

1.1 Problem Statement

Issues on cultural and natural integration have been recognized as internationally significant, where many people express their concerns on the degradation of cultural landscapes. The preliminary works by Platcher and Rossler (1995) have identified that many natural regions of the world have lost most of their intrinsic values due to human influence. This was also discussed during the “Agenda 21”, where it raised the awareness on this matter. Hence, many approaches have been developed to improve how the environment can be managed. In Malaysia, this situation is worsened by the rapid urbanization and industrialization, especially during the early 1960’s, for example, during the migration processes from the East Coast to the West Coast states of the Peninsular (Kojima, 1996). Following this, cultural rich states, such as Penang and Melaka, had also become industrially motivated due to this phenomenon. During this period, many traditional villages had turned into sub-urban areas and industrial cities.

Rural area re-development projects, such as the tourism industry, have also influenced the transformation of traditional residential landscape settings through renovation and modification works of new houses into tourist attraction sites (see Figure 1). This phenomenon is highlighted by Worden (2003), in which he lists several states in Malaysia (including Melaka), where threats towards the loss of ‘Malayness’ are happening due to their recognition as tourism states. In this case, a lack of understanding on cultural landscape values in contemporary Malay living has led to the degradation of cultural heritage design of home compounds, and has also influenced the adoption of foreign concepts, such as Balinese and English (Kamsah, 1997). This is why the measurements of the Malay identity preservation, specifically in traditional Malay residential gardens, are needed in order to control future developments in rural areas. For this reason, this paper explores the physical characteristics that form the Malay cultural landscapes by identifying the social and cultural factors that strongly influence them in sustaining their gardens to be inherited by the next generations. However, the question here is: How can social and cultural factors influence the Malays in their residential landscape composition?



Figure 1: A renovated house sponsored by PERZIM (Source: Author)

1.2 Assessing the Malay Culture

The Malays are well known for their culturally-rich heritage and inherited values. These qualities are shaped from the norms of the Malays in their daily activities. Zainal (1994) states that the lifestyle of the Malays is much dictated by the cultural cues and customary practices. However, his study has justified that the Islamic customs of the Malays determine the norms of behaviour, values and beliefs of the traditional Malay society, where the Islamic principles greatly shape the pattern of family relations and individual behaviour. His findings are also supported by Anuar (2006), who states that the mannerism and behaviour of the traditional Malay society in everyday life are much dictated by the customary practices, such as Undang-Undang 99, Tajul Muluk and Adat Papatih, as well as the teachings from the Holy Quran and the Prophet’s hadiths. The Malays are also well known for their “house proud” culture, which is the feeling of attachment that the Malays have with their houses. This culture explains the close bond to a house that dictates the lifecycle of a man (Teh & Nasir, 1997). This close bond results in many interpretations of the layout design and symbolic meanings of each space in it.

According to Zaharah Mahmud (1970), the Malay identity could be studied through old manuscripts, folk tales, poetry and architectural monuments. Her study finds that these sources may be the best way to access the information on the background of the Malay culture in the region due to the limitations of other reliable documentation. Zainal (1994) also adds to the fact that, adat or 'ritual' is a part of the Malay identity. His study states that these rituals have kept the Malays organized and efficient in their daily lives, in which they adopt them to blend with the natural environment. In their rituals, nature will be a part of the event. From childbirth to death, the elements of nature will play important roles in their rituals. Furthermore, Al Ahmadi (2000) mentions that orientation is the key element in considering the placement of things in the Malay environment. His study refers to Tajul Muluk and he translates his findings into the built environment perspectives. Al Ahmadi also states that landscape and topography contribute to the approach that the Malays take in designing their outdoor environment. Several pointers have been adopted into the methodology. It is learnt that archival surveys from old manuscripts, literature and folktales are needed in order to assess the cultural landscapes of the Malays, from which understandings on the background of rituals and customs must be done before proceeding to the next step.

1.3 Assessing the Cultural Landscape

Robert Melnick's characteristics are the starting point for understanding and mapping cultural landscape. They provide an overview of the cultural landscape and include a sufficient range of variables for an initial investigation. One of the most important contributions of the publication of Melnick's Rural Historic Districts is the description of the characteristics of the rural landscape and how these characteristics could be used for research and inventory of sites (Buckle, 2005). Melnick's work for the US Park Services identifies 12 characteristics that are useful in landscape inventory. They are also designed for ordinary landscapes, especially for rural settings. These characteristics provide a list of elements to be considered in inventorying landscapes (see Table 1). Melnick's characteristics for studying rural historic districts are now frequently being used to conduct cultural landscape inventories, ensuring that a broad base of information is collected.

Table 1. Melnick's Characteristics (Source: Buckle, 2005)

	Characteristic	Examples
Process	1. Patterns of Spatial Organization	Grid, Clustered
	2. Landuse and Activities	Paddy field, orchard, irrigation
	3. Response to Natural Features	Swale, Hedges
	4. Cultural traditions	Element related to ritual/customs
Features	5. Circulation networks	Pathways
	6. Boundaries	Demarcation of land
	7. Vegetation related to land use	Orchards, edible garden
	8. Structural types	Barn, Storage house, Decking
	9. Cluster arrangement	Homestead
	10. Archaeological sites	Abandoned elements/historical/memories
	11. Small scale elements	Fencing, water Pots, swing set
	12. Perceptual Qualities	Views

A few local researchers have adopted the Melnick's characteristics into their research analysis. In 2003, a study on cultural responsive landscapes was conducted in rural Perak. The study aimed to understand how social and cultural factors could be influenced by their surrounding landscapes. The characters were analyzed using the Overlay method and the findings strongly suggested that social and cultural influences could not be analyzed separately from each other. Inspired by these discoveries, in 2004, a study was conducted utilizing the National Register Bulletin (1989) guidelines in evaluating and documenting rural historic landscapes using 11 landscape characteristics. Her study, however, focused on identifying the characteristics that needed to be preserved and conserved in Kg. Pulau Duyung, Terengganu. Both of these research works were similar in their focus on the meaning of cultural landscape within the local context, enriched by the community spirit of the village.

This article intends to understand the compositions of identity in each selected rural home compound and their influences through the varieties of social status and diversities of cultural heritage. This research will adopt the Melnick's characteristics as the inventory guidelines and Ian Mc Harg's Overlay method to analyze the findings.

2. MATERIALS AND METHODS

Melaka was chosen as the case study area, and therefore, the state will act as the benchmark in this study for the essences of the Malay garden concept. The scope of this study is to explore all the three districts of Melaka, which comprise Alor Gajah, Melaka Tengah and Jasin. In order to obtain the samples that are both informative as well as rich in historical values and details, a pre-survey sampling process is required before the actual data collection stage begins. The relevance in selecting Melaka as the case study location is the richness of information that this state offers during literature search on the Malay culture and heritage. Besides, Melaka has been identified as one of the oldest states in the Malay Archipelago and has significant values in the history of Malay cultural development (Al-Ahmadi, 2003).

2.1 Sampling Process

A pre-survey field visit to identify potential sampling cases was done before the actual data collection. To discover, understand and gain insights, a purposive sampling method was applied at this stage of research. Using the listed sampling guidelines (see Table 2), 24 traditional Malay houses from all districts of Melaka were identified as the potential study samples.

Table 2: Sampling selection criteria

Sample Details	Requirements
Age	More than 40 years old.
Authenticity	Minor modification, without affecting the original garden layout, where the front, side and backyard areas still exist.
Accessibility	By a mutual understanding with only the owners. Restricted to private residential compounds.
Compound distribution	Front, side, and back yard preferred.
Vegetation type	Native plants preferred, planted with house if possible.
In-sight sources	Reliable secondary sources to validate information of the original condition of the selected samples.
Man-made feature	Must compliment compound purposes.

These 24 houses were then required for further evaluation to ensure that they have aesthetic values, along with a few other requirements, such as the required accessibility and permission from the house owners, in order to fulfill this study. As a result, the best 18 houses were identified and appointed as the study samples (see Figure 2 and Table 3).

Table 3: Selected houses in Melaka (final samples for the study)

Sample ID.	District	Location
AG 01	Alor Gajah	Kg. Pdg Sebang
AG 02	Alor Gajah	Kg. Pdg Sebang
AG 03	Alor Gajah	Kg. Pdg Sebang
AG 04	Alor Gajah	Kg. Ganun
AG 05	Alor Gajah	Kg. Ganun
AG06	Alor Gajah	Kg. Ganun
AG07	Alor Gajah	Kg. Solok Duku
MT 01	Melaka Tgh	Kg. Tanjung Keling
MT 02	Melaka Tgh	Kg. Lereh
MT 03	Melaka Tgh	Kg. Balai Panjang
MT 04	Melaka Tgh	Kg. Paya Rumpit
MT 05	Melaka Tgh	Kg. Paya Rumpit
J 01	Jasin	Bt.18, Kg. Sebatu, Merlimau
J 02	Jasin	Bt.18, Kg. Sebatu, Merlimau
J 03	Jasin	KM27, Kg. Sebatu, Merlimau
J 04	Jasin	KM 29, Kg. Batu Gajah Pasir
J 05	Jasin	KM 28, Kg. Batu Gajah Pasir
J 06	Jasin	Jln Permatang Serai, Merlimau

2.2 Field Data Collection

For each house that was selected, a physical inventory process was required in order to collect as much information as possible regarding the following details: the measurements of the house and compound layout, details on vegetation, soil type, landform and other related physical features, predecessors' activities or land-use surrounding the property, and any other landscape components or any other small scale elements within the compound area. During field data collection, all information and details of physical features were recorded using an on-site mapping method that includes all related measurements required for the study. These characteristics are recognized as the identity and preferences of the Malays in their garden compositions (see Figure 3). Photographic records are very important in proving the existence of the Malay landscape concept in this study. They can be used as valuable evidence and become one of the important factors to identify the essences of Malay garden concept.

In addition to site inventories and observations, in-depth interviews were also conducted with the property owners to gain invisible information, such as the historic details of the community and the village, its original layout, methods of land demarcation, as well as the construction background of their property. A set of semi-structured questionnaires was prepared for each session as a guideline for the interviewer. This interview aims to produce important pieces of data for the understanding process, which could only be achieved during the session. The post data collection process is crucial and needed to be completed immediately after the field survey session. This was to ensure that all recorded data could be recalled during the data reviewing process.

3. RESULTS AND DISCUSSION

The proposed method to analyze multiple case studies was done by adopting an improvised Ian Mc Harg's Layer Cake Relationship (1971) analysis, also known as the Overlay method. In this method, "each element is considered as one 'layer' of the landscape as a whole" (Steiner, 1991). This study employed the Overlay analysis (Ismail, 2003) in order to complement site conditions and characteristics. Each house acts as one layer. The basic components that make up the house composition are the natural vegetation, man-made elements, demarcation methods, house orientation and compound relationship (see Figure 3). As a result, this process has produced significant characteristics of garden composition for the traditional Malay compounds of the selected houses (see Figure 4). The Macro Analysis Findings section will discuss the quantitative findings of the study while the Micro Analysis Findings section will elaborate the qualitative results in detail.

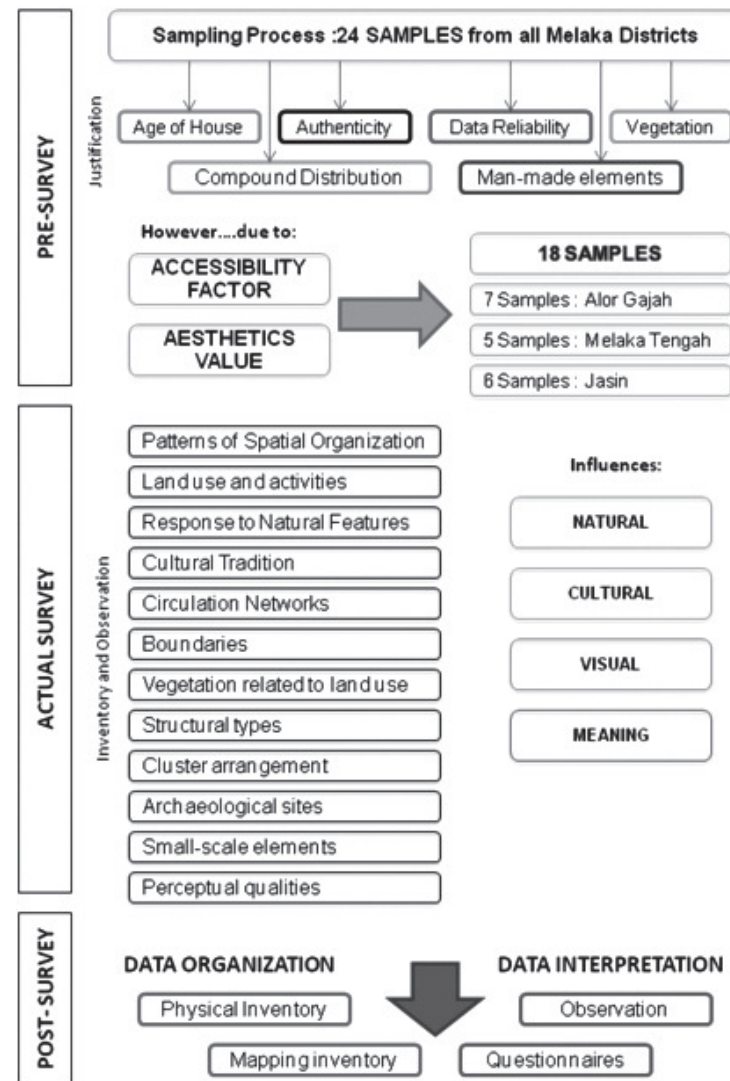


Figure 2: Field Data Collection Guidelines using 12 Melnick's Characteristic (Source: Author)

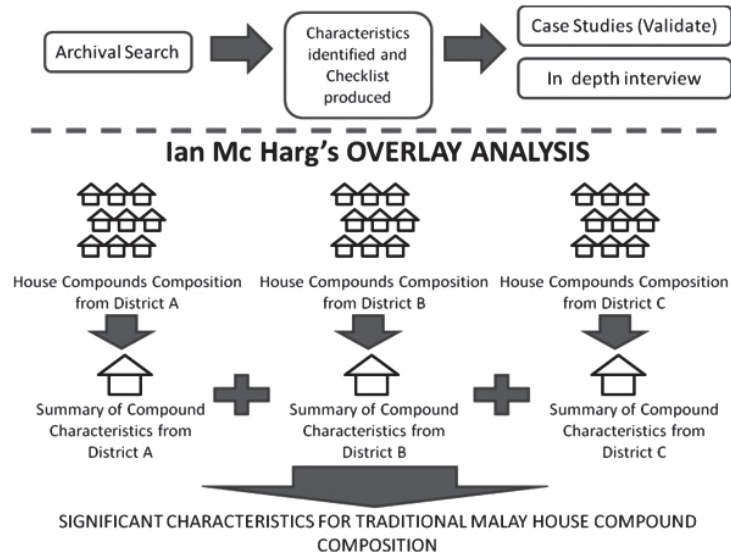


Figure 3: The analysis approach using the Layer Cake Relationship (Source: adapted from Ismail, 2003)

3.1 Macro Analysis Findings: Traditional Malay Village Environment of Selected Villages in Rural Melaka

Physical features, such as landforms or topography, can influence the formation of compound composition and the choice of activity for certain areas. From the field observation, it is found that Melaka territories can be categorized into three types of topography, namely, coastline, flat land and countryside (see Table 3). This observation has resulted in different outputs for lifestyles and daily activities. This is also shown in the landform feature of the compound areas according to their location. Moreover, it is discovered that physical features, such as topography, are important factors in identifying the characteristics of the villages and the houses themselves. This is analyzed through Melnick's characteristics (Buckle, 2005), as listed in the following section.

Table 3: Types of topography discovered during field observations

District	Case Study Location	Type of Topography (Source: JUPEM)
Alor Gajah	Kg Padang Sebang	Hilly countryside
	Kg Ganun	Flat land
	Kg Solok Duku	Flat land
Melaka Tengah	Kg Tanjung Keling	Coastline
	Kg Balai Panjang	Flat land
	Kg Lereh	Coastline
	Paya Rumput	Flat land
Jasin	Kg Sebatu, Merlimau	Countryside
	Kg Batu Gajah Pasir	

3.1.1 Land Use and Activities

a. The Kitchen Garden

The Malays love to be associated with a variety of lovely home-cooked meals, which justify the importance of domestic raw food supplies in this community. An edible garden is a must in most domestic gardens in the world, and it is implemented by the Malays as well. Most of the samples studied allocate edible gardens in their compounds at the backyard as the Malays highly value privacy. The plants vary from small to medium sizes, which also serve medicinal purposes (See Table 4). Most of the planting palettes are inherited from their ancestors, which become a symbolical feature of the backyard garden.

Table 4: Edible plants (vegetables and herbs)

Common names	Scientific Names	Edible parts	Usage	Allocation in Compound
Serai	<i>Cymbopogon citrates</i>	Stem and leaf	Cooking/Herbs	Backyard
Lengkuas	<i>Alphimia galanga</i>	Rhizome	Cooking	Backyard
Pandan	<i>Pandanus odoratus</i>	Leaf	Cooking	Backyard
Cili	<i>Capsicum annuum</i>	Fruits	Cooking	Backyard
Daun kari	<i>Murraya koenigii</i>	Leaf	Cooking	Backyard
Daun kesum	<i>Polygonum minus</i>	Leaf	Cooking	Backyard
Keladi	<i>Alocasia pseudobracteatum</i>	Stem	Cooking	Backyard
Asam jawa	<i>Tamarindus indicus</i>	Fruit	Cooking/Herbs	Backyard
Sirih	<i>Piper betle</i>	Leaf	Cooking/Herbs	Backyard
Ubi Kayu	<i>Manihot utilissima</i>	Rhizome	Cooking	Backyard
Mengkudu	<i>Morinda citrifolia</i>	Leaf?/Fruit	Cooking/Herbs	Backyard
Limau nipis	<i>Citrus aurantifolia</i>	Leaf?/Fruit	Cooking/Herbs	Backyard
Petola	<i>Luffa acutangula</i>	Fruit	Cooking	Backyard
Halia	<i>Zingiber officinale</i>	Rhizome	Cooking/Herbs	Backyard
Kunyit	<i>Curcuma domestica</i>	Stem and leaf	Cooking/Herbs	Backyard

b. The Orchard

Another element that can be linked to the Malay identity in Melaka is the small scale orchards found in their compound spaces. However, this pattern can only be seen in the samples in Alor Gajah and Jasin districts and not in Melaka Tengah due to the plot size and soil suitability. Table 5 presents the species of fruit trees that are commonly found in the state of Melaka. The trees found in the orchard are usually the dominant types inherited from their ancestors, which were bred from the original seed brought by their ancestors when they moved into the village.

Table 5: Edible plants (fruits)

Common names	Scientific Names
Nangka	<i>Artocarpus integra</i>
Nona	<i>Annona squamosa</i>
Belimbing besi	<i>Averrhoa bilimbi</i>
Bacang	<i>Mangifera foetida</i>
Binjai	<i>Mangifera caeisa</i>
Betik	<i>Carica papaya</i>
Pisang	<i>Musa sapientum</i>
Jambu batu	<i>Psidium guajava</i>
Kuinin	<i>Cinchona officinalls</i>
Jambu air	<i>Eugenia aquea</i>
Cempedak	<i>Artocarpus champeden</i>
Cermai	<i>Phyllanthus acidus</i>
Ciku	<i>Manilkara sp</i>
Duku	<i>Lansium domesticum</i>
Durian	<i>Durio zibethinus L</i>
Mata kucing	<i>Nephelium malaiense</i>
Mangga	<i>Mangifera indica</i>
Kelapa	<i>Cocos nucifera</i>
Langsat	<i>Lansium domesticum</i>
Manggis	<i>Garcinia mangostana</i>
Jering	<i>Pithecellobium Jiringu</i>
Petai	<i>Parkia speciosa</i>
Rambai	<i>Baccaurea motleyana</i>
Sukun	<i>Artocarpus altilis</i>
Rambutan	<i>Nephelium lappaceum</i>

c. The Open Lawn

A free green space is a quality that can be commonly found in the compound area of each Malay rural home. It serves as a community space as well as a family extended space for activities. This shows how much the spirit of family and networking still exists in the Malay community. The open lawn is usually located in front of the house, providing space for many family and community activities when required. Planting choice of the space usually varies from decorative ones to colourful feature complimenting the festive spirit of the space (see Table 6).

Table 6: Decorative/Cosmetic plants

Common names	Scientific Names	Allocation in Compound
Bunga kertas	<i>Bougainvillea sp.</i>	Front lawn
Siantan	<i>Ixora javanica</i>	Side lawn
Bunga raya	<i>Hibiscus sp.</i>	Front and Side lawn
Buluh Cina	<i>Bambusa sp.</i>	Side lawn
Palma	<i>Palmae sp.</i>	Front and Side lawn
Puding	<i>Croton hirta</i>	Fron lawn
Inai	<i>Lawsonia Inermis</i>	Side and Backyard

d. Live Stock Farming

The context of live stock farming in rural traditional homes in Melaka is mainly for domestic food supply and not for commercial purposes. Most of the respondents allocate spaces in their compound areas to serve this purpose.

3.1.2 Pattern of Spatial Organization

Even with unclear boundaries, the “core” of the compound is overall readable. There are definite zones around the house, as Ismail (2003) has found in rural Perak. The zones are not marked by any material indication, yet they appear to be a tacit agreement on their respective function, as summarized by Longuet (2007) and Faridatul (2004) in Pulau Duyong, Terengganu. Furthermore, the front yard is a well-swept delaminated area, which wards off preserving from animals from polluting the path of the visitors and inhabitants. Two or more feature trees mark the entrance, giving a welcoming shade with flowering species especially near the staircase

3.1.4 Cultural Traditions

The Malays in this study are found to pass these traditions to their heirs, which comprise the method of land demarcation, social and cultural heritage, rituals and customs, as well as symbolism and meaning of things. The following section explains each of these traditions.

a.Land Demarcation

The way the Malays in Melaka pass their lands to their children is influenced by Adat Perpatih from Negeri Sembilan, where daughters earn the most. That is why 16 out of 18 residents studied are females, who have inherited the house from their own parents. According to Adat Perpatih, the power of dividing lands among siblings is given to the eldest female in the family. This is proven as 16 of the owners in the samples are the eldest.

b.Socio-cultural Heritage

From the case studies, it is found that the composition of house compounds in Melaka is full with rituals, customs and symbolism. There are two categories of socio-cultural heritage to be explained under this subject: rituals and customs, as well as symbolic meanings.

c. Rituals and Customs

From the observation, the spirit of community is very much alive in each community member. This can also be seen in the micro-scale context on how the Malays respond to this spirit by designing their compound to be community-friendly. Even though the privacy of family members is still a priority, the compound elements are friendlier in design and serve the purpose as a community relation tool. This attitude has become a part of the family rituals rather than an obligation.

d.Symbolic Meanings

The Malays are rich with meaningful rituals in their daily lives. These rituals can also be seen in the composition of their house compound. Allocation of plants can represent the boundary of land, age of the house, birth of a family member, authority of the residents and also animistic beliefs. In this study, boundary demarcation and also the first day of construction for a house are the main elements that are usually interpreted into the design features of a compound.

3.1.5 Circulation Networks

The Malays always put networking and relationships with other community members in their priority list. Thus, all samples in this study display a trail as a dominant feature in the compound areas. The trail serves the purpose as the linkage to the neighbouring houses, and sometimes, acts as the boundary demarcation since the overall land plot has been divided among siblings. It is usually created with a measurement of 0.5-0.8 m wide to fit one large vehicle at a time.

3.1.6 Boundary Demarcation

As Raja Bahrin (1988) has found, the compound boundaries are often imprecise, which are marked on one or two sides and unclear on other sides. The study discovers that plants are used for boundary statement between lands. In the countryside areas, tall and steady plants are chosen for the markings of territories. On flat lands and coastal stretches, demarcation methods usually depend on dominant features, such as streams, drains, and sometimes, shrubs or hedges. In addition, trees are also used for the remembrance of important events, such as a childbirth or moving to a new house. In Kampung Balai Panjang, the Melaka Tengah district, the boundaries between the neighbouring villages are demarcated traditionally with a river stretch. This method is recognized by many Malay villages in the state of Melaka due to the existence of many river extensions. Today, the said river has now turned into a natural swale due to land developments.

3.1.7 Vegetation Related to Land Use

The quantitative results from the inventory, in which a pattern of preferences for the selection of plant species can be seen, is shown in the summary presented previously. (see Tables 4, 5 and 6). Referring to the tables, the plants are listed according to their functions and plant locations within the compound area. These plants are categorized according to their purposes, namely, for cosmetics, edibility, medicine and decoration, or simply for shading the compound. The data from the 18 case studies are presented in the table below to show the species that are commonly found in the case studies. The inventory tables produce a summary of plant species relevant to their distribution within a compound area, plus their significance to the house owner. There are several functional factors of the plants, namely, for cosmetics, domestic food supply, consumption, medicine, decoration, and finally, as additional shades from direct sunlight. In the choice of vegetation

category from the inventory data, a significant quantity of 72% represents the plants used as food supply. Plants from the fruits and vegetables are highly preferable in a Malay garden. As a historical state, the selection of decorative species is also represented by a significant number, which is 15%. The cosmetic and medicinal purposes as well as natural shades have relatively smaller percentages in the inventory (see Figure 6). Changes in lifestyles and improvement in the socio-economical state help to explain the choices of vegetation. In the interviews, many owners admitted that they no longer depend on domestic sources for medicine and cosmetics when access to the nearest town is so easy. However, the application of plants to provide natural shades can still be found in the countryside areas of Alor Gajah and Jasin, where natural air movement still exists and shades are highly appreciated in the outdoor lifestyles of the Malays there.

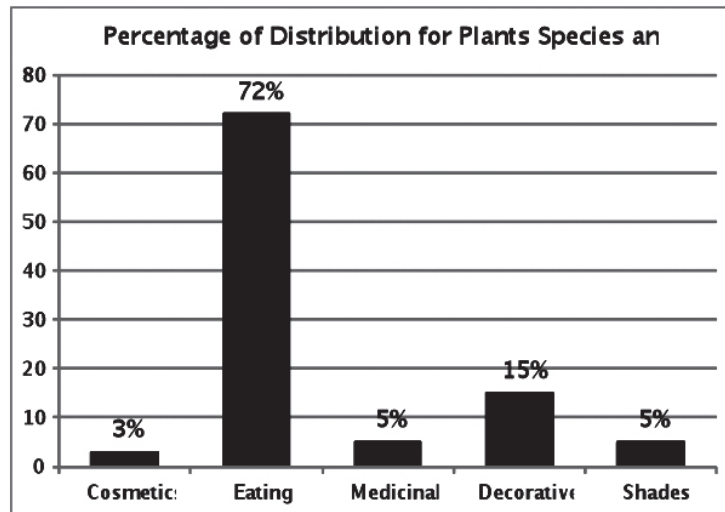


Figure 6: Plant distribution within the compound area and the purposes

3.1.8 Structural Types

For the districts in the countryside and flatland areas, such as Jasin and Alor Gajah, *kebuk padi* (i.e. a paddy storage) has become a significant feature in the compound design due to previous socio-economic activities and because

these places are where paddy fields were located back in the 1950's. It is used to store harvested paddy before it is collected and transferred to the paddy mill. Now, it has become an artifact and functions as extra storage space for the house.

3.1.9 Cluster Arrangements

The arrangements of plants and other compound elements are not ruled by any guidelines and rituals or customs. However, the arrangements of a typical rural Malay house compound are neat, clustered into their functions subject to the resident's social background and main activities.

3.1.10 Archaeological Sites

The Malay compound is rich with historical contents and memories to be inherited to the next generation. In Melaka, this archaeological feature sometimes is inherited to their children to ensure their prolongness and existence. One artifact that is common to be found is the *kebuk padi* or the paddy storage where memories of previous activities still can be seen today.

3.1.11 Small Scale Elements

Changes in lifestyle contexts and highlights in the landscape species categories have contributed towards the owners' preferences in designing their gardens. Table 7 shows the inventory of compound built-elements, which is another main essence of the Malay garden identity formation. It shows a significant distribution of man-made compound elements, particularly the numbers of *kebuk padi* (paddy storage), *perigi* (well), *tempayan* (vase), *kolah* (tank) and *pasu* (pot). For the districts in the countryside and flatland areas, such as Jasin and Alor Gajah, the *kebuk padi* has become a significant feature in the compound design due to previous socio-economic activities and because these places are where the paddy fields were located back in the 1950's. The *perigi* or well has also been a key feature in a Malay garden since that time. During the pre-independence era, it was used as an instant water source right up to the 1990's when water crisis occurred in Melaka. The *tempayan* (vase) and *kolah* (tank) were also identified as supporting elements in handling that situation.

Table 7: Distribution of small-scale elements in the compound areas

DISTRICT	SAMPLE LOCATIONS		SMALL SCALE ELEMENTS														
			Pagar Fence	Gerbang gateways	Makaj gazebo	Pempayan	Pangkin bench	Pasu	Banca Pias	Pelamar-plaffo	Titani bridge	Perge well	Kolam pond	Reban coops	Buatai swing	Bangsai shed	Kepok padi
ALOR GAJAH	1	Kg Padang Sebang	*		*	*	*	*	*		*	*	*	*	*		
	2	Kg Padang Sebang	*	*	*	*	*	*	*		*	*	*	*	*	*	*
	3	Kg Padang Sebang	*	*	*	*	*	*	*		*	*	*	*	*	*	*
	4	Kg Ganun	*	*	*	*	*	*	*		*	*	*	*	*	*	*
	5	Kg Ganun	*	*	*	*	*	*	*		*	*	*	*	*	*	*
	6	Kg Ganun	*	*	*	*	*	*	*		*	*	*	*	*	*	*
	7	Kg Solok Duku	*		*	*	*	*	*		*	*	*	*	*	*	*
MELAKA TGH	10	Kg Balai Panjang			*	*	*	*	*		*	*	*	*	*	*	
	8	Kg Tanjung Keling	*		*	*	*	*	*		*	*	*	*	*	*	
	9	Kg Lereh	*		*	*	*	*	*		*	*	*	*	*	*	
	11	Paya Rumpit	*	*	*	*	*	*	*		*	*	*	*	*	*	*
12	Paya Rumpit	*	*	*	*	*	*	*		*	*	*	*	*	*	*	
JASIN	13	Bt 18, Kg Sebatu, Merlimau	*		*	*	*	*	*		*	*	*	*	*	*	*
	14	Bt 18, Kg Sebatu, Merlimau	*		*	*	*	*	*		*	*	*	*	*	*	*
	15	KM27, Kg Sebatu, Merlimau	*		*	*	*	*	*		*	*	*	*	*	*	*
	16	KM 29, Kg Batu Gajah Pasir	*		*	*	*	*	*		*	*	*	*	*	*	*
	17	KM 28, Kg Batu Gajah Pasir			*	*	*	*	*		*	*	*	*	*	*	*
	18	Jln Permatang Serai, Merlimau	*	*	*	*	*	*	*		*	*	*	*	*	*	*

This was a major event that has affected the design composition for compounds in Melaka, generally. In addition, the pasu (planting pot) has also become a popular planting method to deal with unsuitable soil conditions in Melaka. Through site observation and information gained from the questionnaire sessions, because of the sandy conditions of the coastline areas of Melaka Tengah that forbid certain species to grow, the owners use these planting pots to create their dream gardens.

3.1.12 Perceptual Qualities

From the analysis, the distribution of compound built-elements shows decreasing numbers for many of its elements. These are caused by the changes in the socio-economic status of the state itself. Government ambitions, such as Melaka Maju, have transformed many traditional communities by exposing them to facilities, education, as well as opportunities to improve their social status and thinking. Traditional values, such as the use of compounds as gathering places for families, and cultural components, such as landscape furniture and vegetation, have been slowly neglected. In addition, modernization has transformed the traditional Malays into urbanites even though their residential environment is still within the countryside districts, such as Alor Gajah and Jasin. Compound areas have been transformed into extra rooms through renovation.

3.2 Micro Analysis Findings: Social and Cultural Influence Analysis of the Traditional Malay House Compounds in Rural Melaka

This section summarizes the macro-analysis findings on the characteristics that shape the Malays' social and cultural identities as well as their values in the Malay residential compounds of rural Melaka. It also concludes the weaknesses and lessons learnt from the applied methodology along with recommendations for future implementations to improve the study.

3.2.1 The Compound as a Social Interaction and Communication Space

The Malays treat their compound areas as gathering spaces for kenduri or feasts and other cultural activities ever since. Martial arts practice such as silat, traditional court games such as the takraw, gasing or tops and many more, are some of the examples of how the Malays spend their leisure time, which is socializing in their own lawn areas. Today, even though a compound area has cement flooring, the spirit of games and socializing still exists, which is another key essence of the Malay gardens. These are just some of the highlighted memorable elements that provide a sense of identity to a Malay traditional residential compound.

3.2.2 Representation of Compound as the Social Background of Residents

Background details, such as the age of the dwellers in a traditional Malay residence, will dictate the composition of compound features, such as vegetation, furniture and made-made elements. From the findings, 85% of the residents interviewed are more than 50 years of age, who seemingly spend more time tending their gardens. Therefore, maintenance work, cleanliness and organization of the compound can be well kept at all times due to the number of hours spent at their residences. Educational background also influences the compound composition within the traditional Malay residences. The higher the owners' educational background, the more the compound will be well kept, maintained and upgraded with modern furniture. Furthermore, more than 60% of the owners are educated from high school (see Table 8) and their affordability to maintain their compound areas is due to the presence of help from gardeners or home keepers.

Table 8: Residents' educational level

Education level	Numbers	Percentage
High School or more	11	61
Middle School	2	11
Junior School	5	28
TOTAL		100

Size of household (i.e. the number of family members living permanently or occasionally) determines the size of open space in the compound area for outdoor activities, ceremonies, and religious or community functions. A residence containing ten members will have a bigger lawn area to serve the purpose as a social interaction space, as shown in Table 9.

Table 9: Relationship between household size and compound size

Sample ID	Number of household member	Approx. size of compound area (acres)
Ag01	10	3.5
Ag02	8	2.7
Ag03	6	1.2
Ag04	5	0.5
Ag05	6	0.5
Ag06	7	2.0
Ag07	8	2.5
Mt01	5	0.5
Mt02	5	0.3
Mt03	7	2.0
Mt04	4	1.5
Mt05	3	2.5
J01	7	1.5
J02	7	1.5
J03	6	2.0
J04	7	2.8
J05	6	1.5
J06	9	3.0

On the other hand, the occupation of owners also contributes to the organization of a compound's man-made elements. For example, a paddy-field worker will have a kebuk padi (a paddy storage) on his or her lawn, a livestock farmer will have a reban (a small shed for domestic fowl) or kandang (an enclosure for livestock) as part of the compound feature, while a ketua kampung (the village head) will have an open untouched lawn for community gatherings or occasions. Table 10 displays the details of the residents' occupations in the case studies.

Table 10: Occupations of owner residents

Occupation type	Numbers	Percentage
Jobless	2	11
Teachers	5	27
Paddy-field workers	3	16
Committee members	2	11
Live stock Farmer	6	35
TOTAL		100

3.3.3 Compound Serves as the Social and Cultural Entities

A Malay compound is rich with cultural traditions behind its formation. It must be filled with valuable heritage components and placed with guidelines according to rituals, customs and religious teachings. Symbolic meanings of a garden's components and the placement for each component are other characteristics of the Malay identity in a garden's design. A Malay compound must be fitted to fulfill its purpose as a social component. It is designed to give a sense of warm hospitality. A humble as well as modest compound layout and spatial organization welcomes a strong bond and relationship among neighbours and the village community. Annual ceremonies and festive occasions in a compound area are high-impact activities that dictate close interactions among the village community members. These customs are encouraged by the community for a friendly compound composition. The composition is both multifunctional and flexible, where it caters to changes of activities at different times, be it day or night.

3.3.4 Landscape of Memory

The old components in a traditional Malay residential compound also invite us to recall previous memories from childhood that indicate important events or provide sentimental values to the owner. Plants allocation in the compound area may consist of meanings or symbolism of important events from the past. For instance, the coconut palm is used to symbolize the birth of a family member, while the pinang (bitternut) palm is famous as an indication of the first day of a house construction. Furthermore, the large trunk feature in trees, such as the kekabu and durians, significantly helps to demarcate the land.

3.3.5 Meaningful Relationship between Nature and Dwellers

A personal relationship with nature is significantly developed when man fertilizes the land with vegetation while nature contributes water and food supplies, assisting the man to adjust to the outdoor environment by providing shades, thermal comfort, and indoor ventilation. These cultural customs are taught to the Malays from the early age, where the concept of *berbakti pada tanah* (i.e. to serve the land) is continuously fed into the minds of the younger generations. This ideology has been adapted into their homes and living environments including the house compound itself. The existence of edible vegetation in the compound area is a living proof that the concept of a personal relationship with nature is something that can characterize the Malay landscape.

From the analysis, it is discovered that there are two valuable aspects identified as the main influences of the Malay rural community, namely, the functional and cultural aspects. Each plant, furniture and equipment found in the analysis is influenced by its usage and needs at that time. All components benefit the house dwellers as well as function as a life source, and these components are still acceptable and significant to the owners, which can still be found in many districts of Melaka. Following this discovery, further analysis is needed in the future to consider the outside influences that may contribute to the organization and formation of the Malay garden essences within the traditional residential compound areas. However, during this exploratory process, it is learnt that a qualitative survey is needed simultaneously to the quantitative inventory to assist in the data analysis phase. This research also identifies that there are two subjects in the Malay cultural landscape that desperately in need of our attention; these subjects will be discussed in the following section.

3.4 Threats on Social and Cultural Compositions and Values

i) Threats on Native Landscape Composition

From the case studies, it is learnt that the rural villages in Melaka are still rich with a variety of native and planted species. The species that have high durability, uniqueness in colours and textures should be highlighted as high value species and recognized as national heritage. These features will be coveted especially by outsiders such as the tourists. These values should be preserved by homeowners as well as the community and should be in the re-

branding of the Malay identity in a garden composition. However, from the interviews conducted, 5 out of 18 house owners have considered to replace the old species with new plants instead (see Figure 7 and Figure 8). This is due to the urbanization process that requires land acquisition, such as in the



Figure 7: Original compound view without renovation showing a classic open lawn concept for Malay compound (Source: Author)

ii) Threats on Cultural Customs and Their Heritage

The community of the rural villages of Melaka is still synonymous with the Malay culture. Land demarcation is still being practised based on kinship foundation, negotiation and responsibility. However, this spirit will be diminished slowly especially when the process of urbanization starts. The values of a house compound as a medium for a strong family and community bondage will be lost when the residents start to renovate their houses and extend the house size, thus, neglecting the importance of a compound space. This happens to the samples at Kampung Lereh and Kampung Tanjung

state of Melaka Tengah, where the old species are required to be cut. This threat shows that a consistent cultural landscape preservation act is needed in order to protect the significant cultural values and identity of a place.



Figure 8: Original compound view with renovation showing limitation of space, and usage of petite, low maintenance decorative plants (Source: Author)

Keling, Melaka Tengah, where the respondents' families no longer have the space to conduct their outdoor activities, such as games and feasts. The renovation is done in order to minimize noise and pollution in response to the noise from the nearby traffic. The functions of compound as a space for court games as well as community and family gathering space are now taken over by the nearby community halls. This phenomenon shows that the process of urbanization has slowly diminished the traditional values of family and community bondage area.

3.5 Implication of Research Findings

Social and cultural characteristics that represent the composition of the Malay identity in residential compounds are suggested through this study. These findings are hoped to contribute in providing relevant information to related parties, such as the government, NGO's, practitioners in the field, and academicians. Since the study was done in the state of Melaka, where written evidence on the application has been found in the Malay annals, the research was only done in three districts of Melaka. However, the applied methods may also benefit other states, such as Perlis, Penang and Negeri Sembilan due to their similarity in land scale and location along the coastline of West Malaysia.

4. CONCLUSION

The search for the Malay identity in private traditional residential gardens is an exploratory journey between the researcher and the homeowners. However, in this exploratory study, family histories, memories of childhood and many other personal details will be revealed to strangers in the name of research. This challenge needs to be tackled with a cautious and kind approach by the researcher so that the respondents will not feel vulnerable when giving information.

The threats on Malay cultural landscapes and identity discovered in this study have pointed to the need of consistency in applying cultural landscape conservation evaluation and improvisation to suit the unique condition of each site involved. Understandings on the importance of preserving social and cultural values for the rural Malays are very crucial in order to demand implementation from practitioners and national authorities. Hopefully, this study has succeeded to provide more in-depth details that are needed to understand the social and cultural identities in the garden composition of traditional Malay houses in Malaysia.

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