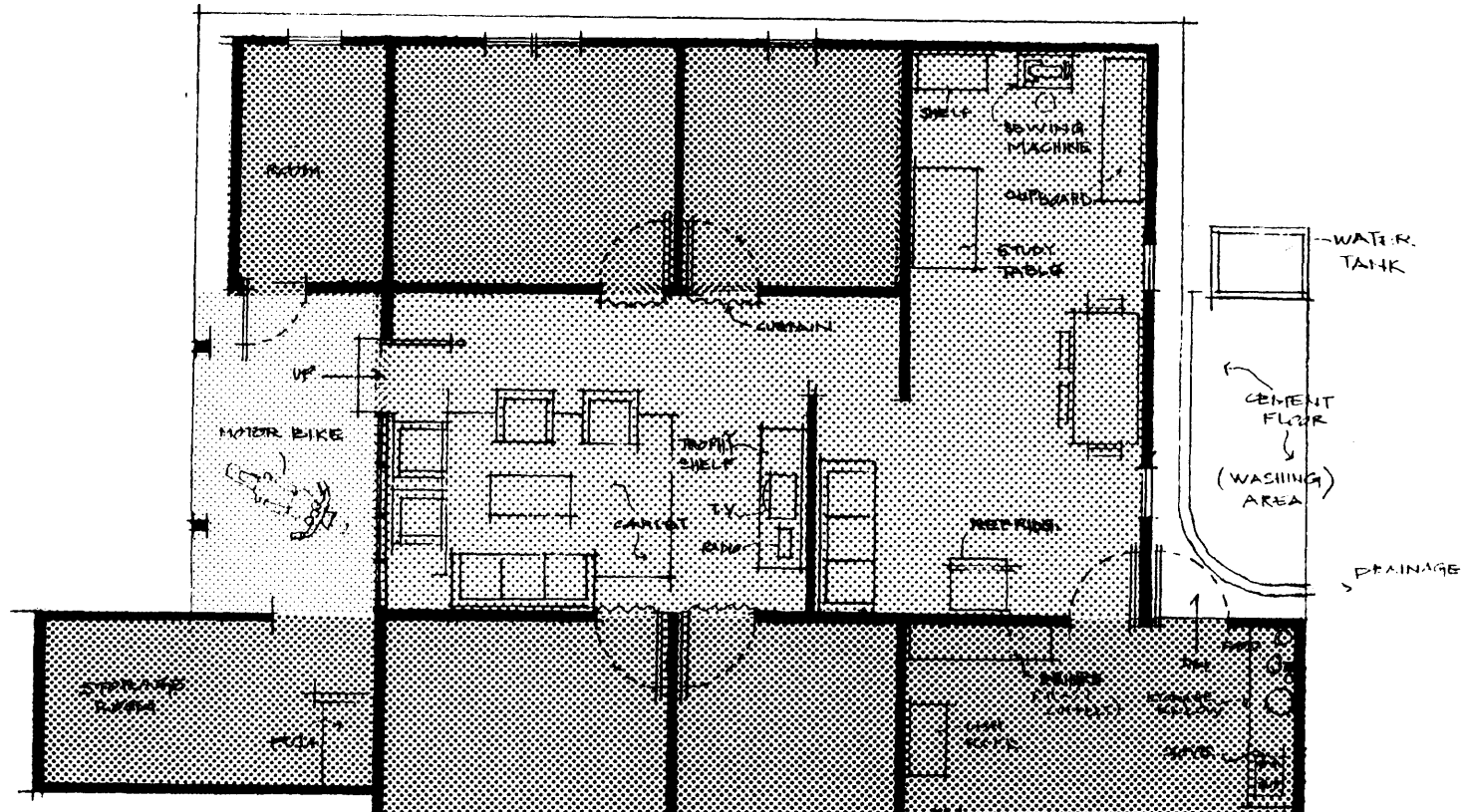
FLOOR PLAN OF AN INDIAN TRADITIONAL HOUSE SHOWING PUBLIC/PRIVATE ZONES



The front porch of Indian houses is a public zone and opens to the street, while the back zone is private and is usually walled.

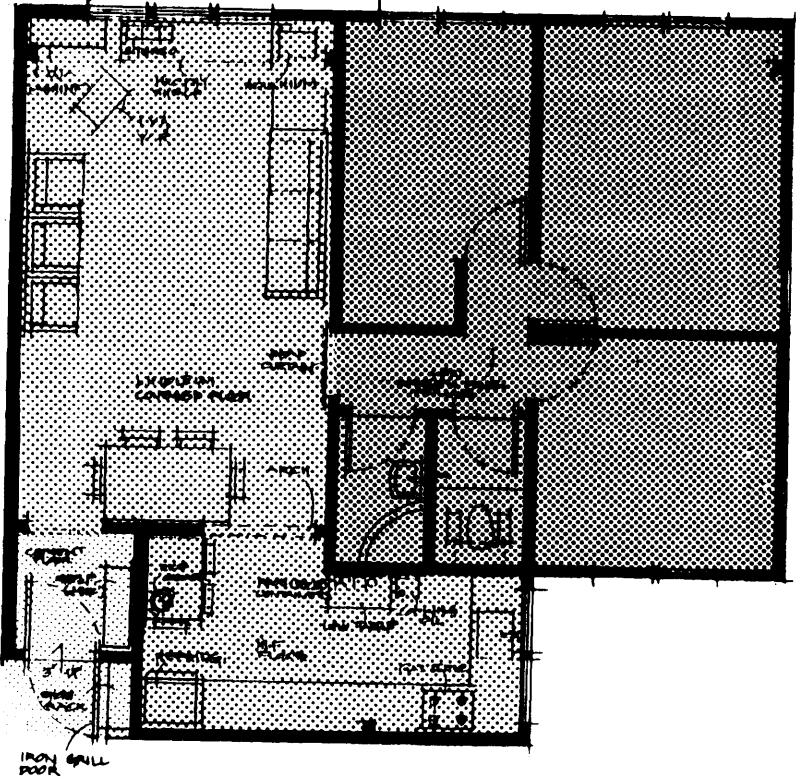
## 4. ANALYSIS

FLOOR PLAN OF AN INDIAN SQUATTER HOUSE SHOWING PUBLIC/PRIVATE ZONES



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FLOOR PLAN OF AN INDIAN PUBLIC HOUSING UNIT SHOWING PUBLIC/PRIVATE ZONES



### 4.4 Front / Back

The linear organization of spaces in traditional Malay, Chinese and Indian houses makes for a clear definition of front and back zones. However, this definition varies greatly from one ethnic group to another.

The Malay house, which is the most outward oriented, has a very open front zone. The front yard is usually unfenced and vaguely defined by trees. The front zone also includes the front porch, which is also very open, and the *serambi*, which is the outdoor-facing living room. The back zone is also very open with its territory vaguely defined by fruit trees. It is also the female zone, and thus is semi-private in character.

The Chinese house, on the other hand, is the most inward oriented. The interior of Chinese houses do not engage the outdoors. The front yard, if there is one, is usually fenced or walled. Therefore, the front zone of Chinese houses is very private. The back zone too, is considered private and is also walled. This zone, as with Malay and Indian houses, is the service zone that includes the kitchen, bathroom and toilet.

Since Indian houses are usually built up to the street front, the front zone of the house is very public. Like the front porch of the Malay house, the *thinnai* is very public, and in fact, it is traditionally intended as a sleeping area for vagabonds.

The back zone, on the other hand, is very private like the Chinese house, and is walled and inward oriented. Like the Malay house, this zone is also the female zone.

Front / Back	Malay	Chinese	Indian
General	Usually distinguishable between one another. Both front and back zones are vaguely defined (unfenced).	Usually distinguishable between one another. Both front and back zones are fenced or walled.	Usually distinguishable between one another. The front zone is open to the street, back zone is fenced or walled.
Front zone	is the public front. Very formal, and decorated with colorful paints, lattices, and flower pots. Also the male zone. Front yard is open and merges with public areas.	is the public front. Very formal and elaborately decorated.  Front yard is walled.	is the public front. Very formal and elaborately decorated.  Also the male zone. No front yard.
Back zone	is the semi-public and private zone. Very informal, little or no decoration.  is the female zone and the service zone, includes the kitchen, back porch, bathroom and toilet.  The back yard is open, territory is defined by fruit trees and plants for cooking.	is the private zone. Very informal - no decoration.  is the service zone, and includes the kitchen, bathroom and toilet.  The back yard is walled, paved and partially roofed. Also used as an outdoor cooking, laundry and storage area.	is the private zone. Very informal - no decoration.  is the female zone and the service zone, includes the kitchen, back porch, bathroom and toilet.  The back yard is walled, and planted with fruit trees. Sometimes includes animal sheds.

## 4. ANALYSIS

### DESIGN IMPLICATIONS: FRONT / BACK

	Malay	Chinese	Indian	Comments	Implications
Walled front zone	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Malay: Level increases towards the middle zone. Chinese/ Indian: Declivity from front to back.	Supports: Provisions for front and back yard are optional.  Infill: M: Front & back are left unpaved and unfenced. C: Front & back are paved and walled. I: Front yard is unfenced, back yard is fenced but unpaved.
Walled back zone	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>		
Level change from front to back	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>		
Separate entrances in the front and back zone	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>		
Front zone More decorative Holds religious uses	<input checked="" type="radio"/> <input type="radio"/>	<input checked="" type="radio"/> <input checked="" type="radio"/>	<input checked="" type="radio"/> <input type="radio"/>	Malay: No specific religious zones. Chinese: Shrines and ancestral hall are in the front zone. Indian: The most religious zone is the middle.	

YES

NO

MAYBE

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#### 4.4.1 Malay

The Malays are generally inclined towards community intimacy rather than personal privacy, and this is reflected in the openness and outward orientation of the house.

The Malays often refer to the different parts of their house as *rumah depan* (Front house), which is also the main house or *rumah ibu*, and *rumah belakang* (Back house), which is the kitchen or *dapur*. These two "houses", in concept, can be understood as being connected "back to back", with each facing outwards.

The front zone, which includes the *anjung* (front porch) and *serambi* (living room), is very open to the outside, with rows of large full length windows to give the room an atmosphere of a verandah. The front yard is usually very formal and adorned with an arrangement of colorful flower pots.

The back yard, on the other hand, is planted with fruit trees or plants for cooking, such as *pandan*, lemon grass, curry plants, etc. The arrangement of the trees and the back porch is very informal. It is also more private than the front yard. A bench is usually built amidst the seclusion of the trees for the women folk to relax and chit-chat in the afternoon. The back zone also includes the more private spaces, which are the kitchen/dining area, and the toilet and bathrooms.

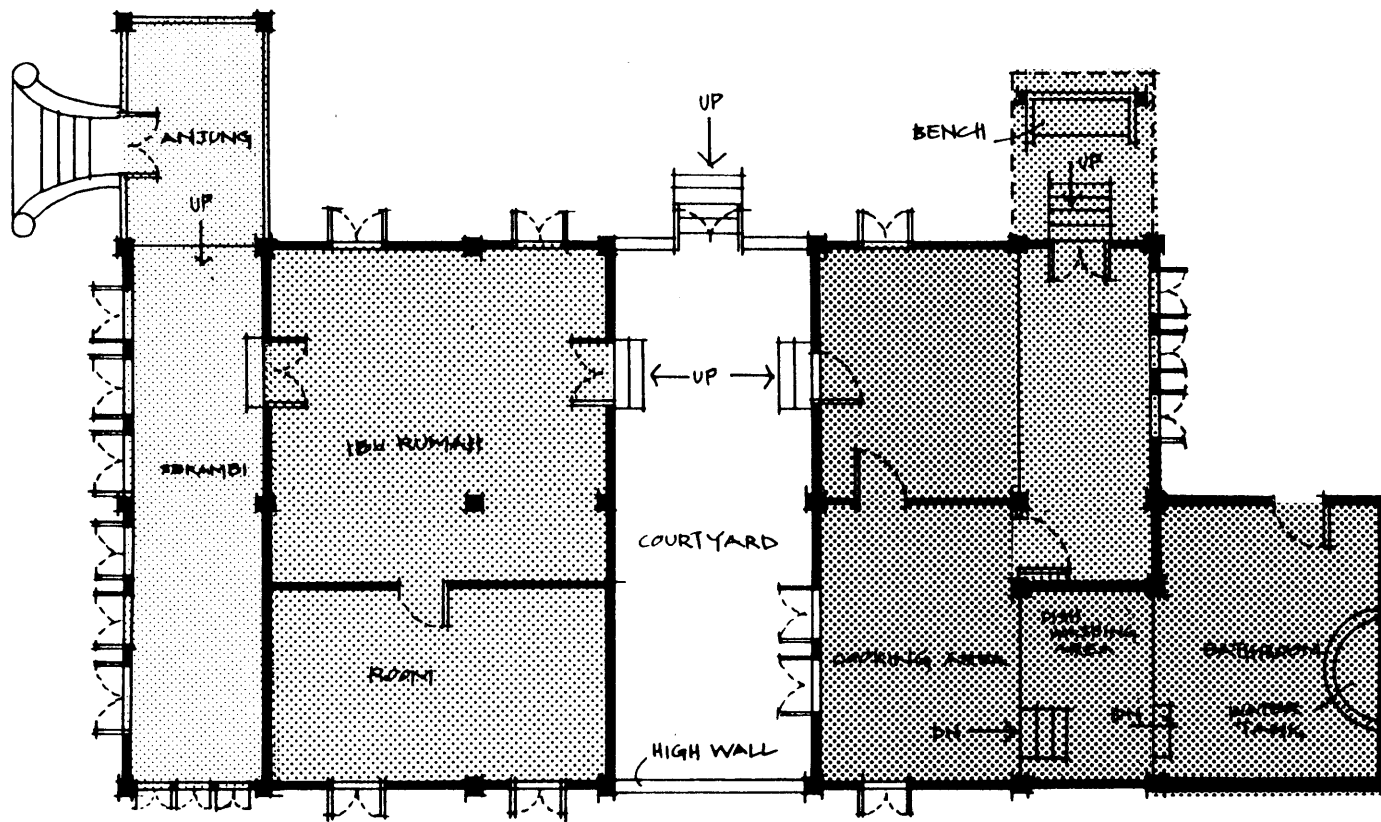
The same front and back zone definitions can be observed in squatter housing as well.

In public housing, although all spaces are aggregated around the living room without clear definitions of front and back, the kitchen area is often referred to as the back of the house, even though it is in the front zone.

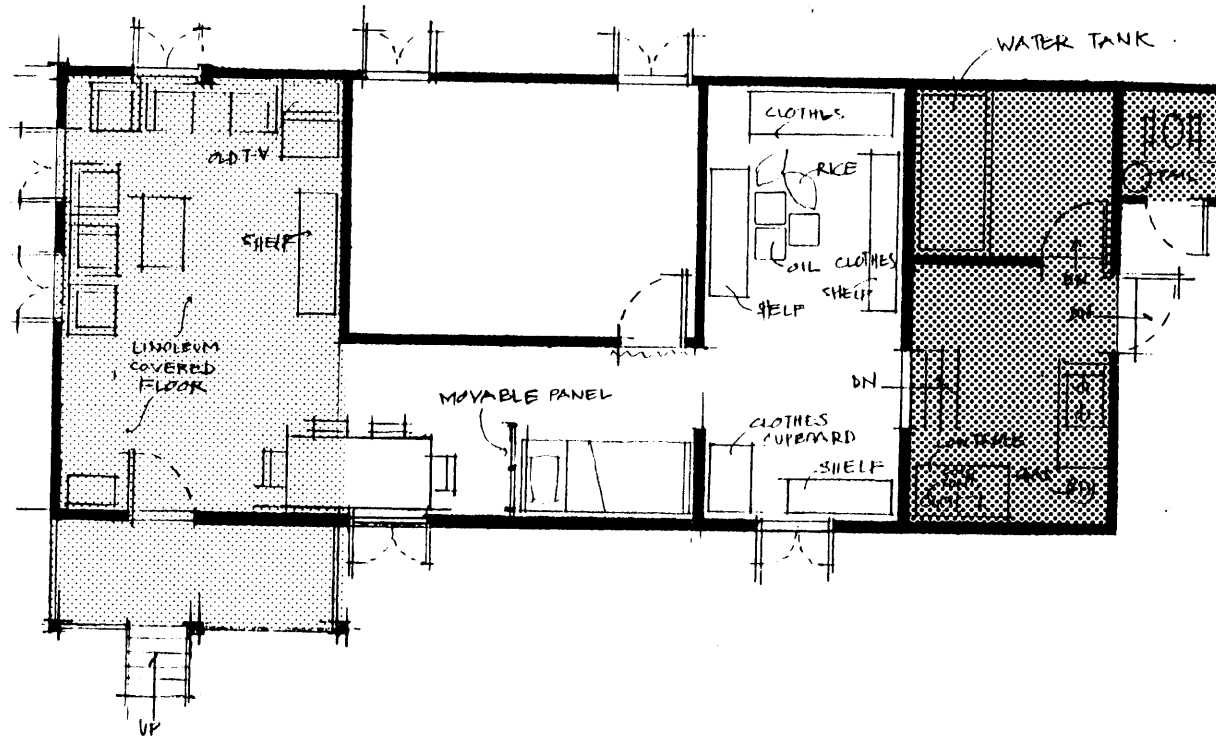


## 4. ANALYSIS

FLOOR PLAN OF A TRADITIONAL MALAY HOUSE SHOWING FRONT/BACK ZONES

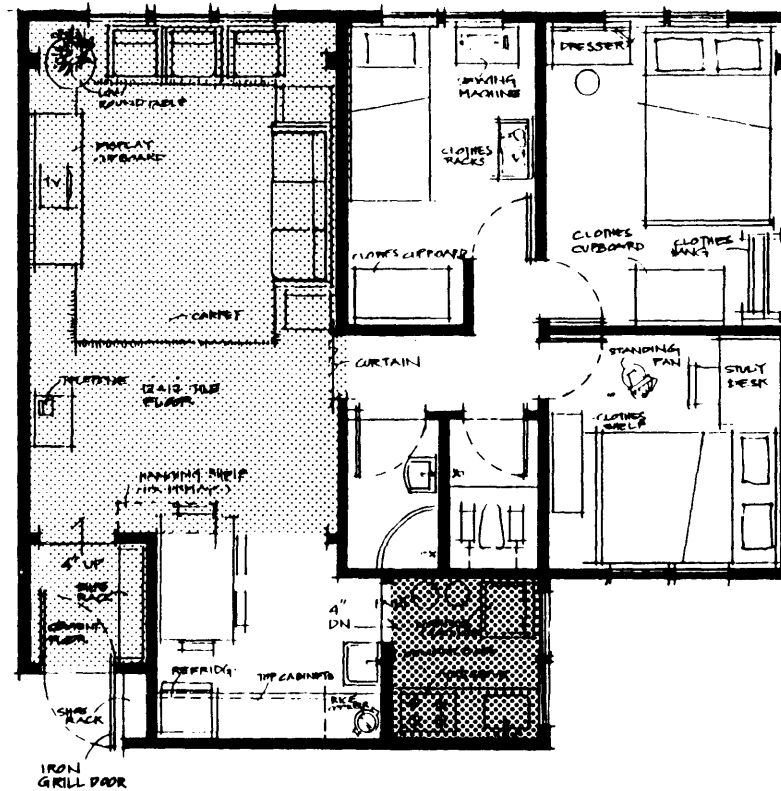


FLOOR PLAN OF A MALAY SQUATTER HOUSE SHOWING FRONT/BACK ZONES



## 4. ANALYSIS

FLOOR PLAN OF A MALAY PUBLIC HOUSING UNIT SHOWING FRONT/BACK ZONES



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#### 4.4.2 Chinese

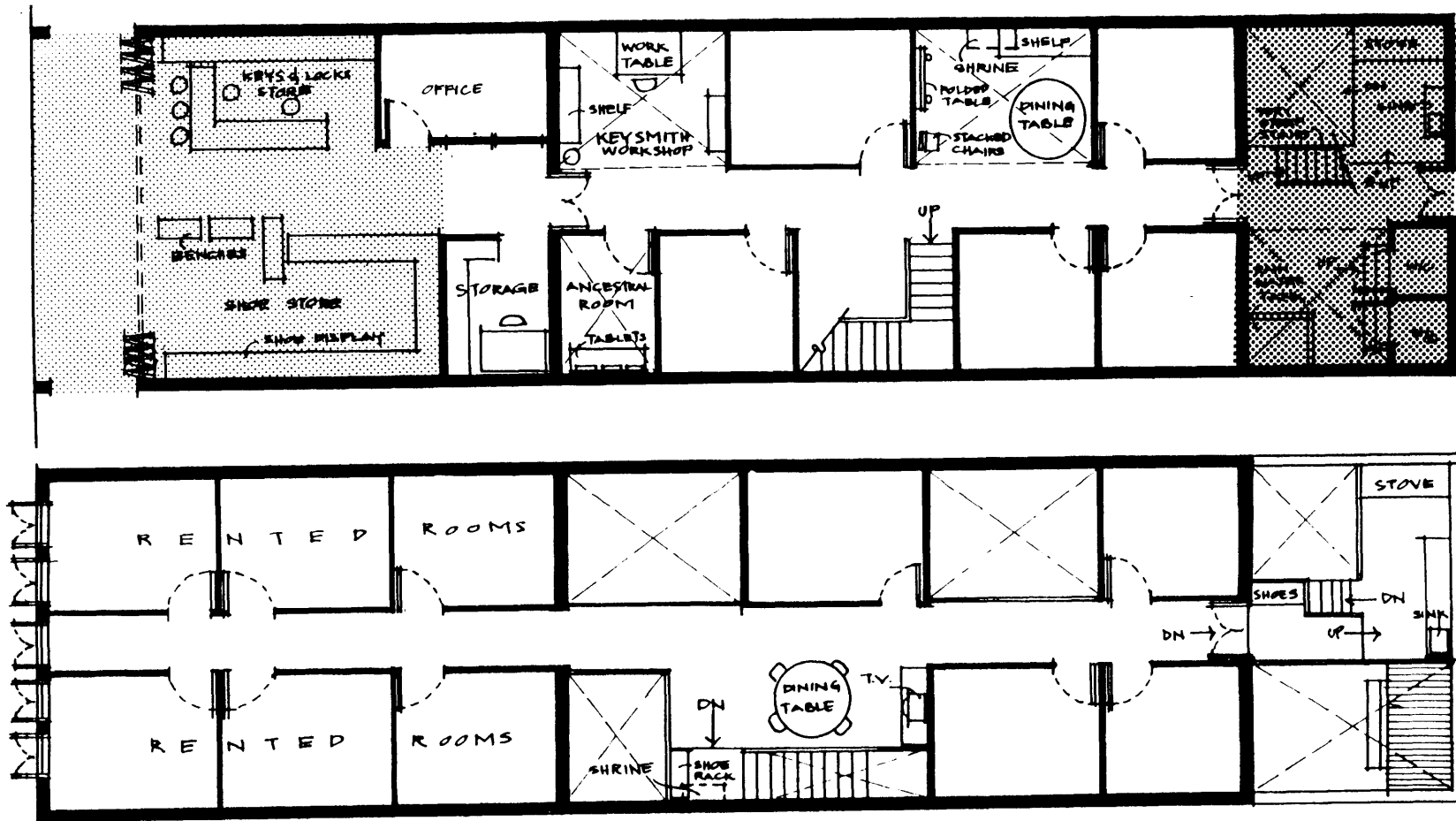
All types of Chinese houses, the rural farm and fisherman's houses, the shophouses, as well as the squatter houses, have a very clear definition of the front and back zones.

The front zone usually faces the main street, while the back zone faces the back alley. Therefore, the front zone is very formal and serves as the public front of the house, while the back zone is informal and very private. In shophouses, the front zone is usually used as a commercial area and the front porches of a row of shophouses form a commercial pedestrian arcade. In the other types of Chinese houses, the front zone, although serving as the public front, is not as public. Unlike Malay and Indian houses, where the front porch engages openly to the public zone, the Chinese front porch is not used as a social transaction area. The front yard is usually fenced, making the front zone actually rather private.

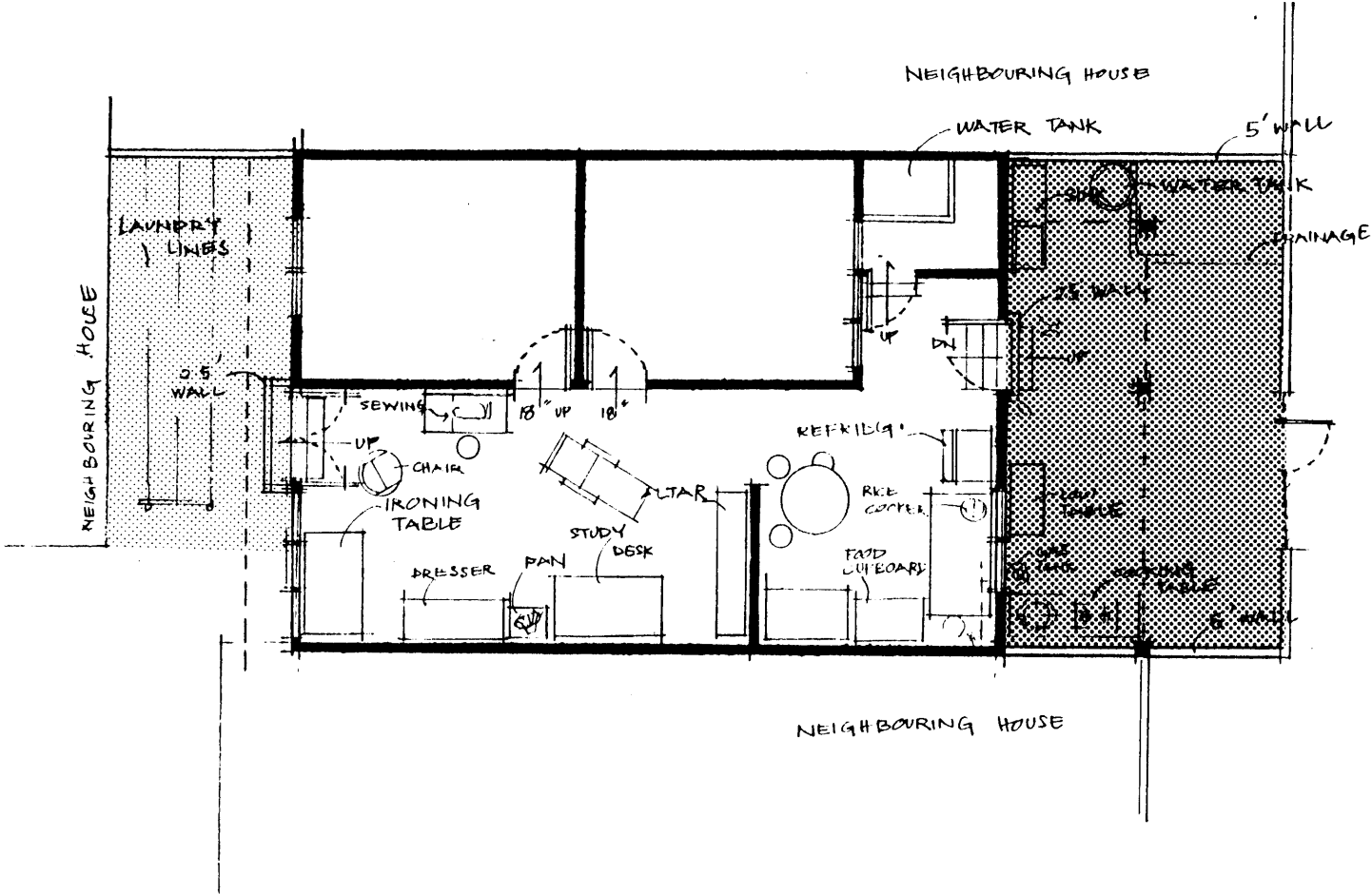
With the exception of the fisherman's house, most Chinese houses have a walled back zone where service spaces, which include the kitchen, bathroom and toilets, are located.

# 4. ANALYSIS

FLOOR PLAN OF A CHINESE SHOPHOUSE SHOWING FRONT/BACK ZONES

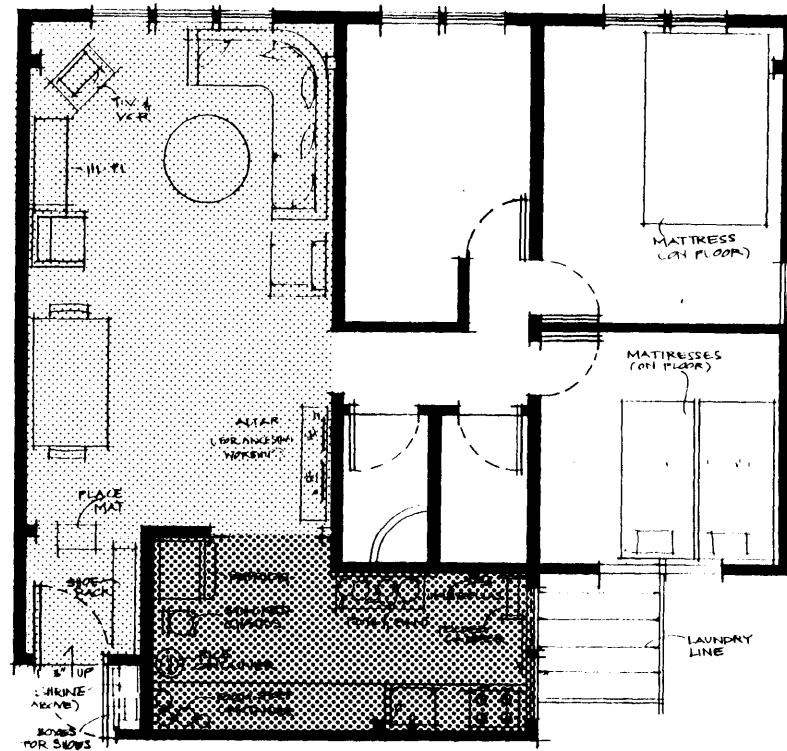


FLOOR PLAN OF A CHINESE SQUATTER HOUSE SHOWING FRONT/BACK ZONES



## 4. ANALYSIS

FLOOR PLAN OF A CHINESE PUBLIC HOUSING UNIT SHOWING FRONT/BACK ZONES



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#### 4.4.3 Indian

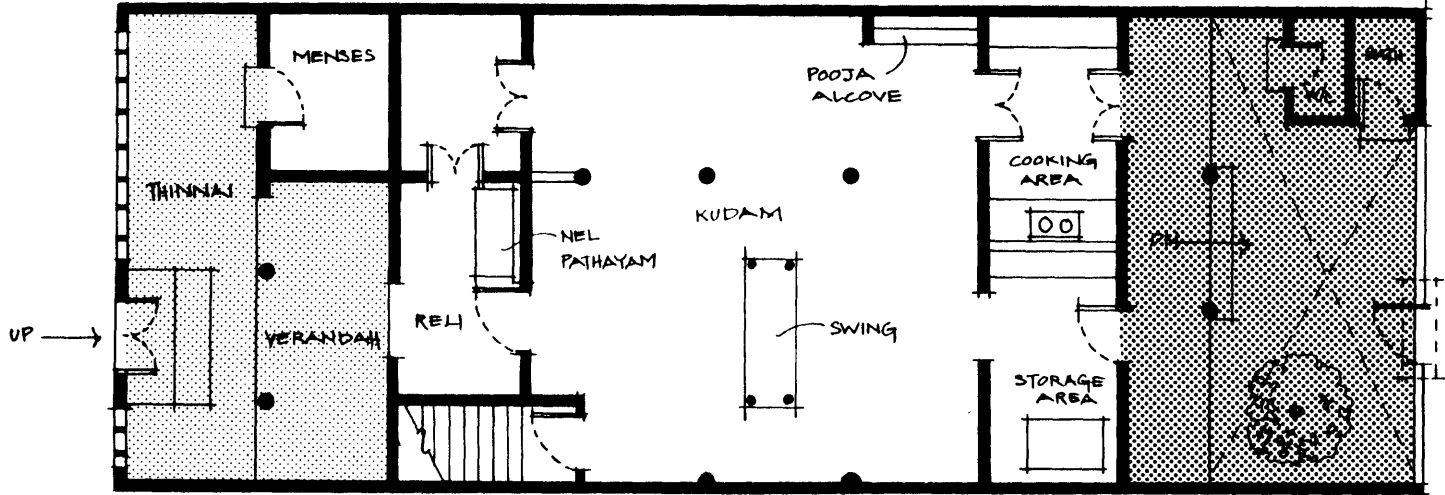
Like Malay and Chinese houses, Indian houses also have a clear front/back definition. The front zone is always more formal and more decorative than the back zone. Since it is commonly built right up to the public street front without a fenced front yard, it is also very public. In terms of size, the front zone of traditional Indian houses is smaller than those of the Malays and Chinese, because it only includes the *thinnai*, or front porch. In the squatter houses however, the front zone also includes the living room, which is part of the middle zone in the traditional house.

The back zone of Indian houses is also the female zone and therefore, is considered a private zone. The backyard is usually walled, but unlike the Chinese backyard, which is usually paved and roofed, it is a garden area where cooking plants and trees are planted. In the traditional houses, this area is usually very spacious and sometimes includes cow shed.

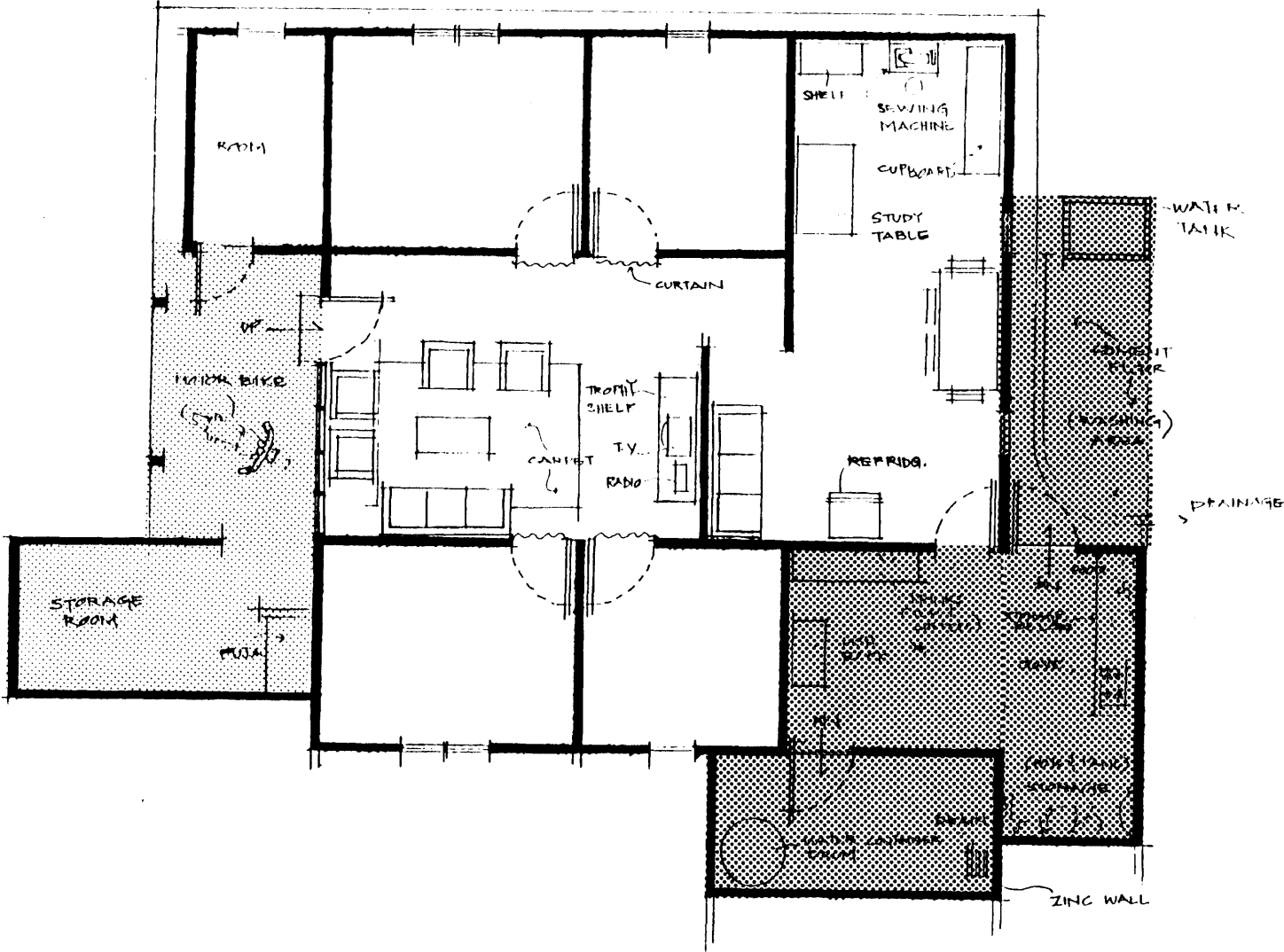
The middle zone is the most important zone in Indian houses and also the most sacred. In traditional rowhouses, it is where the courtyard is located which symbolizes *Brahman*, the Lord of Cosmos. All the interior spaces of the house are oriented towards this zone. The activities of the kitchen area, which is located in the back zone, often spill into this zone.



FLOOR PLAN OF A TRADITIONAL INDIAN HOUSE SHOWING FRONT/BACK ZONES

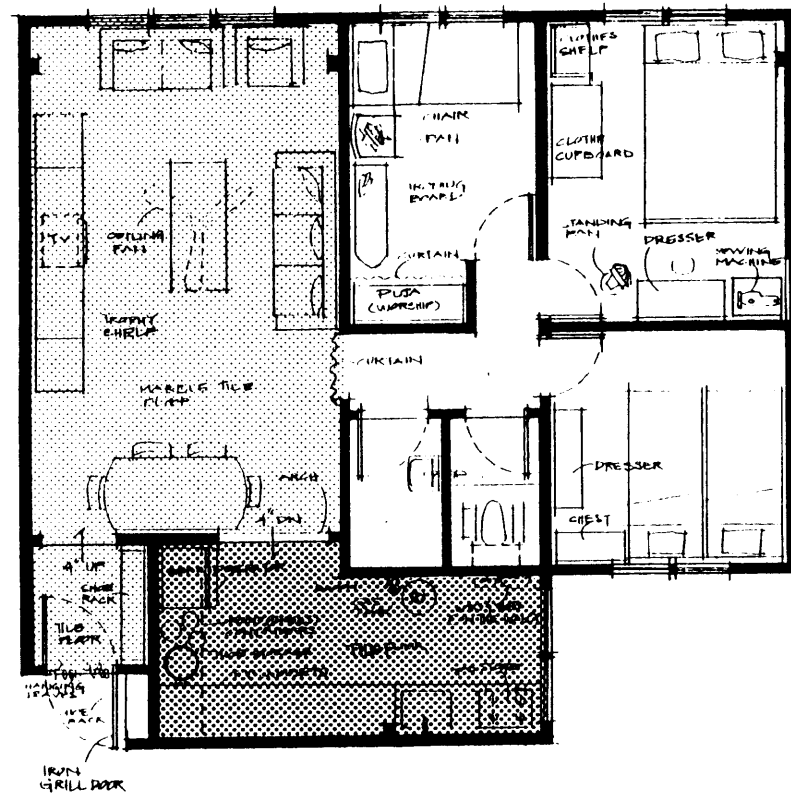


FLOOR PLAN OF AN INDIAN SQUATTER HOUSE SHOWING FRONT/BACK ZONES



## 4. ANALYSIS

FLOOR PLAN OF AN INDIAN PUBLIC HOUSING UNIT SHOWING FRONT/BACK ZONES



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#### 4.5 Male / Female

The male/female zone distinction is prominent in Malay and Indian houses, but not in Chinese houses. Both Indians and Malays, for religious reasons, restrict interactions between male and female. Thus, in the traditional houses of Malays and Indians, there is a clear separation between the male and female zones. But due to Western influence, especially in education and television, this separation is becoming less rigid in squatter houses and public housing. Within the Malay society however, the last decade has seen an insurgence of religious awareness among the younger generation. Therefore, the separation between male and female in Malay society is, in fact, now stronger than ever.

In general, the male and female zones in Malay and Indian houses coincides with public and private zones, as well as front and back zones. This is not the case in Chinese houses because all the different zones of the house, whether it is a shophouse, farm house or squatter house, are used equally often by males and females.

In traditional Malay houses, the courtyard acts as the dividing element between the male zone and the female zone; but in Indian houses, the courtyard is the neutral family zone that merges the two zones together.

In public housing, where the unit layout does not provide much flexibility for accommodating this traditional concept of male and female separation, the Malay and Indian female dwellers simply have less informal social interaction inside the house.

## 4. ANALYSIS

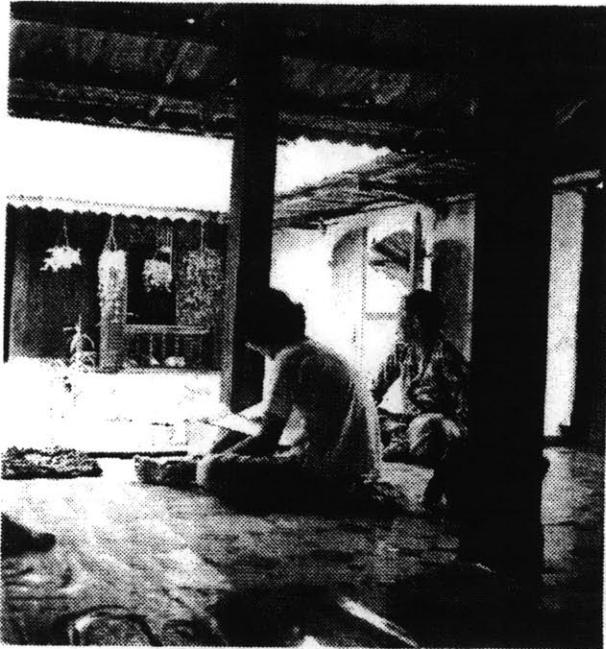
	Malay	Chinese	Indian
General Comments	<p>The zones are clearly defined</p> <p>The male zone is in the front, while the female zone is at the back; separated by a courtyard, or a selang (walkway), or a wall with a change in floor level.</p> <p>There are separate entrances to the two zones.</p>	<p>No clear definition of male zone of female zone.</p> <p>All zones are equally used by either male or female.</p> <p>Separate entrances denote public / private, rather than male / female.</p>	<p>The zones are clearly defined.</p> <p>The male zone is in the front while the female zone is at the back; the courtyard or the family area is the transition zone between the two.</p> <p>There are separate entrances to the two zones.</p>
Female Zone	<p>is at the back zone of the house.</p> <p>The zone includes the dapur, back entry porch, and selang.</p> <p>Activities in the zone include cooking, dining, social interacting, sleeping and resting.</p>		<p>is at the back zone of the house.</p> <p>The zone includes the kitchen, kottil and back thinnai.</p> <p>Activities in the zone include cooking, dining, social interaction and resting.</p>
Male Zone	<p>is in the front zone of the house.</p> <p>The zone includes the anjung, serambi and ibu rumah.</p> <p>Activities include resting, reading, sleeping, social interacting and working.</p>		<p>is in the front zone of the house.</p> <p>The zone includes the thinnai, verandah, living room and kudam.</p> <p>Activities include resting, sleeping, reading, social interacting and working.</p>

DESIGN IMPLICATIONS: MALE / FEMALE

		Malay	Chinese	Indian	Comments	Implications
Separation	Male/female zones	●	-	●	Malay Separation is either by the use of a courtyard, selang, or level change.	
Courtyard Use	As a separating zone between male/female areas	●	-	○		Supports: Provision for courtyard in the middle zone Infill: M: Minimum dimension (inactive space). C: Dimension varies (general-purpose space). I: Maximum dimension (general-purpose space).
	As a merging zone between male/female areas	○	-	●	Indian Courtyard is the "neutral" family zone.	
Separate Entrances		●	-	●		Supports: Provision for 2 separate entrances. Infill: M: Separate entrances and separate social interaction areas. I: Separate entrances.
Male Zone	In the front zone	●	-	●		
	More public	●	-	●		
	More decorative	●	-	●		
Female Zone	In the back zone	●	-	●		
	Private	○	-	●	Malay Public to female members.	
	Less decorative	●	-	●		
	At a lower level	●	-	○		

● YES    ○ NO    ● MAYBE

### 4.5.1 Malay



View of the courtyard from the female zone.

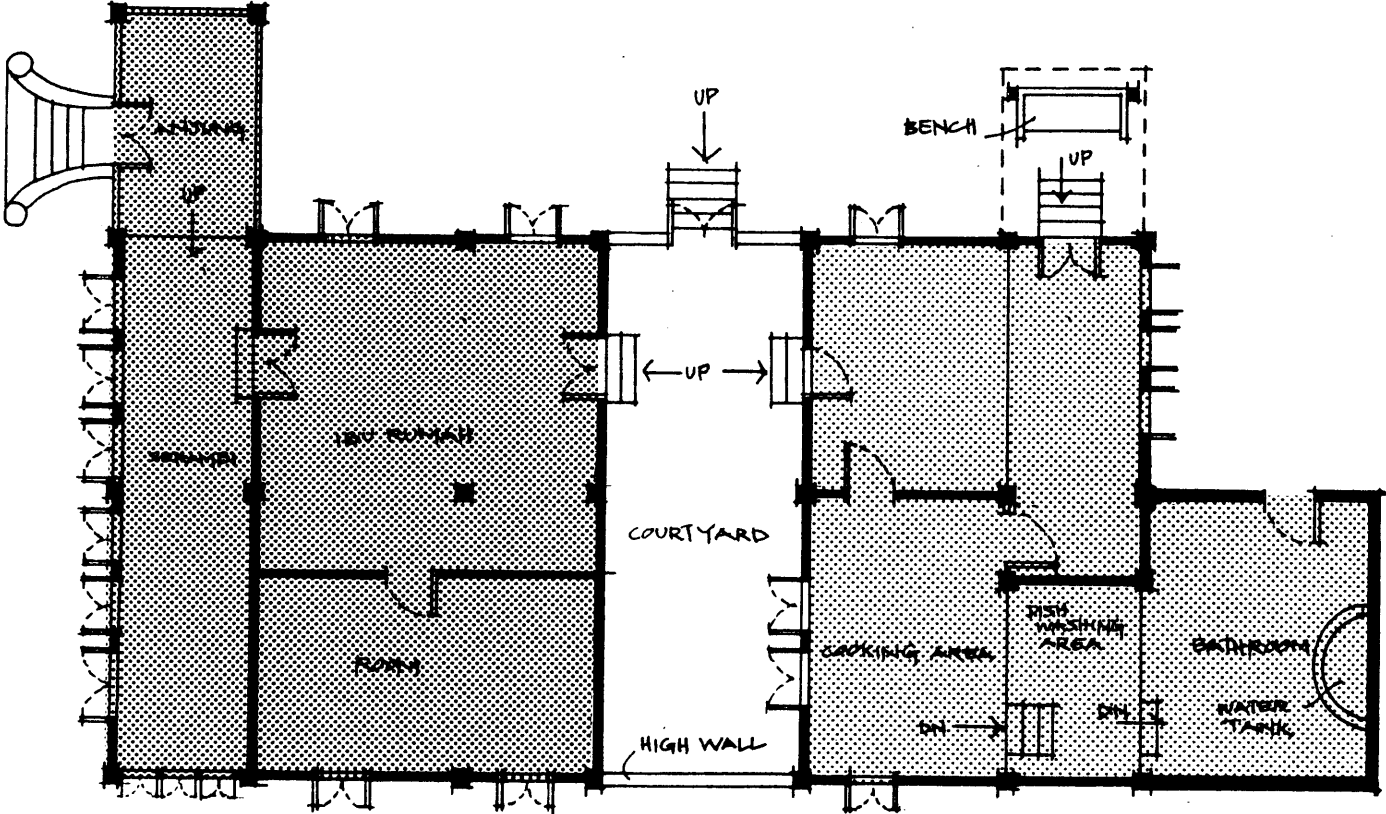
Islam, the religion of the Malays, advocates the protection of women, who are regarded as the symbol of family honor. Therefore traditionally, the separation of male and female is a crucial factor in determining the houseform and living patterns in rural traditional houses. Today, this separation is still apparent even in squatter houses and public housing despite the Western-influenced education of Malay women and men.

In traditional houses, the *rumah ibu* can easily be identified as the male zone, and the *dapur* as the female zone, which explains why a house composed of a *rumah ibu* alone without the *dapur* is called *rumah bujang* (bachelor's house). The *rumah ibu* and *rumah dapur* are two separate structures that clearly separate the male zone from the female zone, by means of a courtyard or a *selang*. In the cases where neither courtyard nor a *selang* is provided, the separation is indicated by level changes, which can be as little as eight inches to as much as five feet. Each zone has its own separate entrance and socializing area.

The *Dapur* is clearly a female domain where the women folk cook, wash, and chat. Female visitors and friends are entertained either in the *dapur* itself, or in the *selang* or the courtyard. Young unmarried women are generally kept away from the male zone of the house, which includes the *Anjung* and the *Serambi*. Some houses have a special loft in the *dapur* called *Loteng*, for these women to sleep in.

The male/female zones in squatter houses are more subtle. The living room is the shared zone where both male and female visitors are entertained. However, the arrangement of furniture in this zone subtly divides it into separate male and female zones.

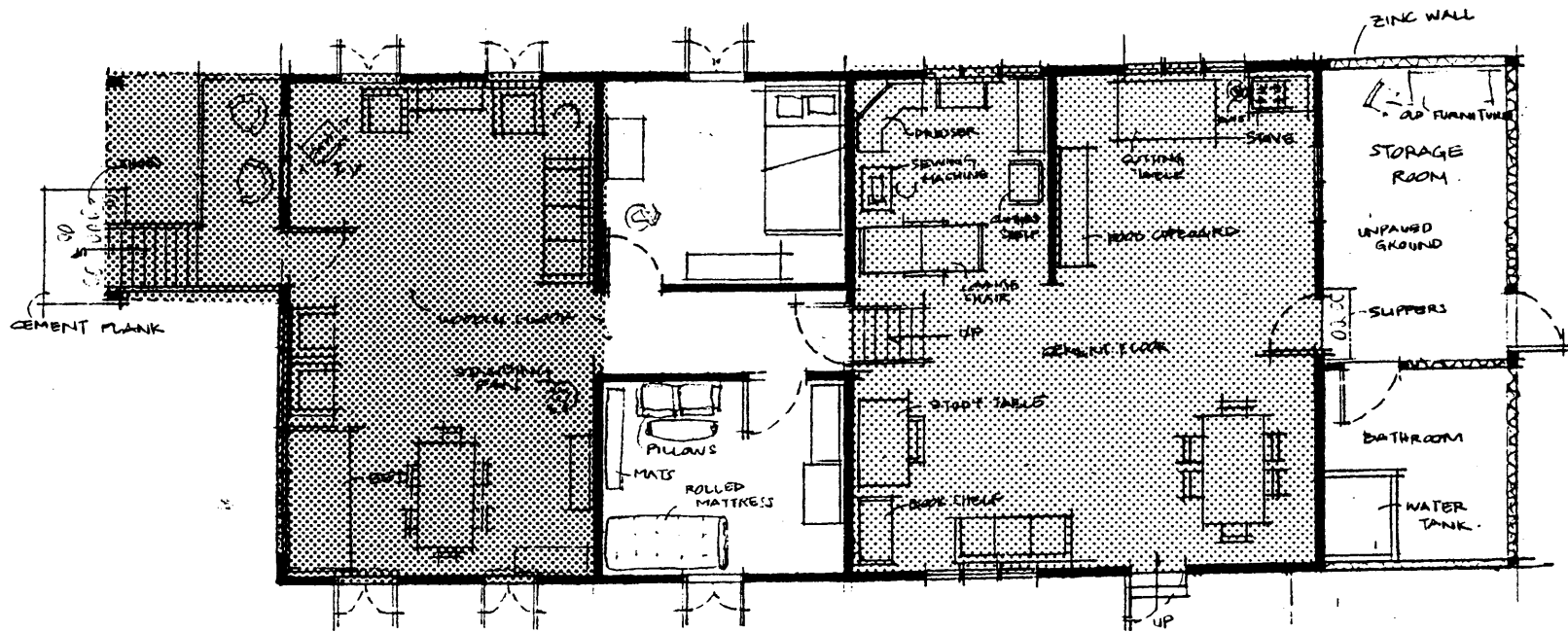
FLOOR PLAN OF A TRADITIONAL MALAY HOUSE SHOWING MALE/FEMALE ZONES



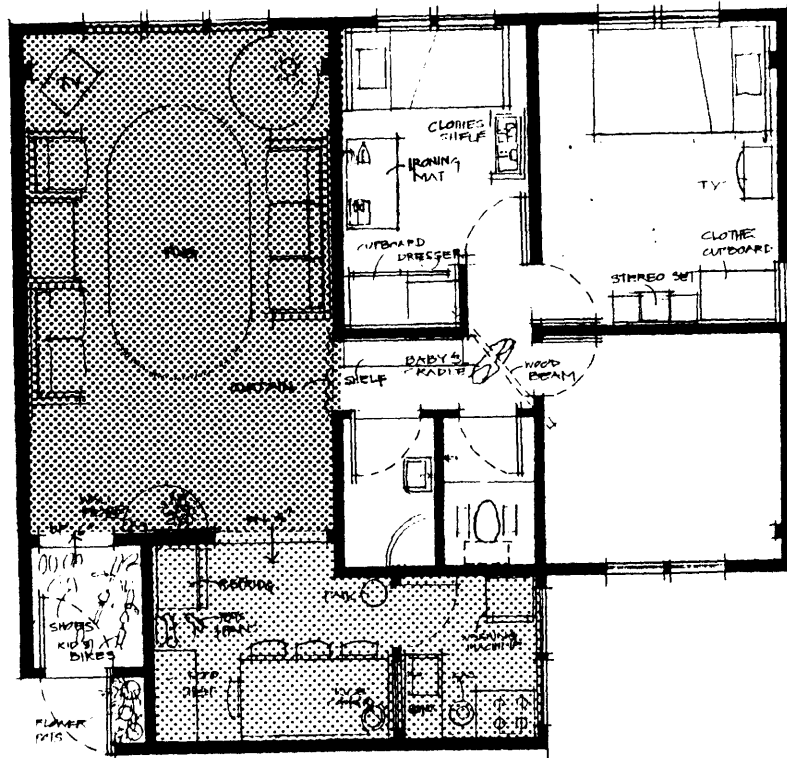


## 4. ANALYSIS

FLOOR PLAN OF A MALAY SQUATTER HOUSE SHOWING MALE/FEMALE ZONES



FLOOR PLAN OF A MALAY PUBLIC HOUSING UNIT SHOWING MALE/FEMALE ZONES



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## 4. ANALYSIS

There still exist two entrances but they denote formal and informal entrances rather than male and female entrances, as in traditional houses. However, it is interesting to note that although the formal entrance is used by both men and women, the informal entrance is used only by women and children.

In public housing, where the unit design is fixed and inflexible, the traditional concept of male and female separation is accommodated with restraint. Figure 4.5.3 shows an example where the resident went to great length to tear down the doorway connecting the living room and the part of the kitchen and use the balcony as the cooking area instead. This creates a larger living room which, by means of furniture arrangement, is divided into male and female zones.

It is common among traditional families, especially large extended families, that men eat first before the women. During Ramadhan, the fasting month where everybody breaks the fast at the same time after the sun sets, the eating activity then takes place in two separate areas; the men eat in the living room and the women in the kitchen. Although this convention may not be popular in contemporary Malay society, it is retained during special ceremonies.

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#### 4.5.2 Chinese

Traditionally, Chinese houses are laid out according to *feng shui*, the Chinese geomancy which balances the natural elements (earth, water, wood, metal and fire) found in the inhabitants, with those of the house and surroundings. The male authority figure is also head of the Chinese house, and the *feng shui* is always determined in relation to him.

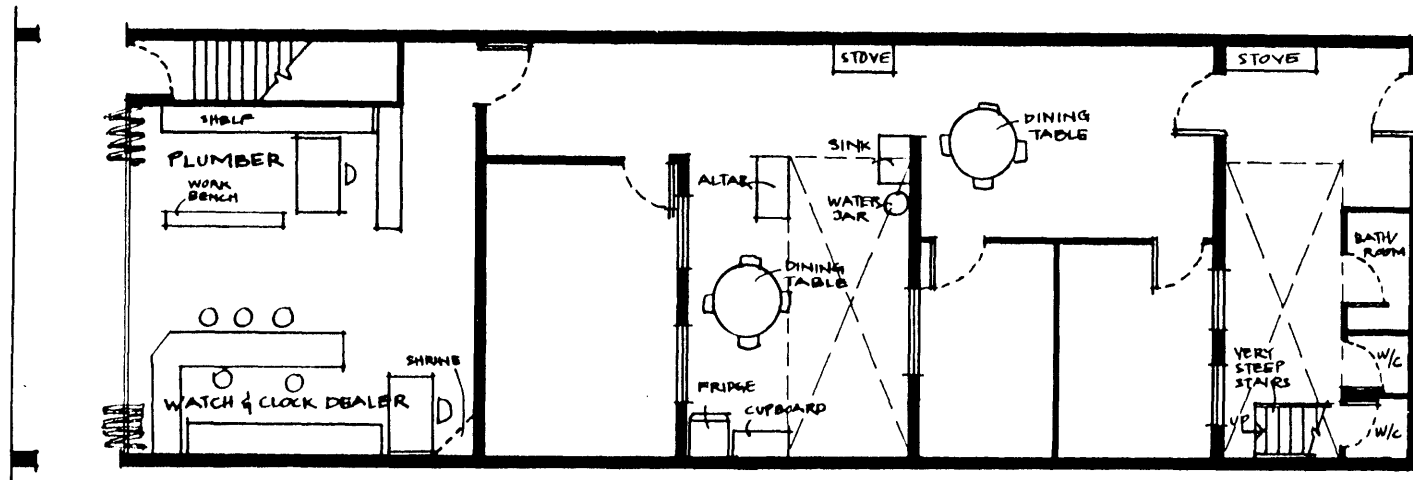
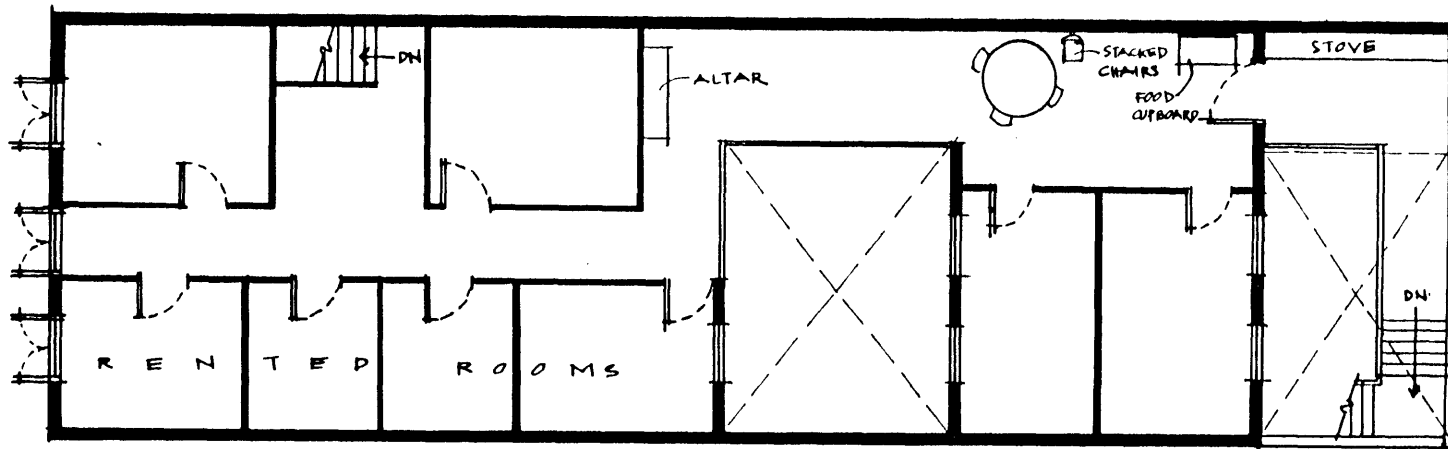
Although the Chinese society is without doubt, a paternalistic society, the priority of men over women is not apparent in either traditional, squatter, or public housing. In Chinese shophouses, family business is the responsibility of all family members, regardless of gender. Although the man of the house is usually in charge, the zone is not restricted to females. In fact, they often provide the main labor in shop keeping.

In Malay and Indian houses, the male and female zones can easily be determined by who uses the space most. This is not so in Chinese houses. Although the kitchen work is done mainly by women, the zone is not considered a female zone. Rather, it is the family zone, where family activities such as eating, chit-chatting, and watching TV take place. Similarly, the living room is not considered a male zone, as in Malay and Indian houses. It is the area for entertaining visitors, male and female alike, without any kind of division, physical or conceptual.

In Chinese shop houses, the two separate entrances to the house differentiate the public and the private entrances, rather than the male and female. The entrance facing the main street is obviously the public entrance to the shop front of the house, while the back entrance facing the back alley is the private entrance used by all family members.

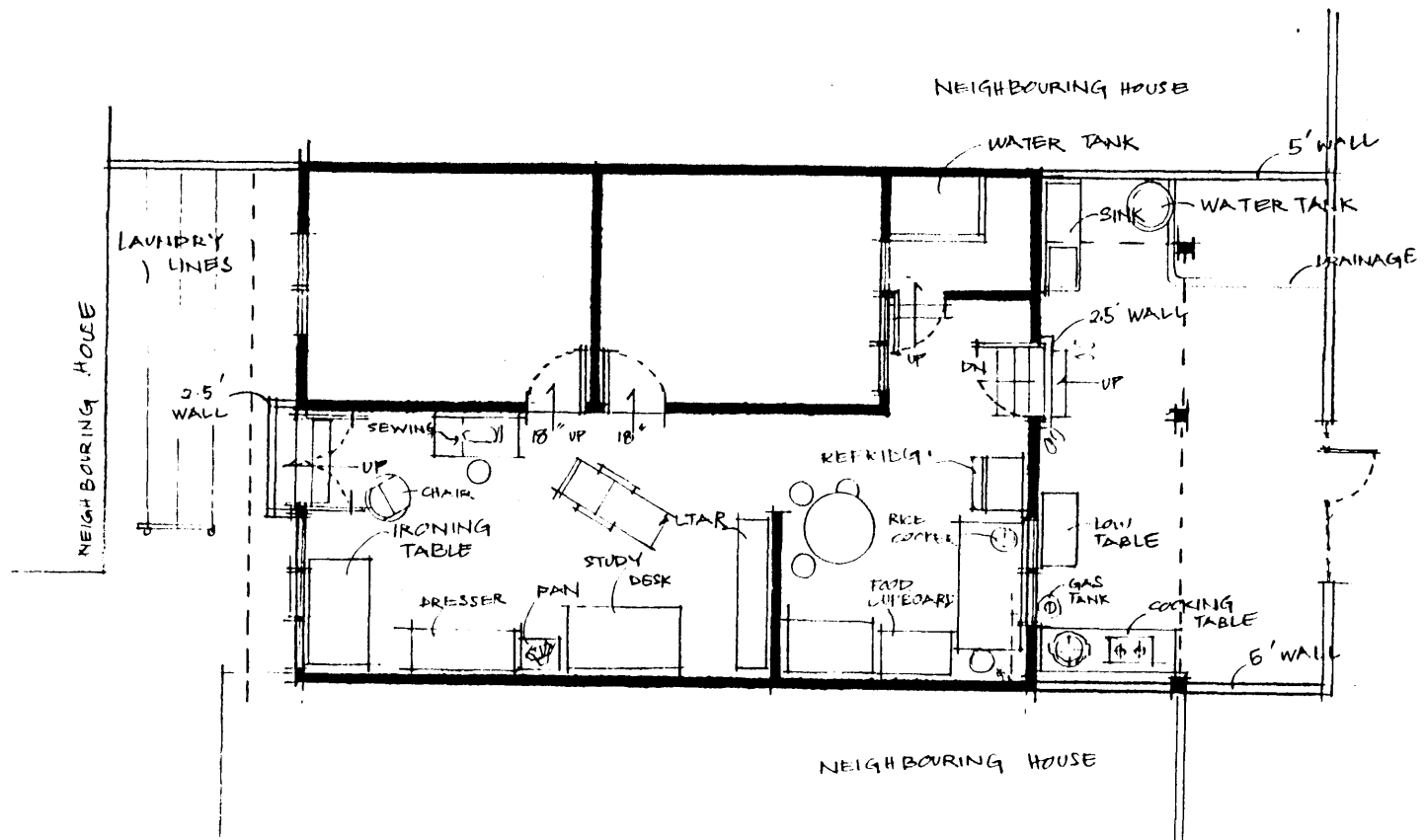
## 4. ANALYSIS

FLOOR PLAN OF A CHINESE SHOP HOUSE SHOWING MALE/FEMALE ZONES



There are no male/female zones in a Chinese shophouse.

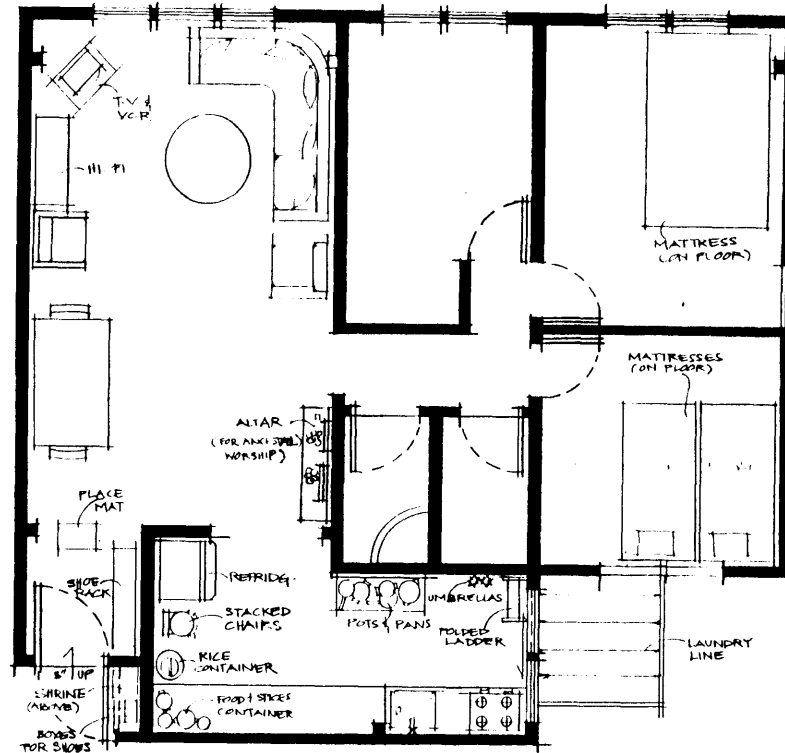
FLOOR PLAN OF A CHINESE SQUATTER HOUSE SHOWING MALE/FEMALE ZONES



There are no male/female zones in a Chinese squatter house.

## 4. ANALYSIS

FLOOR PLAN OF A CHINESE PUBLIC HOUSING UNIT SHOWING MALE/FEMALE ZONES



There are no male/female zones in a Chinese public housing unit.

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#### 4.5.3 Indian

Like Malay houses, Indian houses also have clear definition of male and female zones. The *kudam*, which is situated in the middle of the house, is the neutral zone used as family space, while the spaces adjacent to the front of the house are the male zones, and the spaces adjacent to the back of the house are the female zones. Therefore, the male zone includes the front porch and the living room, while the female zone includes the kitchen area, the back porch and the backyard.

The two separate entrances to Indian houses denote both male and female entrances, as well as public/private, front/back, and formal/informal. Although the front entrance is used mainly by men, occasionally, female visitors may use this entrance during formal visits.

Similarly, although the living room is used mainly by the male family members, female visitors may be entertained in this area during formal occasions. Normally, they would be led by the women of the house to the female socializing area, which is the area in the vicinity of the kitchen, usually facing the courtyard.

Unlike the Malay house, where the courtyard serves as a physical separation between male and female zones, the courtyard of the Indian house is part of the neutral zone where the main family space is located. Both the family area and the kitchen area usually open out to the courtyard. Therefore, the physical separation between the male and the female zones is the family zone.

The same pattern is observed in squatter houses, although they rarely contain a courtyard. In public housing, the living room remains the male zone, although it is occasionally used to entertain female friends and relatives during formal visits.

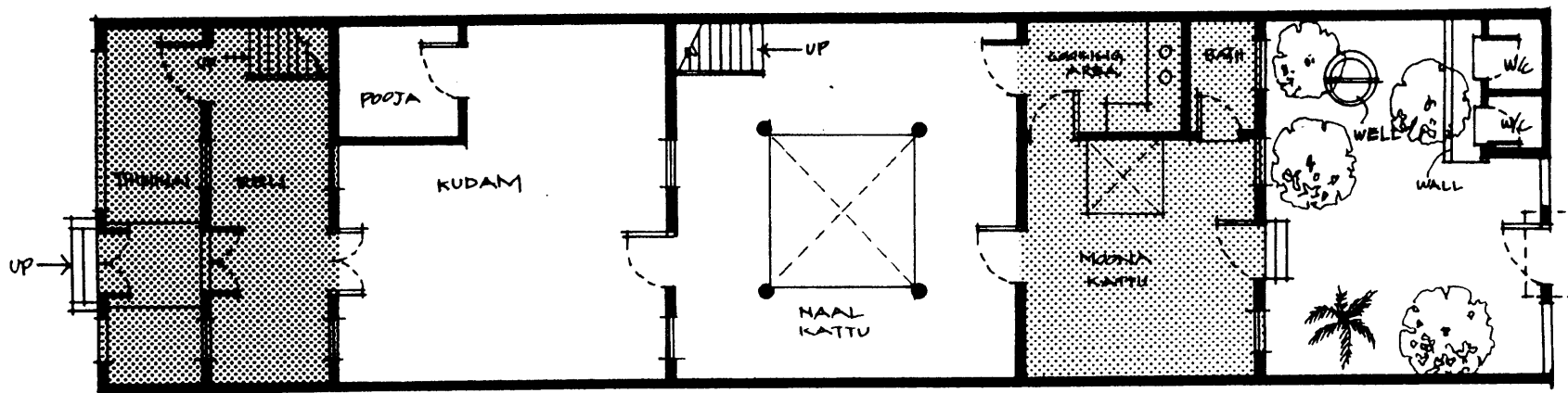


View of a living room of an Indian squatter house showing its use as a male zone

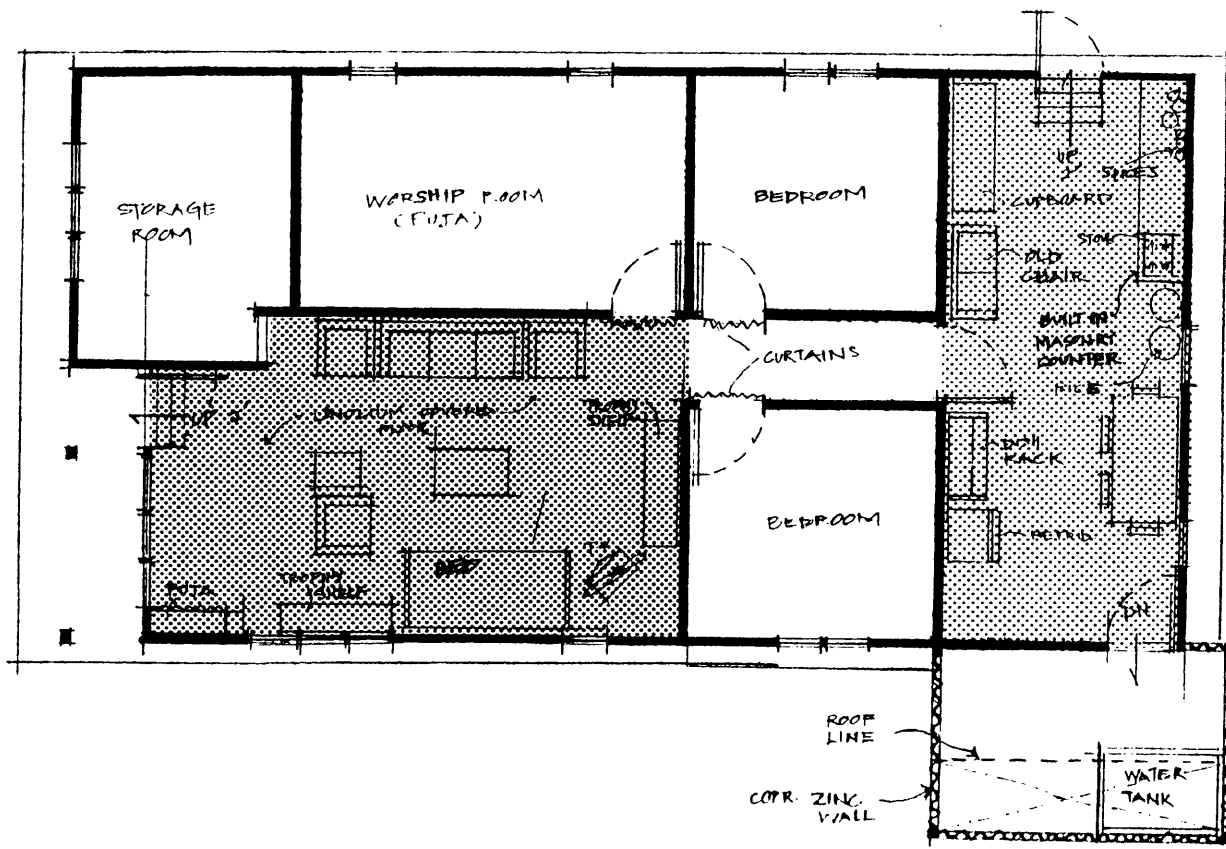


## 4. ANALYSIS

FLOOR PLAN OF A TRADITIONAL INDIAN HOUSE SHOWING MALE/FEMALE ZONES

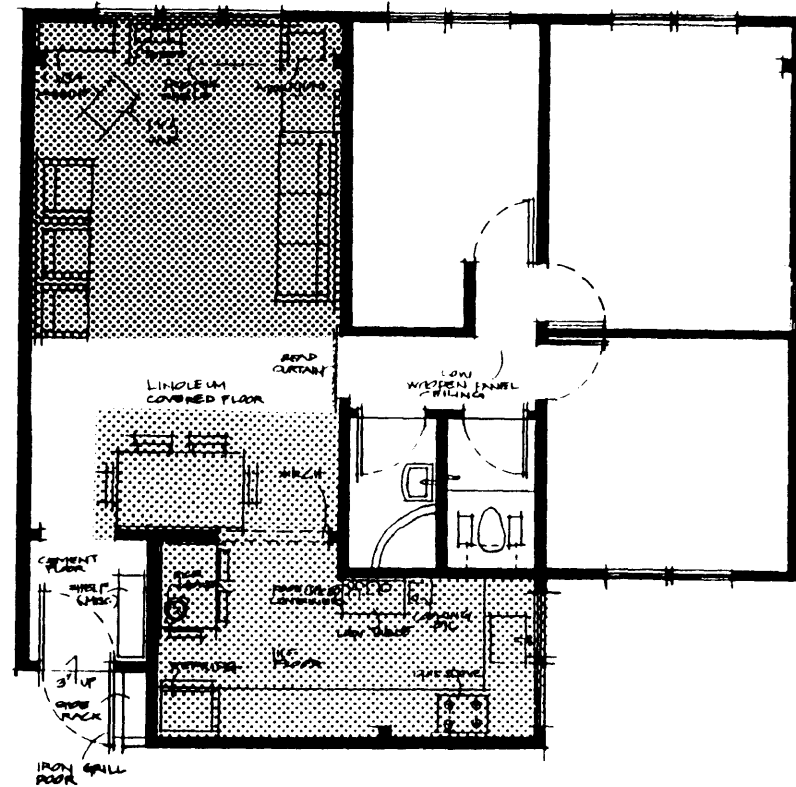


FLOOR PLAN OF AN INDIAN SQUATTER HOUSE SHOWING MALE/FEMALE ZONES



## 4. ANALYSIS

FLOOR PLAN OF AN INDIAN PUBLIC HOUSING UNIT SHOWING MALE/FEMALE ZONES



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*"...the architect is not making all the decisions but instead contributing to the overall process. Of importance in this context, would be the ability to explain, rather than defend, a whole range of alternatives. The alternatives would make it possible to enter into discussion with participants and to get closer to the current solutions."*

N.J. Habraken



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## 5. CONCLUSION

This chapter discusses John Habraken's Supports method and offers a re-interpretation of his methodology in the context of Malaysia. Drawing from the analysis presented in the previous chapter, the thesis attempts to formulate general frameworks and design criteria for the design of public housing in Malaysia using the supports approach.

The discussion begins with an assessment of the general characteristics that are common in the houses of all Malays, Chinese, and Indians. Those shared characteristics are regarded as the basic **design criteria** to be considered in the supports design process. For that purpose, these criteria are then discussed in relation to the definitions of **zones and spaces** which are fundamental in the support design methodology as presented by Habraken in his book Variation: the Systematic Design of Support. The chapter also discusses the **levels of control** in the support design process, which is an important aspect of the support theory.

## 5.1 Design Criteria

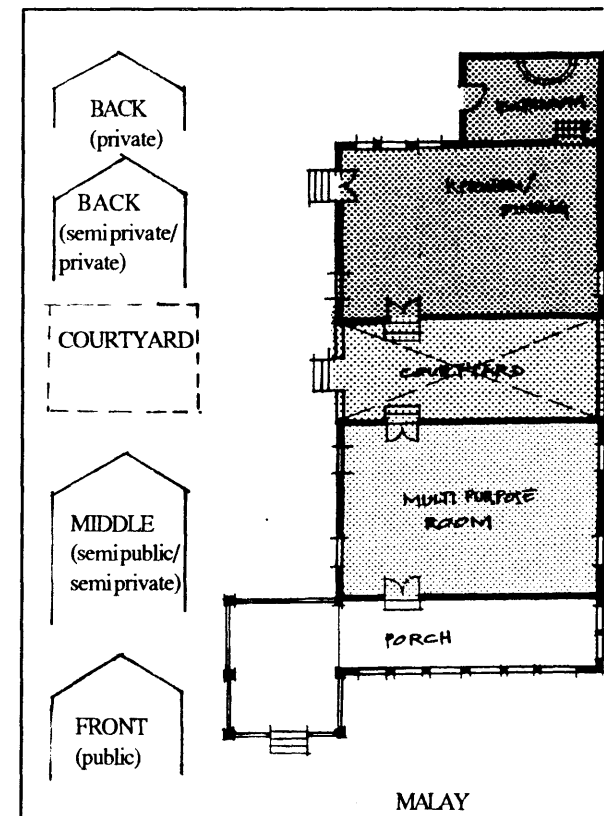
There are four common characteristics inherent in the houses of the Malays, Chinese, and Indians which can be considered as the basic criteria in the Supports design process :

### The linear organization of interior spaces

Unlike the Western type houses in which function-specific rooms are organized around a general purpose space, each of the traditional houses belonging to the Malay, Chinese and Indian is composed of several general purpose spaces organized in a linear arrangement, such a way that one experiences the house by progressing from one space to another in a linear axis.

### The tripartite zoning of the interior spaces

The linear arrangement of spaces is consisted of three zones: front, middle, and back, each is partitioned either physically, by means of a wall and a doorway, or conceptually, by the use of the space. Each of the three zones, is a general-purpose space even though it may be used for one type of function more often than the others. Although the characteristics of these zones vary greatly from one culture to another, it is common in all the houses that the back zone is where the service-spaces, i.e. toilet, bathroom, and cooking area, are located.



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## 5. CONCLUSION

### The use of courtyard

In the center of the linear organization of these zones, i.e. the middle zone, is an open space, or a courtyard or a light-well, which is interpreted either as a divider or a merger between the front and the back zones, depending on how it is used in relation to the adjacent spaces.

### Changes in the floor level

The spatial hierarchy of the three zones is denoted by the changes in the floor level. The front zone is at the highest level, and the middle zone is at the lowest. The differences in these levels is between 8 to 18 inches in Chinese houses, 8 to 24 inches in Indian Houses, and between 8 inches to 4 feet in Malay houses.

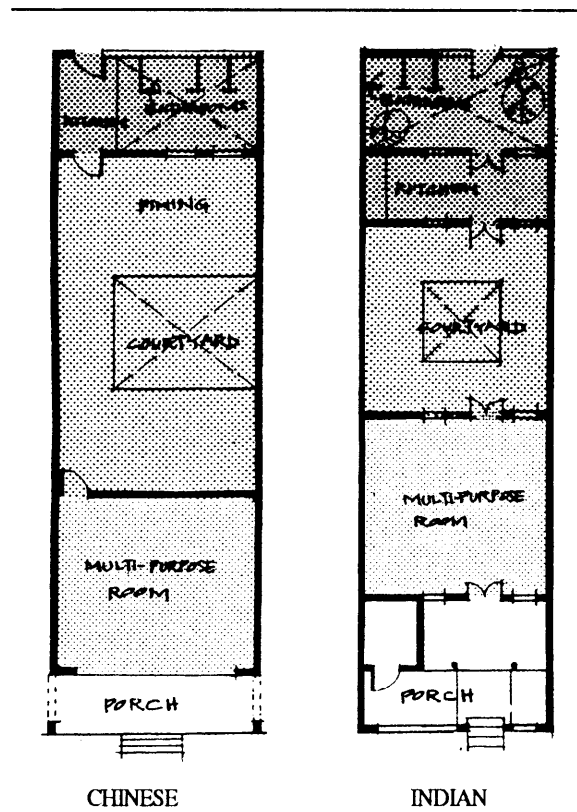


Diagram showing general organization of the Malay, Chinese and Indian houses.

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## 5.2 Zones and spaces

In his Supports design methodology, John Habraken uses a system of zones and margins as a tool in the design and evaluation process of supports. Zone and margins are fixed bands within which spaces can be placed according to certain conventions. These spaces may develop one or more zones, but have to end in margins. There are 4 types of zones, defined by Habraken:

Alpha zone: an interval area intended for private use and is adjacent to an external wall.

Beta zone: an interval area, intended for private use, and is not adjacent to an external wall.

Delta zone: an external area intended for private use.

Gamma zone: a internal or external zone, but intended for public use.

In between two zones, there is always an area known as a margin, which he defines as:

Margin zone: an area between two zones, with the characteristic of these zones and taking its name from them.

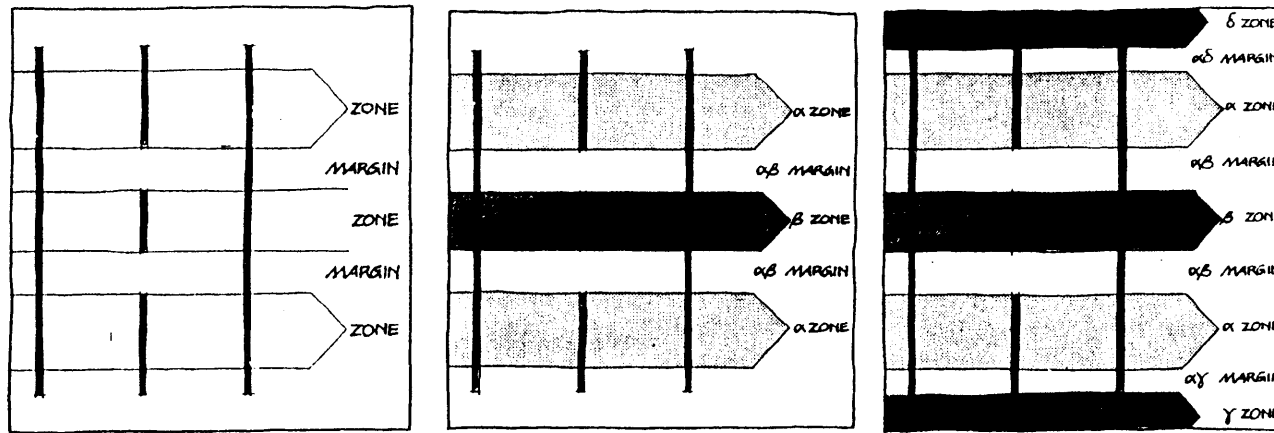
According to these definitions, the backyard is located in the delta zone, and the inside/outside separation (e.g., facade or back porch) occurs in the alpha-delta margin.

The Gamma zone, on the other hand, will be the front zone of the house where the public access is located. And similarly, the inside/outside separation (e.g., facade or front porch) occurs in the alpha-gamma margin.



## 5. CONCLUSION

DIAGRAMS SHOWING THE ZONE AND MARGIN SYSTEM



Source: Habraken, Variation: The Systematic Design of Supports 1976

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These definition can be easily translated in the Malaysian context because the house in Malaysia, as described earlier, is clearly defined in similar zones. However, because the interior spaces of the house is organized in a linear arrangement with a clear definition of front and back, the two Alpha zones need to be differentiated. Therefore, in the Malaysian house, the zones can be translated as

**Gamma Zone :** an external area in the front zone, intended for public use and provides public access to the dwelling

**Alpha 1 Zone:** an internal area in the front zone, intended for private use and adjacent to an external wall

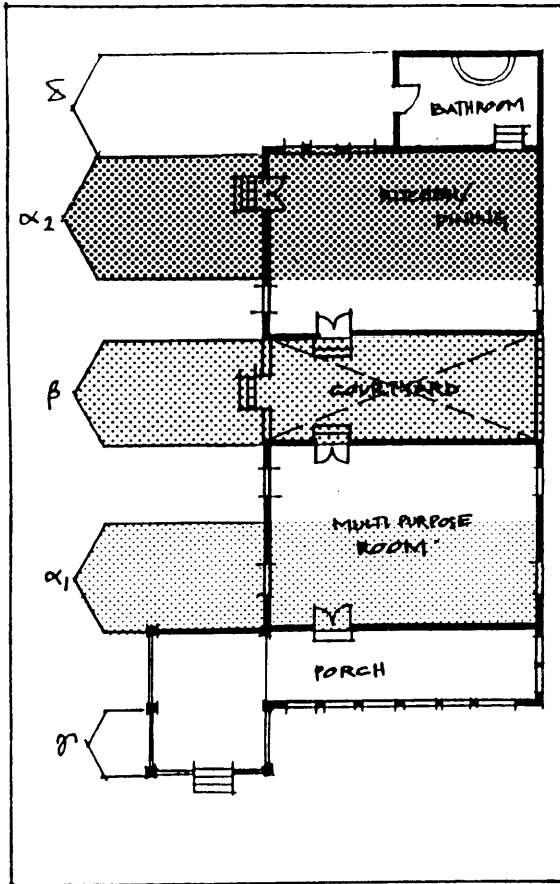
**Beta Zone:** an internal area in the middle zone, intended for private use, not adjacent to external wall, and contains an a courtyard.

**Alpha 2 Zone:** an internal area in the back zone, intended for private use and adjacent to an external wall, and contains service spaces.

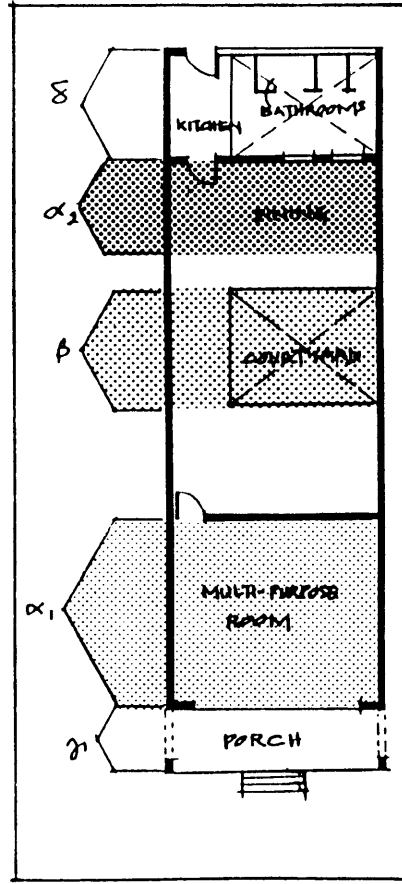
**Delta Zone:** an external area intended for public or private use.

## 5. CONCLUSION

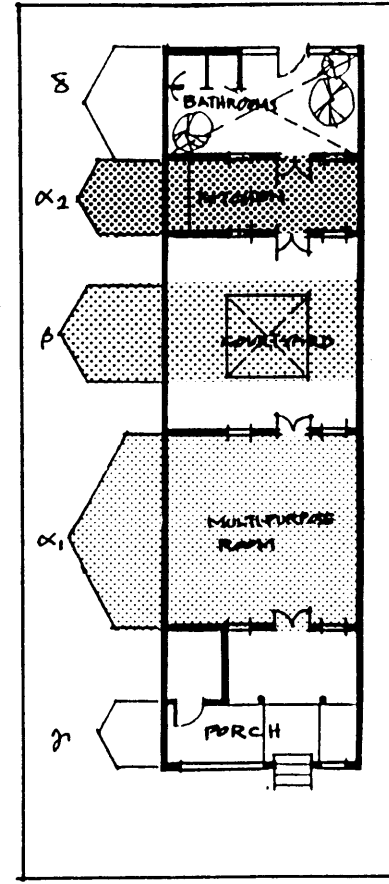
DIAGRAM SHOWING THE ZONING DEFINITION OF TRADITIONAL HOUSES OF MALAYS, CHINESE AND INDIANS.



MALAY



CHINESE



INDIAN

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Habraken identifies three kinds of spaces which can be placed in this zone / margin system according to various conventions. A space can overlap one or more zones and end in the adjacent margin. He defines these spaces as:

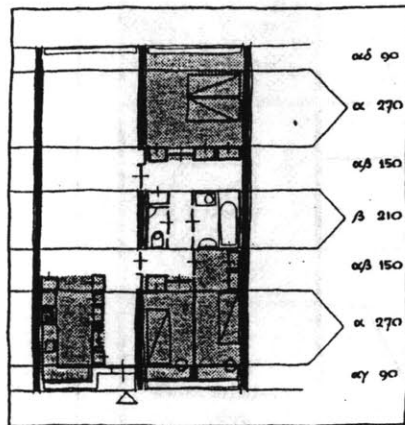
Special Purpose Space: a space intended for occupancy over a certain length of time, the maximum and minimum size of which can be determined on the basis of an analysis of its function.

General Purpose Space: a space that allows a combination of specific activities that cannot always be determined in advance.

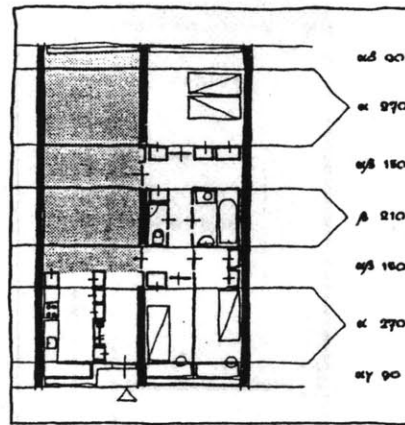
Service Space: a space that is for short term occupancy, utilitarian in character, the size and layout of which can be determined on the basis of an analysis of their function.

In the houses in Malaysia, the interior spaces are generally composed of two or three general purpose spaces, which overlap with the zones described. Malay houses do not have special purpose spaces at all, while in Chinese and Indian houses, the only spaces that can be considered the special purpose space are the master bedroom and the worship room respectively. In all the three houses, the service spaces are always in the Alpha 2 zone, i.e. the back zone.

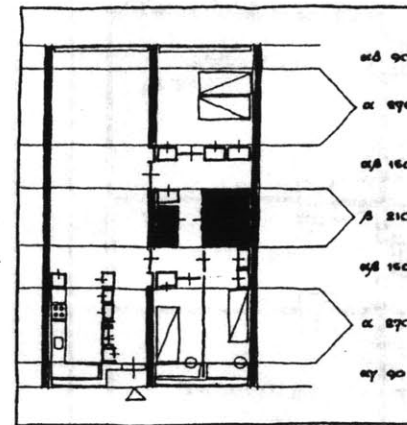
DIAGRAM SHOWING DIFFERENT KINDS OF SPACES



SPECIAL PURPOSE SPACE

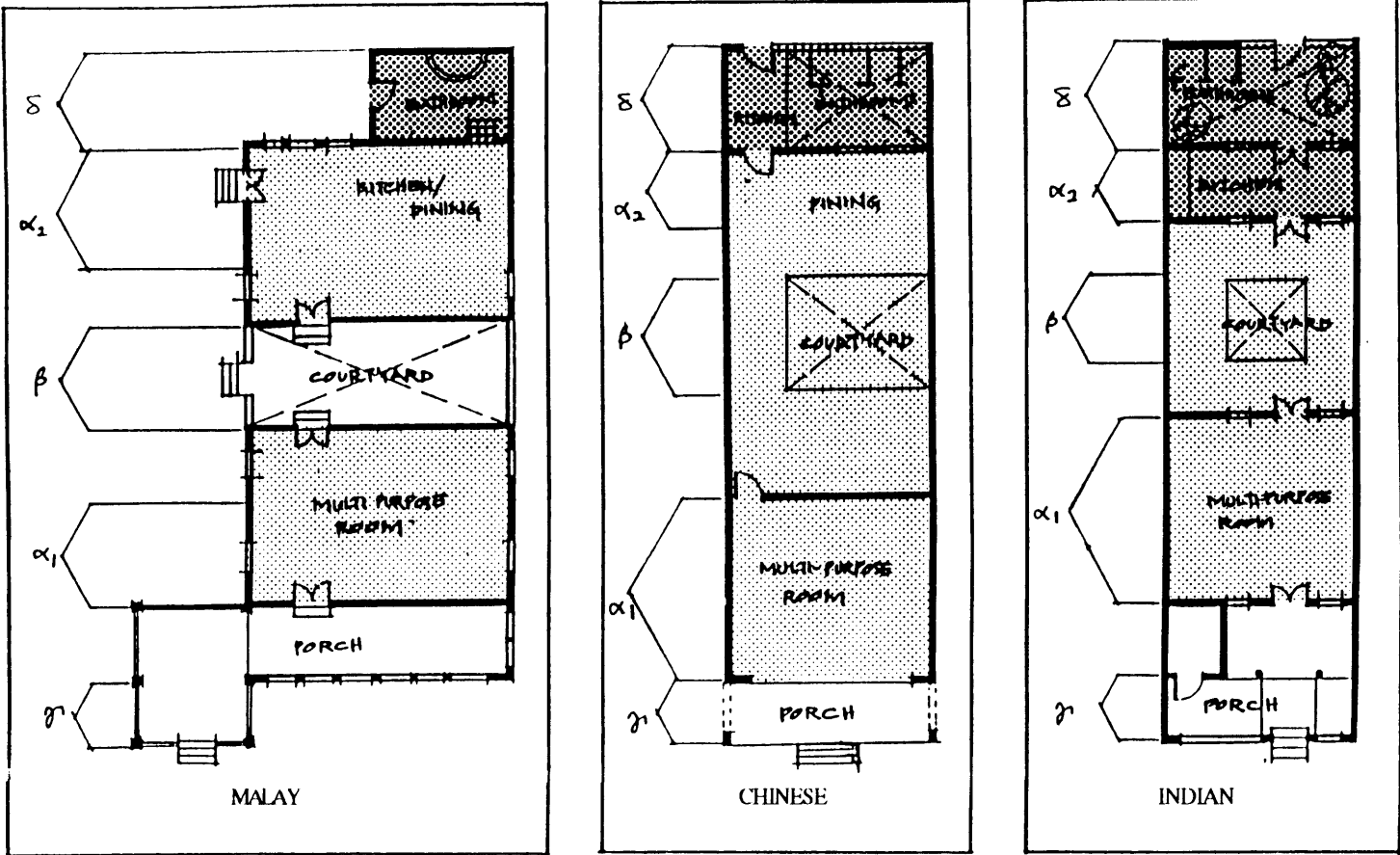


GENERAL PURPOSE SPACE



SERVICE SPACE

DIAGRAM SHOWING THE GENERAL PURPOSE AND SERVICE SPACES OF MALAY, CHINESE AND INDIAN TRADITIONAL HOUSES.



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## 5. CONCLUSION

Therefore in a Malaysian Supports dwelling, each interior zone represents a general purpose space which may or may not include special purpose spaces. The margin zones in between these zones provide the variables in the dimensions of each general purpose space, thus allowing for various interpretations of the space according to different cultures.

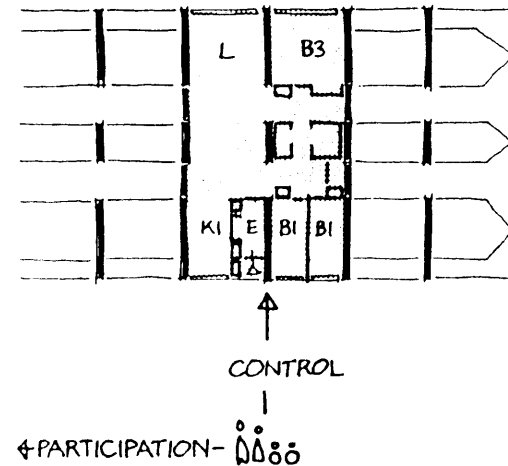
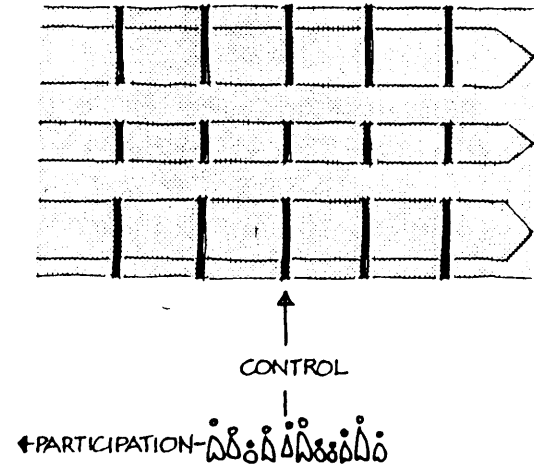
For example, the Beta zone in a Malay dwelling, is an inactive general purpose space which divides the male zone (Alpha 1) and the female zone (Alpha 2). Therefore, the margins belong to the spaces in the Alpha 1 and Alpha 2 zones. In an Indian dwelling on the other hand, the Beta zone is the most important and sacred zone, and therefore holds the most actively used general purpose space, i.e. the family / living / dining / sleeping / worshipping space. Therefore, the space in the Beta zone overlaps both margins on either sides.

### 5.3 Levels of Control

In his book Variations The Systematic Design of Support, John Habraken envisions three different levels of control by which the dwellers participate in the dwelling process.

- First: at the community level, where the dwellers participate in the decision making process concerning the design of the supports and its immediate surrounding.
- Second: at the family level, where the dwellers make the decision over the division of the dwelling into rooms, at the same time, decide on the size of the dwelling unit that affect the number of units in a supports.
- Third: at the individual level, where each dweller has control over the planning of his or her own room, and participates in the decisions concerning the laying out of the dwelling.

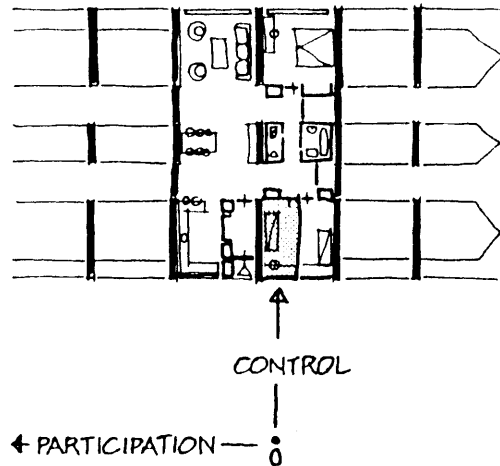
It is very difficult to imagine the same process of decision making and levels of control be adopted in Malaysia, for many reasons.





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## 5. CONCLUSION



Firstly, the dwellers' control at the community level over the design of the supports and its environment is difficult to be accommodated in the Malaysia context as it exists today because of bureaucratic reasons. Generally, any Government sponsored project is politically very complicated, and thus making the process of communicating with the community very arduous and time-consuming. Therefore, the decision making process at the supports level should be in the hand of the designers and the rest of the building-related professional team.

Secondly, a great majority of the houses in Malaysia till today are still being built by local craftsmen and "untrained" traditional builders. In adopting the supports system in Malaysia, one cannot eliminate this group of people in the process, for they are the ones most Malaysian associate with when it comes to building, renovating, and repairing their houses. Since the whole argument behind the supports concept as an alternative in Malaysia is the cultural issues, it is only logical that the craftsmen become one of the important decision makers at the supports infill level.

Thirdly, the idea of an individual having control over his or her own space simply does not exist in Malaysia, because traditionally, nobody owns his or her room. The family decides at all levels as far as the layout of the dwelling is concerned.

Therefore, in adopting the supports system in the context of Malaysia, the

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design and implementation process should be divided into four frameworks:

Framework I: at the supports level, the design decision is controlled by the architect, the engineers and the rest of designing team.

Framework II: at the Basic Variation level , the architect's team consult each family regarding the Sector's combination (i.e. size of the dwelling and its basic variation) which affect the number of units in the support.

Framework III: at the Sub-variation / infill level, the family consults local craftsmen on the planning of the spaces, the building of the detachable units, as well as on the aesthetic.

Framework IV: at the personal level, the family decides on the particulars of the interior and exterior, thus personalizing their dwelling environment.

### 5.4 Conclusion

Many governments in the Third World countries are now leaning towards a "non-housing" attitude. They argue that it is better to provide financing supports, and let the rest of the decisions regarding the location, house type, plan, etc. to the people themselves.

In Malaysia, this argument is not very popular among the housing officials, because the Malaysian government in general is pushing towards high development, basing on the results that the Singapore government has achieved. Therefore, the supports idea may be acceptable to the Malaysian government. Even if it is not, the supports concept may also be developed through private sectors. It can be used in the design of housing for all income groups, not necessarily the low income group only. As a design tool, it is useful to the architects because it can help the architect to deal with the cultural diversity in designing houses for the Malaysian people, even if the project is not a supports project.

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*"Would it be possible to cultivate the organism, to have it sprout yet another part? Could something grow there in an almost natural way, or did something have to be imposed, alien and artificial - a dead stone in living vegetation ?*

*Here you can see the theme that have fascinated me for so long, growth and change, the continuation of patterns as results of human action; the way the urban living tissues are developed out of small individual entities; and above all, the underlying structure, the relatively ephemeral; the unity and the diversity; the beauty of the extraordinary that compliments the beauty of the ordinary - the leaves and flowers that speak of the same tree."*

N.J. Habraken  
*The Leaves and the Flowers*

For the M.Arch thesis, I had a unique opportunity to explore the analysis and conclusion put forth in the previous chapters in a design exercise. Taking a parcel of land from an existing proposal for Sri Sentosa Housing project as my site, I proposed a mixed use development which included a hawker center, a retail street, a public riverside park, a multi-purpose hall, and 66 units of housing consisting of two-storey houses and two-storey split level duplex units.

One of the lessons gained from this design exercise was that it was infeasible to have houses more than two stories high for the following reasons:

The supports design must make provision for 2 separate entrances which are interpreted as male/female in Malay and Indian houses, and as public/private in Chinese houses. This requirement is difficult to fulfill when designing multi-storey housing units because it implies a large area for external circulation. Therefore, designs are effectively constrained to a maximum of two stories in order to accommodate the spatial requirements.

The supports design must also make provision for a courtyard or light well. In Chinese houses, light wells are employed for ventilation and as a source of illumination. In Malay houses, the courtyard demarcates the male and female zones, while in Indian houses, it is the most sacred space and is used as a family interaction area. To accommodate these disparate functions, the courtyard must be designed to provide privacy and good ventilation. However, when designing multi-storey units, it is difficult to provide a courtyard without sacrificing some degree of privacy of the courtyards belonging to lower-level units. Furthermore, courtyards of designs of more than two stories do not provide ventilation as efficiently as traditional courtyards.

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However, this does not necessarily imply that the supports approach is limited to low density projects. It is a common mistake for authorities to only consider high rise when high density is required. Designers should also realize that high density can be easily achieved in low rise projects by careful planning of the overall layout of buildings and common spaces. This fact becomes apparent when the space requirements of high rise designs are examined. In high rise design, significant amounts of space in between housing blocks must be deliberately left empty because of the peculiar requirements implicit to this form of housing. These spaces are usually designated as green space, playgrounds or paved parking, but due to their enormous sizes, they typically end up being void of people and lifeless. Therefore, significant tracts of land are unused but required by high rise housing. Low rise housing does not suffer from this space requirement, therefore smaller pockets of common space can be designed where necessary. This results in spaces that are more human in scale and more meaningful to the everyday activities of the people.

In Malaysia, Nature had always been treated with reverence until the dawn of the modern era. Man's place was low to the ground, beneath the tropical canopy, and his architecture complemented the landscape, blending in with the lush tropical scenery. But now forest has been replaced with cities, trees with high rise structures, and the essential relationship between Man and Nature has vanished.

This thesis has attempted to present an alternative to the alienation encountered by the people in the modern environment. It does not pretend to be the only solution, but nevertheless, I believe it is an essential step towards that direction.







III About the House

- 1 number of years residing : \_\_\_\_\_
- 2 rent or own (please circle one)  
if own, was it handed down by parents or other relatives ? Y N
- 3 previous location : \_\_\_\_\_
  - \* type of house
    - a. squatter
    - b. public housing
    - c. private house
  - \* number of years living there : \_\_\_\_\_
  - \* reasons for moving :
    - a. job related
    - b. marriage
    - c. financial
    - d. family related
    - e. other \_\_\_\_\_
- 4 plan to move ? Yes No  
if yes, why? \_\_\_\_\_
- 5 What do you like most about the house ?  
\_\_\_\_\_  
\_\_\_\_\_
- 6 What do you dislike most about the house ?  
\_\_\_\_\_  
\_\_\_\_\_
- 7 If you can own a new house, what would you have it differently ?  
\_\_\_\_\_  
\_\_\_\_\_

IV About the Neighborhood

- 1 ethnic distribution (rough estimate in percentage) :
  - Malay \_\_\_\_\_
  - Chinese \_\_\_\_\_
  - Indian \_\_\_\_\_
- 2 Is the neighborhood :
  - a. old (before Independence)
  - b. (after Independence to the 70's)
  - c. new (around the 80's)
- 3 Is there any community activity : Yes No  
please specify \_\_\_\_\_
- 4 What do you like most about the neighborhood?  
\_\_\_\_\_  
\_\_\_\_\_
- 5 What do you dislike most about the neighborhood?  
\_\_\_\_\_  
\_\_\_\_\_

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## APPENDIX II - Survey Data

Due to insufficient time and resources, The survey only covered thirty houses. 11 of them were from the Kampung Sentosa squatter area, 14 were from the Sri Sentosa squatter resettlement housing, and 4 were shophouses in Petaling Street. Of the 11 squatter houses surveyed, 4 belonged to Malay households, another 4 to Chinese households, and 3 to Indian households. Of the 14 public housing units, 5 were occupied by Malay families, another 5 by Indian families, and 4 by Chinese families.

The survey was conducted in July of 1991, with the help of two assistants who served as interpreters during interviews with Indian and Chinese families. The survey consisted of questionnaires (a sample of which is provided in Appendix I), interviews, and detailed records of the house layouts.

### Squatter Profile:

Household Size	The household size of the squatters in general was quite large. 73% of all squatter families had a household size of more than 5 persons. The largest family consisted of 11 members. The average size of the Malay squatter families was 8, while the Chinese average was 5 members, and the Indians 6.
Household Type	Only 53% of all households in the squatter settlements consisted of a nuclear family. The remainder were either extended or complex families

Household Income	The average monthly income of the squatter household was approximately M\$900 (Malaysian Ringgit), a surprisingly high figure. 53% of all squatter households had a total income above M\$1000. The highest income was M\$2000. At the time of the survey, the official poverty level was M\$400, so these squatter families were relatively well off. However, it should also be noted that 81% of these families had more than one wage earner.
Employment Profile	75% of the wage earners in the squatter settlements were factory workers. 72% of these people also engaged in petty trading such as street vending or hawking. Therefore, many workers supplemented their regular income with other activities.
Housing Preference	The majority of squatters indicated their preference for two-storey brick houses. This type of house was the standard in middle income satellite towns around the K. L. area, and was often regarded as a status symbol by the lower classes.

Public Housing Profile

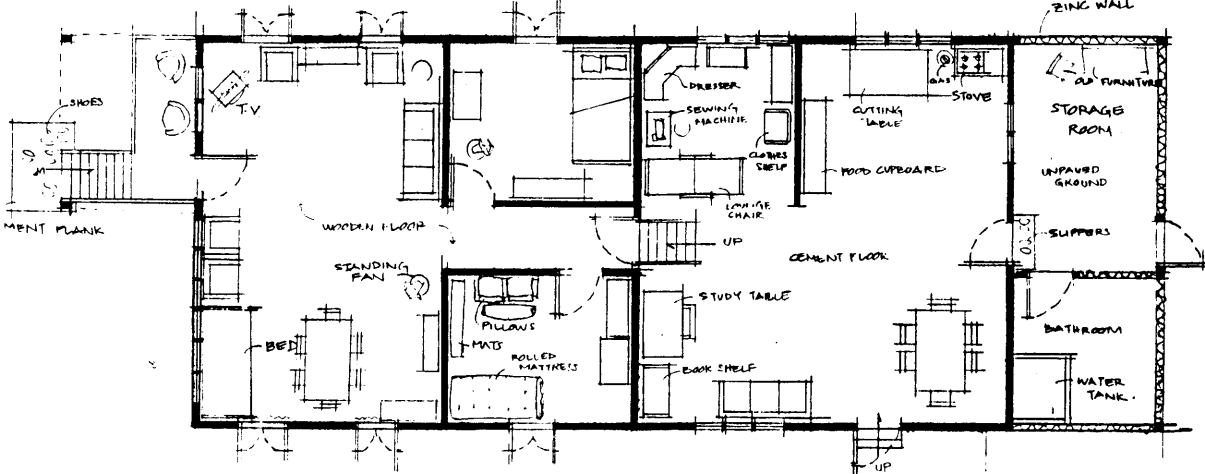
Household Size	86% of all households had more than 5 members. The average size of Malay households was 7, while the Chinese average was 6.5, and the Indian average was 6.
Household Type	65% of all households consisted of a nuclear family. The

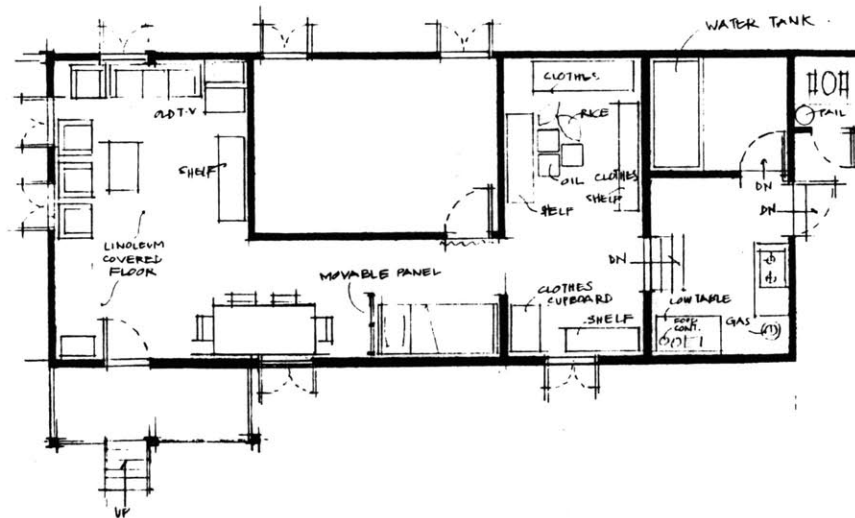
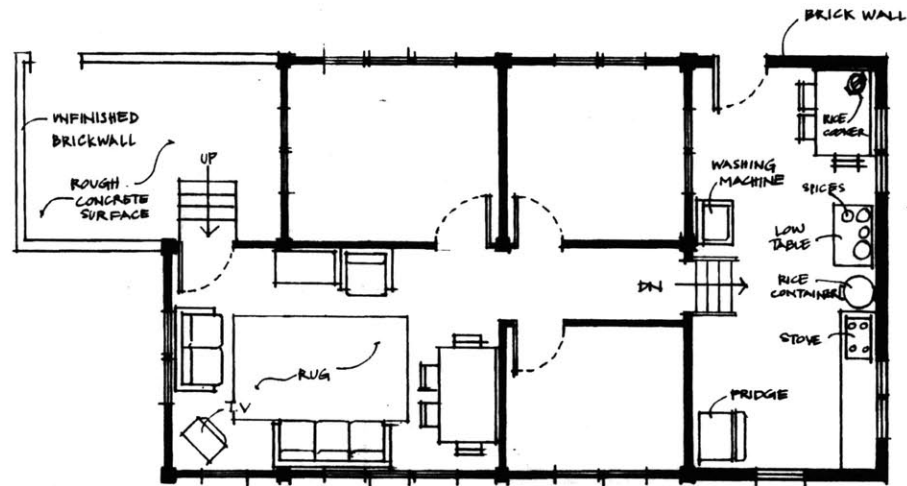
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	remainder were either extended or complex families.
Household Income	The average monthly income of the flat dwellers was approximately M\$850, also quite high. 41% of all households had a total monthly income of over M\$1000, well above the M\$400 poverty line. This was because 79% of these households had more than one wage earner.
Employment Profile	45% of the wage earners were factory workers, about half of whom were also part-time street vendors. 45% of the wage earners were full time street vendors and hawkers. Therefore, 69% of all wage earners engaged in either part-time or full time petty trading. Only 3% of the wage earners were employed as white-collar professionals such as teachers or sales managers. The remaining 7% were blue-collar workers in the government sector.
Housing Preference	Almost all respondents indicated their dissatisfaction with their housing units. The most frequent complaint was the size of the units, which were considerably smaller than the squatter houses previously occupied by the families. When asked about their housing preferences, 93% indicated that they preferred houses with front and back yards so that they could plant trees and vegetable gardens or build additions when necessary.



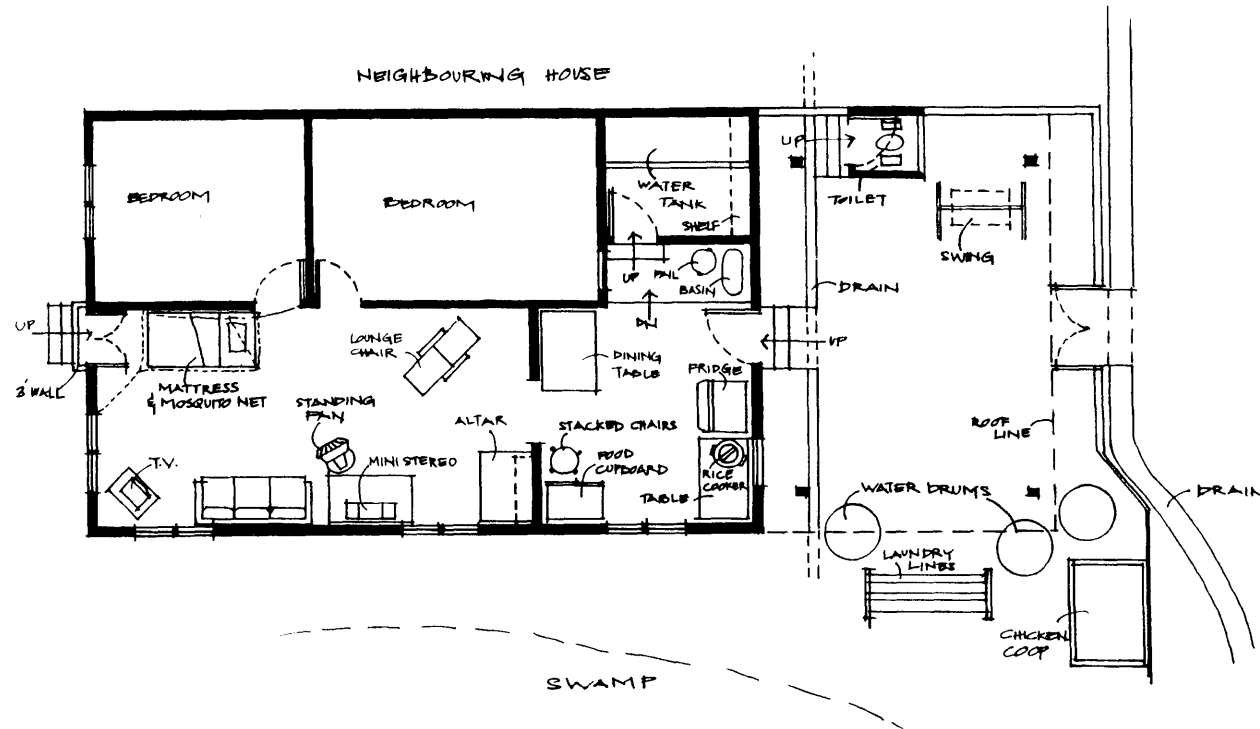
APPENDIX III - Floor Plans of Malay Squatter houses



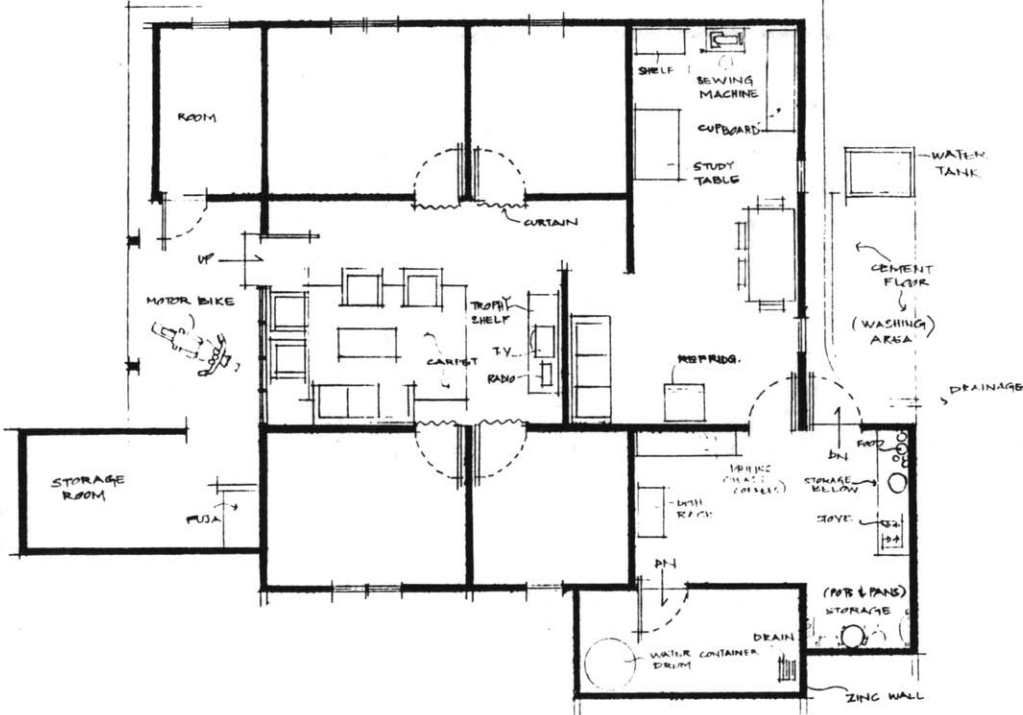


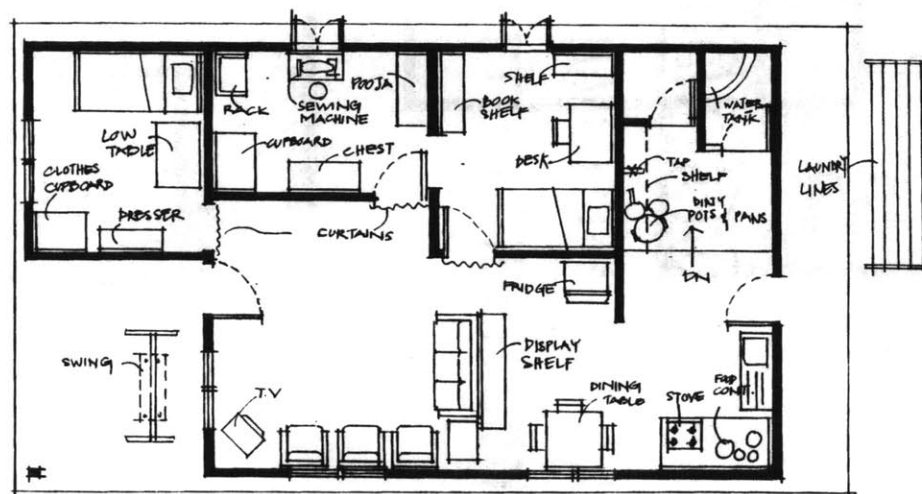
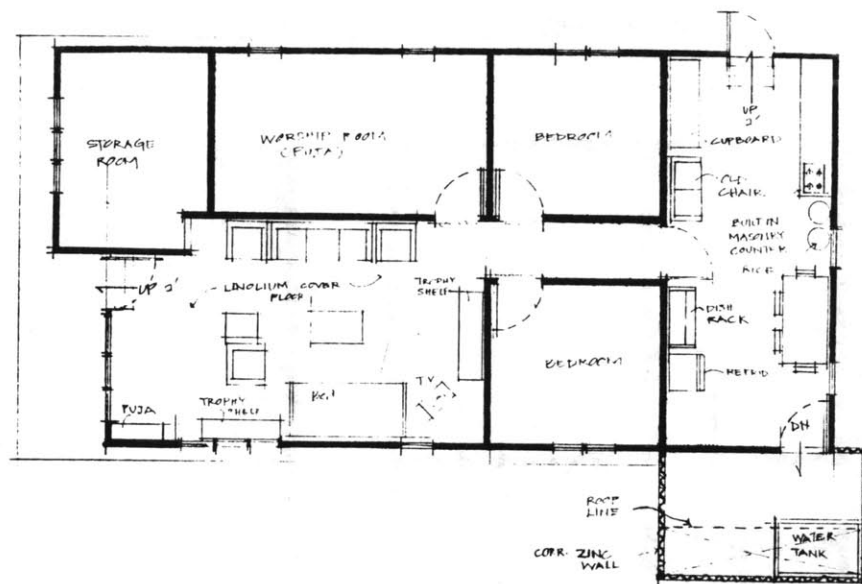




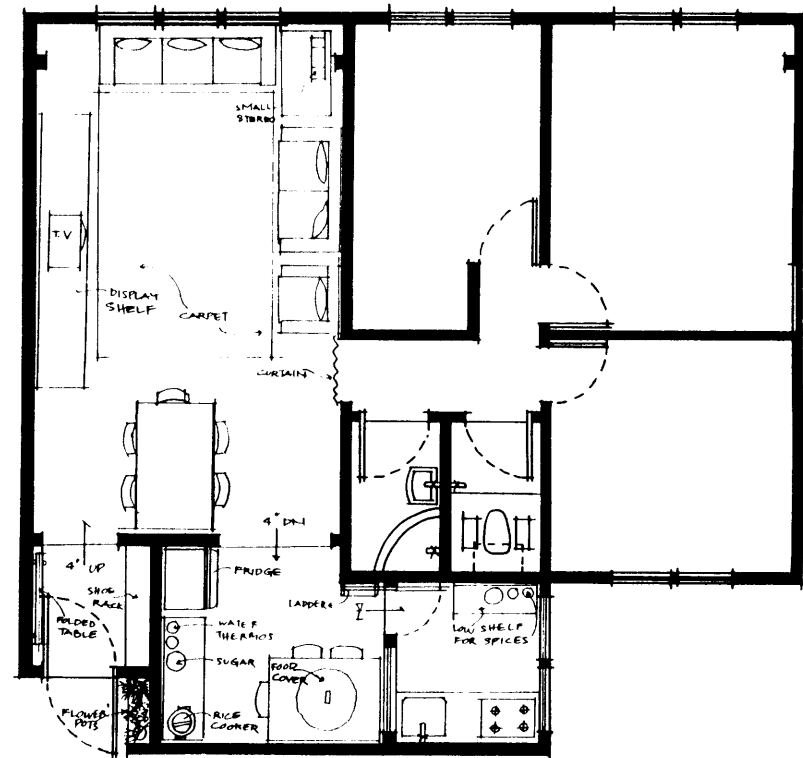
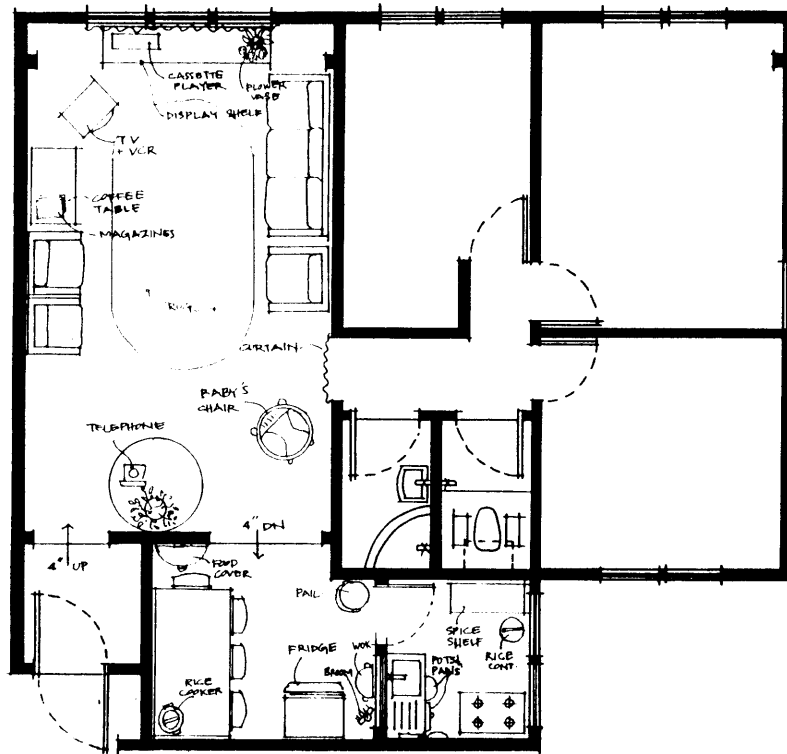


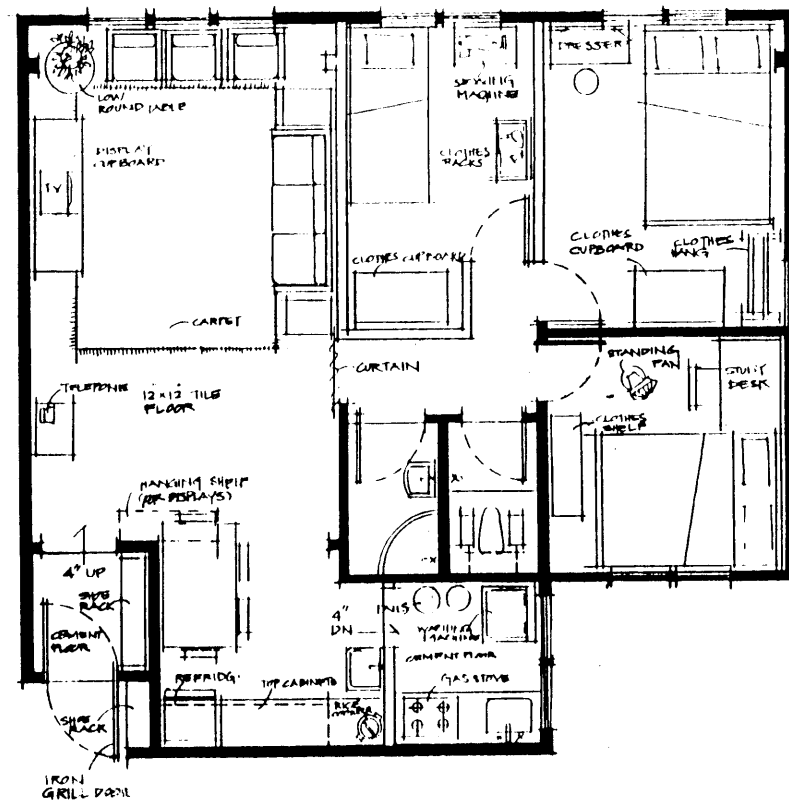
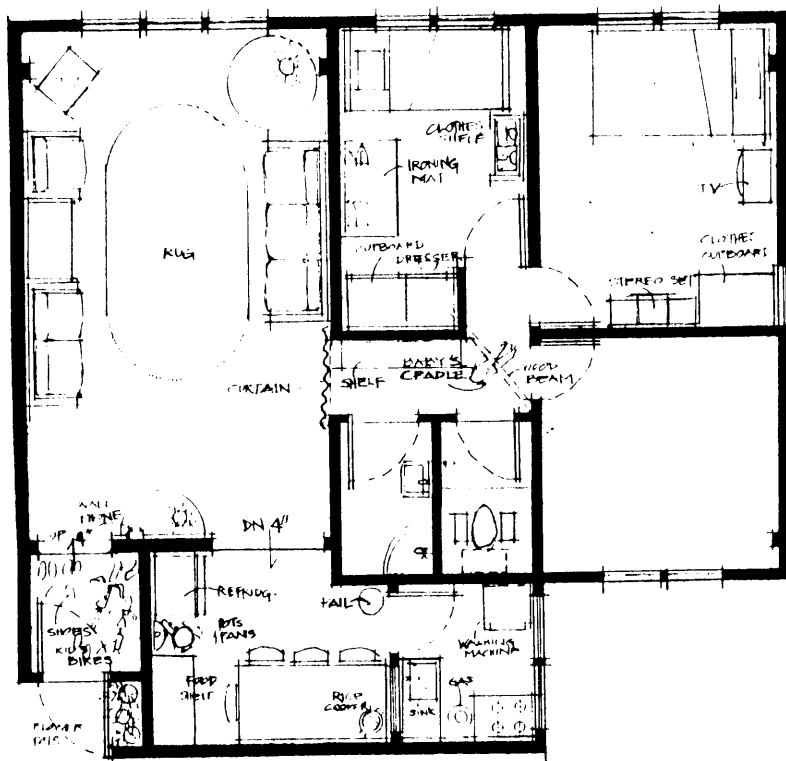
APPENDIX V - Floor Plans of Indian squatter houses

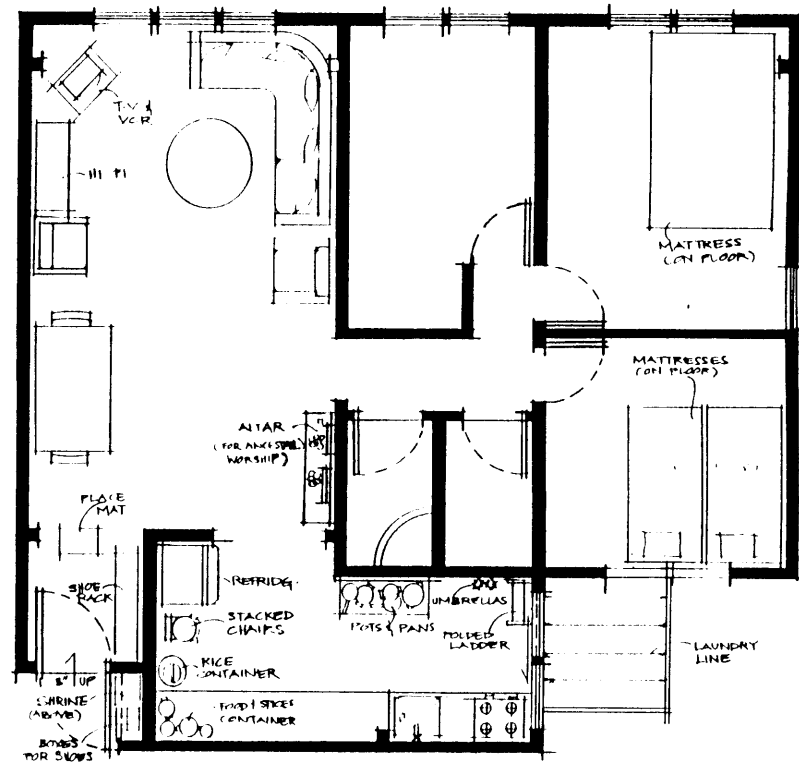
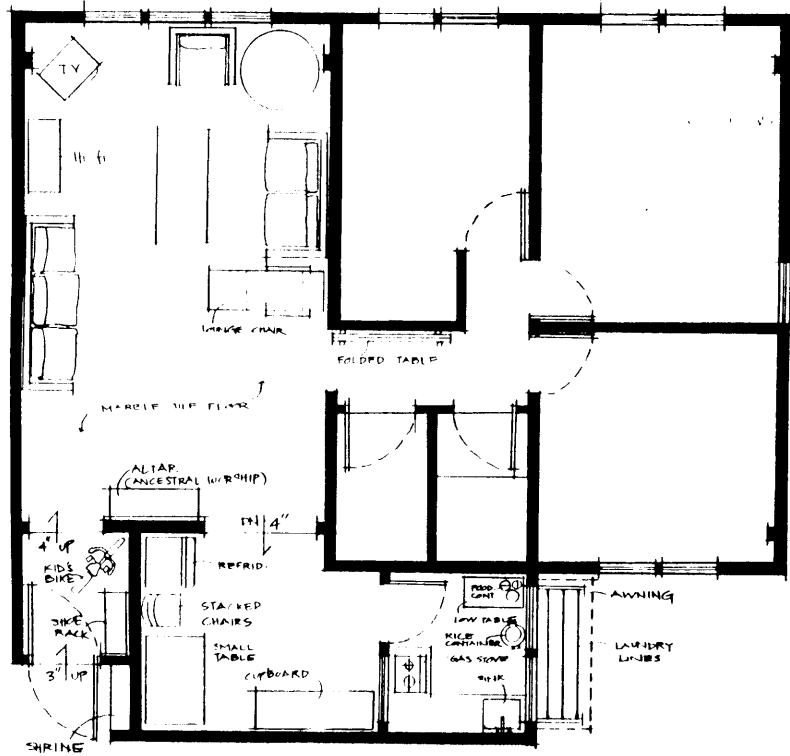




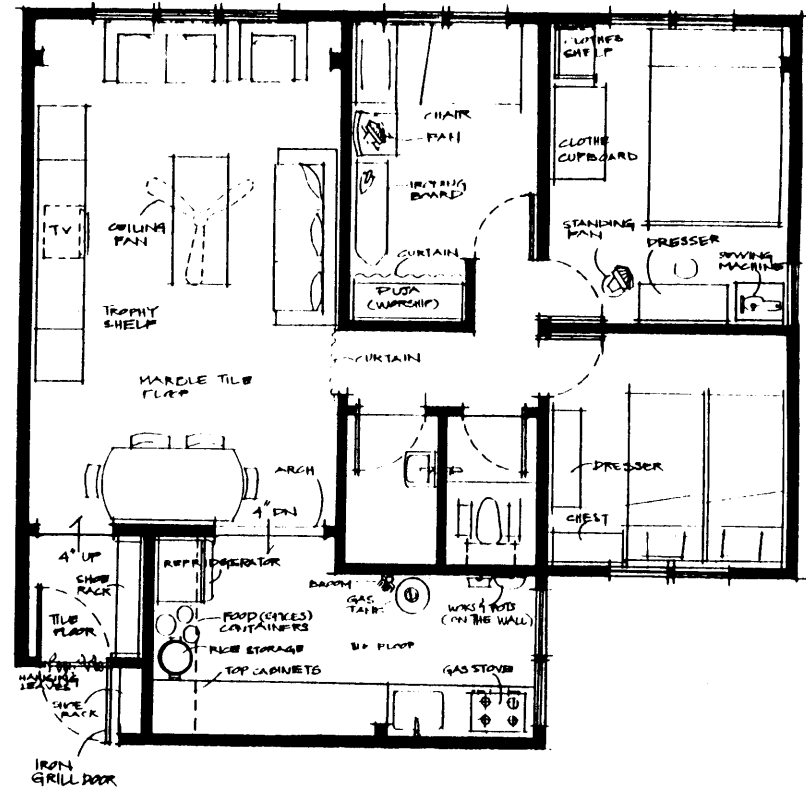
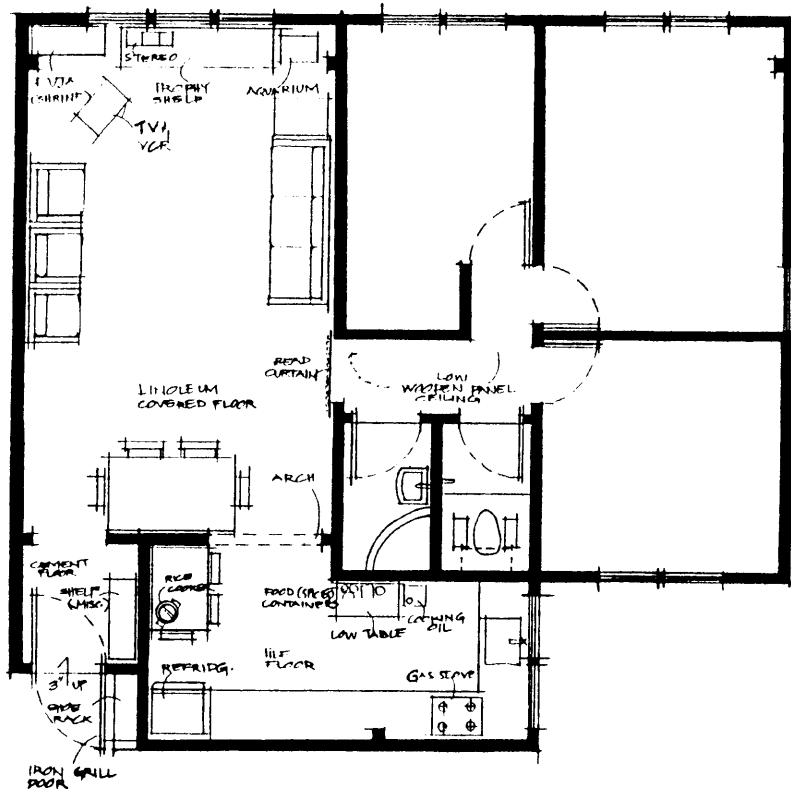
APPENDIX IX - Floor Plans of Sri Sentosa Public Housing















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