Architectural language of the Southern Fujianese traditional Chinese temple timber frame structure in West Malaysia: a cultural semiotics analysis

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Abstract

Purpose – This paper examines the relationship between traditional timber frame structure and the diasporic identity of the Southern Fujianese Chinese community in West Malaysia. It analyses the cultural semiotics of Southern Fujianese traditional Chinese temple timber frame structure architectural language. This study addresses the under-examined domain of Chinese cultural identity representation through the architecture of traditional Chinese temples in Malaysia. It seeks to understand its underlying structure and process involved in revealing its disposition within the cultural phenomena from the perspective of Chinese cultural semiotics.

Design/methodology/approach – Selected Southern Fujianese traditional Chinese temples in West Malaysia built between the 18th to the 19th century that retain the traditional timber frame structure were investigated through field survey and focused publication review. Historical interpretive analysis and typological analysis supplement the cultural semiotics analysis to assess the timber frame structure attributes concerning architectural language expressions.

Findings – Findings reveal that the architectural language signifiers of the structural disposition of the timber framework and its corresponding formal articulation establish a clear statement of the Southern Fujian Chinese cultural identity.

Originality/value – The evaluation of the cultural identity signifiers helps to understand the underlying structure and process of the Chinese cultural semiotics in architecture. Results of this research substantiate the significance of timber frame structure in preserving the architectural heritage of the Southern Fujianese traditional Chinese temples. They provide important references for conservation and cultural studies of such building typology.

Keywords Architectural language, Cultural identity, Timber frame structure, Southern Fujian, Traditional Chinese temple, Cultural semiotics

Paper type Research paper

1. Introduction

As a result of Chinese emigration into Southeast Asia, the traditional Chinese architecture in this region reflects the architectural language and cultural identity of China’s southeastern regions where Chinese sojourners originated. The Chinese came to Southeast Asia as sojourners, whom Wang (2000, p. 42) describes as “people seeking for temporary residence at the new place of abode with the intention of returning”. Chinese sojourners in Southeast Asia mainly originated from the coastline of Southern China due to the availability of maritime
facilities developed for trade on the Maritime Silk Road since the 7th century. The Chinese sojourners were distinguished by their respective geographical regional origins (Guangdong, Guangxi, Chaozhou, Fujian) and dialect groups (Hokkien, Hokchiu, Henghua, Hokchia, Cantonese, Teochew, Hakka and Hainan) from the Fujian and Guangdong provinces (Kuhn, 2008).

Fujian province is located at the southeast coastline of mainland China. It has a long coastline ideal for maritime-based economic activities which was evident in its trade relationship with the Persians and Arabs during the 9th to 11th centuries. Important ports were established in major cities of Quanzhou, Zhangzhou and Xiamen which not only served the international trades but also introduced foreign cultures into Fujian leading to the development of its unique regional culture.

Southern Fujian Chinese are well-known traders and seafarers. The insurgence of Southern Fujian Chinese emigration during the 17th century was highly contributed by its geographical location, good maritime facilities and technology and international trade. The labour market even boosted the diaspora wave into Southeast Asia during the region’s colonisation period. This marks the outward expansion of economic activities leading to the spreading of Southern Fujianese culture.

Southern Fujianese or commonly known as the Hokkiens were the earliest group of Chinese immigrants to establish settlements in Malaya since the 15th century (Yen, 2008, p. 63). The early presence of temples within the Chinese migrant community was prevalent particularly in port cities such as Malacca at the beginning of the 17th century and Penang at the beginning of the 18th century. Temples and shophouses formed the urban segments of the port cities as settlements were established near the harbours to accommodate economic activities. Temples, particularly those dedicated to Mazu, the protector deity of sailors and fishermen originated from Fujian, serve as the primary element of the Chinese settlement urban segment (Widodo, 2018, p. 394). Temples and ancestral halls were built within the settlements to support communal, religious and customs needs signifying the spiritual importance of such building typology (Mei, 2017; Xu, 2010). They were built by the Chinese craftsmen brought from Southern Fujian following the architectural form and style of their native homeland.

The traditional Chinese temples built during these periods have become an important cultural identity marker of the Chinese communities in Malaya. Architecture serves as an identity indicator of a particular community or cultural group through distinctive meanings communicated via specific construction of images and architectural language (Baper and Hassan, 2010). Despite having the traditional Chinese temples as the inherited architectural heritage, demolition of traditional temples for new replacement in modern times has become a frequent practice within Chinese society. Instead of conserving the cultural values of heritage temples, many temple committees have adopted inappropriate methods in repair and renovation works, resulting in the loss of authentic cultural meanings (Loke, 2012; The Straits Times, 2017). The spatial and social construct of the Chinese diaspora habitation is expressed through the interpretive “text” of architecture and built environment (Ng and Ng, 2018). When the “text” is drastically modified or replaced as in the inappropriate restoration and demolition of traditional temples, the expression of authentic Chinese cultural identity through architecture appears questionable.

Most studies about Chinese temples in Malaysia concern the aspects of religion, social network and history. Representation of Chinese cultural identity through the architecture of traditional Chinese temples in Malaysia remains an under-examined domain. There is also a lack of theoretical discourse of semiotics and traditional Chinese architecture. This paper attempts to address this gap by investigating the role of timber frame structure in representing the architectural language and cultural identity of the Southern Fujianese traditional Chinese temples of West Malaysia. The research perceives the architectural
language of timber frame structure as the manifestation of cultural semiotics, deriving from the traditional Chinese aesthetics built upon the Confucian and Taoist ideologies. The investigation focuses on timber frame structure disposition, formal articulation and symbolic expressions. It seeks to understand its underlying structure and process involved in revealing its disposition within the cultural phenomena from the perspective of Chinese cultural semiotics.

2. Architectural language and cultural semiotics

Language and architecture are similar in how they express meanings through a clearly defined organisation of components based on established rules. The linguistic resemblance of architecture is part of the art language that shares common natural language features (Clarke and Crossley, 2000, p. 1). Studies of architectural language have shifted focus from the analogy of architecture and linguistics (Summerson, 1963; Daly, 1860 in Collins, 1998) to the signification process in semiotics (Alexander et al., 1977; Venturi et al., 1977; Broadbent et al., 1980; Rapoport, 1982; Eco, 1986; Lawson, 2001; Norberg-Schulz, 2000; Pallasmaa, 2011). However, the definition of architectural language remains indistinct and tends to be associated with the signification mechanism.

Akin to the natural language, architectural language represents a sign system to communicate the associated aesthetic values within a social and cultural phenomenon (Lazutina et al., 2016). This reflects the abstraction of the human mind to understand the environment in generating meanings (Li and Yeo, 2009). Architectural language communicates cultural values based on a defined structure representing specific meanings where cultural semiotics provides the means to derive these meanings.

Sprouted from the semiotics theory of Ferdinand de Saussure and Charles Sanders Peirce, cultural semiotics is a branch of semiotics focusing on the cultural domain of sign studies. Kascheev (2018) argues that any cultural artefact may establish a sign system that can be analysed through semiotics to derive its manifested meanings. As Umberto Eco (1986) states, architecture being a cultural phenomenon displays itself as a system of signs that works on a defined convention governed by codes in generating meanings within a cultural context related to the sign vehicle (Eco, 1986, p. 59). Lorusso (2015, p. 22) defines codes as systems of social rules vital in the signification and regulation of social meanings. In the context of architecture, meanings that a building carries may be interpreted based on the corresponding cultural codes. This correlates with Eco’s view of how architectural elements display connotative signification of specific ideologies symbolically (Eco, 1986, p. 56).

Based on Saussure’s signifier-signified relationship (Saussure, 2011), Pierce’s triadic semiotics model (Liszka, 2007) and the semantic triangle developed by Ogden and Richards (1923), Parsae et al. (2015) present a conceptual model of cultural semiotics in architecture (see Figure 1). The architectural mechanism becomes the sign vehicle serving as the signifier/representant/symbol. It stands for the social-cultural dimensions of the external realities leading to the interpretation of cultural meanings as the signified/interpretant/reference. This framework refers to the spatial parameters, physical parameters, social parameters and cultural parameters in interpreting the cultural meanings of architecture.

As Barthes notes that all culture lies within the cultural codes which are open for analysis (Lorusso, 2015, p. 38), this research refers to the doctrines of Taoism and Confucianism in traditional Chinese aesthetics where they encompass a wide spectrum of social living (Pohl, 2018; Li, 2010). Chinese philosophical thoughts lack propositional rationale and show a correlative nature (Wang, 2017, p. 15). Taoism seeks for the unity of opposites within oneness as the allusion of corresponding elements (Thompson, 2017). Confucianism derives its aesthetic thinking from the harmonious order of the universe and conceptualises it in social protocols and moral ethics (Wang, 2016). Taoism eliminates propositions while Confucianism
formulates rules and orders to achieve a harmonious relationship with the cosmos. Both philosophical ideas show the tendency to attain oneness with the universe despite adopting a different approach.

Traditional Chinese aesthetics is guided by the cultural codes of Confucianism and Taoism, showing structural, formal and symbolic attributes (Li, 1995). The structural disposition of Chinese cultural semiotics demonstrates the organisation of systems with identifiable patterns; the formal mindset shows strong consciousness of form manipulations to generate a variety of styles; the symbolic disposition carries the linguistic tradition of pictographs in signifying the abstract meanings through concrete images. Drawing from Li Youzheng’s proposition of Chinese cultural semiotics, the architectural language of traditional Chinese temple timber frame structure may be expressed through the structural disposition of components, manipulation of forms and the symbolic connotative meanings carried by itself.

Source(s): Parsae et al. (2015)
3. Methodology

Figure 2 illustrates the conceptual framework of this research. Twenty selected Southern Fujianese traditional Chinese temples in West Malaysia built between the 18th to the 19th century that retain the traditional timber frame structure were investigated through field survey and focused publication review with the objectives of identifying: (1) the timber frame structure organisation and its corresponding spatial configuration, (2) timber framework configuration and short posts, They serve as the sign vehicle of the architectural mechanism. The selection criteria of the study samples ensure accurate capture of the timber framework physical data.

Cultural codes attributes analysis of the traditional Chinese temple timber frame structure enables the interpretation and derivation of meanings associated with the cultural phenomena of the Southern Fujianese Chinese community. As architectural language communicates meanings through visual qualities, visual data captured is analysed involving firstly, the visual entities of structural disposition of timber frame structure and spatial conception, secondly the formal articulation of timber framework typology and short posts variations. The manifested symbolic meanings of timber frame structure are derived through interpretation of visual analysis and historical research. The process of visual entities analysis is described as follows.

3.1 Coding the visual entities description of spatial conception and structural disposition

Visual entities of the timber frame structure are described as sign systems to its structural organisation of individual components. This study adopts the Southern Fujian artisan carpenter’s convention in describing the timber framework configuration, referring to the
number of transverse beams and short posts. The convention $nBnS$ represents this, where “$n$” equals the corresponding amount of the transverse beams (B) and short posts (S). The “two-beams-three-short posts” (二通三瓜) configuration is thus represented with 2B3S, while the “three-beams-five-short posts” (三通五瓜) is shown as 3B5S. This allows a clear visual representation of the timber framework for subsequent visual analysis. Spatial configuration is described similarly by using unique codes to represent a system of spatial configuration. For example, $PP-F-MH$ represents the setting of the prayer pavilion - foyer - main hall. The coding conventions for the timber framework and the spatial organisation shall be used in the subsequent findings discussion.

3.2 Visual entities analysis
Visual entities analysis is then conducted to identify the timber frame structure disposition following the spatial setting. Short posts formal variations are recognised using typological analysis to establish categorical distinctions by identifying traits of commonality and variation within the formal expression (Ayres and Knafl, 2008). Configurations of the timber frame structure are compared against the examples used in Southern Fujian, China as identified by Wu (2018), in distinguishing the similarities and differences adopted in West Malaysia.

3.3 Architectural language meaning interpretation
The corresponding meanings of the architectural language of the timber frame structure are interpreted based on the visual entities analyses. The historical interpretive analysis provides a means to interpret the meanings derivable from the timber frame structure against the historical and cultural contexts of Southern Fujian Chinese society in Malaysia. It involves critical examination of primary sources (fieldwork) and secondary sources (publication review) for subsequent data interpretation and analysis leading to the narrative as evidence supporting the conclusions of the study (Lundy, 2008).

4. Findings
4.1 Timber frame structure configuration of the Traditional Chinese temple in Southern Fujian, China and West Malaysia
The structural disposition of the timber frame structure of the traditional Chinese temples in Southern Fujian is executed in two ways. Firstly it involves the arrangement of different components within a single timber framework. The second structural disposition is expressed through the configuration of multiple timber frameworks within the temple according to the hierarchy of space.

Table 1 shows the comparison of the timber framework configuration in Southern Fujian and West Malaysia with their corresponding visual entities code. The number of beams and short posts indicates how many purlins are used to determine the height and depth of the corresponding space. Certain configurations are unique to temples in Southern Fujian and not applied in West Malaysia.

There are two typical spatial organisations of traditional Chinese temples in Southern Fujian. They may be represented through the codes of $PP-F-MH$ (prayer pavilion - foyer - main hall), or $F-FH-C-MH$ (foyer - front hall - courtyard - main hall). Except for the courtyard, each space contains a timber framework with a specific configuration code. The prayer pavilion typically uses the 2B2S and the 2B4S types. The prayer pavilion of the Leong San Tong Khoo Kongsi temple in Penang, Malaysia however uses the 3B5S type, indicating the large scale of this space. Some larger prayer pavilions may install a caisson ceiling. This uncommon feature appears in the Thean Kong Thnuah Temple in Penang, Malaysia. The front hall adopts the common 2B2S and the 2B3S configurations despite a few exceptions of
the peculiar 2B5S type which is not found in temples surveyed in West Malaysia. The 3B5S type which is more commonly used in the main hall is found in the front hall of the Eng Choon Association of Malacca and the Ong Si Thye Guan Tong (Ong Ancestral Hall) in Penang, Malaysia.

The foyer generally uses the 1B1S, 1B2S and 2B2S types with one or two short posts sitting on the main transverse beam. When curve rafters are used, the 1B2S type is used. There are examples of a bracer connecting directly to the eave column without using any short posts. This configuration is used when the gap between the front hall column and the eave column is small, as in the examples of the Hock Leng Keng Temple, Serendah and the Ho An Kiong Temple, Kuala Terengganu in Malaysia.

The main hall contains three parts: the front gallery, the inner hall or *jia-nei* (架内) and the rear gallery. The front gallery and the rear gallery are spaces adjacent to the inner hall on both sides. The primary timber framework is located at the inner hall with the common 3B5S type,

<table>
<thead>
<tr>
<th>Space</th>
<th>Configuration</th>
<th>Visual entities code</th>
<th>Indicative visual of the timber framework configuration of Southern Fujian, China</th>
<th>Availability of the timber framework configuration in West Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prayer pavilion (PP)</td>
<td>One-beam two-short posts</td>
<td>1B2S</td>
<td>![Diagram of 1B2S configuration]</td>
<td>Yes</td>
</tr>
<tr>
<td>Prayer pavilion (PP)</td>
<td>Two-beams-four-short posts</td>
<td>2B4S</td>
<td>![Diagram of 2B4S configuration]</td>
<td>Yes</td>
</tr>
<tr>
<td>Prayer pavilion (PP)</td>
<td>Caisson ceiling</td>
<td>Nil</td>
<td>![Diagram of Nil configuration]</td>
<td>Yes (uncommon)</td>
</tr>
<tr>
<td>Front hall (FH)</td>
<td>Two-beams-three-short posts</td>
<td>2B3S</td>
<td>![Diagram of 2B3S configuration]</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 1. Comparative analysis of the timber framework configuration of traditional Chinese temples in Southern Fujian and West Malaysia with their corresponding visual entities code
<table>
<thead>
<tr>
<th>Space</th>
<th>Configuration</th>
<th>Visual entities code</th>
<th>Indicative visual of the timber framework configuration of Southern Fujian, China</th>
<th>Availability of the timber framework configuration in West Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front hall (FH)</td>
<td>Three-beams-five-short posts 3B5S (uncommon)</td>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
<td>Yes (uncommon)</td>
</tr>
<tr>
<td>Front hall (FH)</td>
<td>Two-beams-five-short posts 2B5S (uncommon)</td>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
<td>No</td>
</tr>
<tr>
<td>Foyer (F)</td>
<td>Bracer</td>
<td>Nil</td>
<td><img src="image5" alt="Diagram" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Foyer (F)</td>
<td>One beam-one-short post 1B1S</td>
<td><img src="image6" alt="Diagram" /></td>
<td><img src="image7" alt="Diagram" /></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 1.
<table>
<thead>
<tr>
<th>Space</th>
<th>Configuration</th>
<th>Visual entities code</th>
<th>Indicative visual of the timber framework configuration of Southern Fujian, China</th>
<th>Availability of the timber framework configuration in West Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foyer (F)</td>
<td>One beam-two-short posts</td>
<td>1B2S</td>
<td><img src="image1" alt="Indicative visual of the timber framework configuration of Southern Fujian, China" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Foyer (F)</td>
<td>Two-beams-two-short posts</td>
<td>2B2S</td>
<td><img src="image2" alt="Indicative visual of the timber framework configuration of Southern Fujian, China" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Main hall (MH)</td>
<td>Three-beams-five-short posts at the inner hall</td>
<td>3B5S</td>
<td><img src="image3" alt="Indicative visual of the timber framework configuration of Southern Fujian, China" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Main hall (MH)</td>
<td>Two-beams-three-short posts at the inner hall</td>
<td>2B3S</td>
<td><img src="image4" alt="Indicative visual of the timber framework configuration of Southern Fujian, China" /></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 1.
containing the main transverse beam, the second transverse beam and the third transverse beam, supporting five short posts. The 2B3S type is used in smaller temples. An uncommon 2B5S type is used in some examples in Southern Fujian but not in temples investigated in West Malaysia. The 1B1S or 1B2S configurations are typically used in the front gallery and rear gallery. Some larger temples may contain the 2B4S type in the front gallery which is not identified in temples surveyed in West Malaysia.

As religious worship serves as the primary function of the traditional Chinese temple, its architecture sets the spatial rules to establish the human-deities relationship. Users may make sense of the spatial experience through differences in columniation, levelling and height. Along with the floor levelling, columns of the timber frame structures mark the entry into a different space. The height of the timber framework indicated by the number of transverse beams and short posts signifies the spatial status. The hierarchy of space culminates at the inner hall (ih) of the main temple hall (MH) where the altars of deities are placed. The choice of timber framework configuration in relation to both spatial layout of PP-F-MH and F-FH-C-MH is thus determined by this spatial convention. Despite a few exceptions, the general representation of the timber framework-spatial relationship is shown in Figure 3.

<table>
<thead>
<tr>
<th>Space</th>
<th>Configuration</th>
<th>Visual entities code</th>
<th>Indicative visual of the timber framework configuration of Southern Fujian, China</th>
<th>Availability of the timber framework configuration in West Malaysia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main hall (MH)</td>
<td>Two-beams-five-short posts at the inner hall</td>
<td>2B5S (uncommon)</td>
<td><img src="image" alt="Indicative visual of the timber framework configuration of Southern Fujian, China" /></td>
<td>No</td>
</tr>
<tr>
<td>Main hall (MH)</td>
<td>One beam-one-short post or One beam-two-short posts at the front gallery /rear gallery</td>
<td>1B1S 1B2S</td>
<td><img src="image" alt="Indicative visual of the timber framework configuration of Southern Fujian, China" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Main hall (MH)</td>
<td>Two-beams-four-short posts at the front gallery</td>
<td>2B4S (uncommon)</td>
<td><img src="image" alt="Indicative visual of the timber framework configuration of Southern Fujian, China" /></td>
<td>No</td>
</tr>
</tbody>
</table>

Source(s): Author

Table 1.
4.2 Formal articulation of the Southern Fujianese Traditional Chinese temple timber frame structure in West Malaysia

Formal expressions of timber frame structure may be identified in two aspects: timber framework typology and short post variations. As shown in Table 2, traditional Chinese temples in Southern Fujian adopt three types of timber framework: Chuan-dou (穿斗), Cha-liang (插梁) and Ge-lin (擱檁). The Chuan-dou (pillars-and-transverse tie beams) form features interlocking vertical and horizontal components to form a frame structure (Knapp, 2004, p. 34), with purlins directly supported on columns. Such a system may require more columns in generating the interlocking system of pillars-transverse beams as a whole. Studies by Xie (2016) and Cao (2016) affirm the Cha-liang type (columns-and-slotted-beams) as the dominant form applied in buildings in Fujian and Guangdong regions. It has one end or both ends of the transverse beam slotted into the column, with short posts placed onto the transverse beams to support purlins. Lesser columns are used, allowing a wider span of space. According to Wu (2018), traditional Chinese temples in Southern Fujian adopt the Cha-liang and Chuan-dou type in main halls, while the Ge-lin type (embedded-purlins) features purlins embedded directly into the gable wall, and is used in secondary building blocks.

Regional formal variations of timber frame structure are reflected through the part between the purlins and the transverse beam where the short posts are placed (Li, 2017). They are used to support purlins and may take various visual expressions and display formal distinctiveness of the artisan’s craftwork from Zhangzhou and Quanzhou respectively. Form manipulation of the short posts also distinguishes the Southern Fujian style from those of the Cantonese regions.

4.2.1 Timber framework typology. Southern Fujianese traditional Chinese temple timber frame structure in West Malaysia typically adopts the Cha-liang timber framework typology. It was discovered that in some temples, other types of timber framework are incorporated into the Cha-liang framework, resulting in formal expressions. This may be seen in the Kuan Yin Gu See Temple of Kuala Kubu Bahru, Selangor, where the Chuan-dou framework type is integrated with the Cha-liang framework with the transverse beams slotted into the principal columns (see Plate 1). The timber frame structure at the main hall of Poh San Teng Temple of
Malacca resembles the *Chuan-dou* framework type, particularly with the central king post connected directly to the principal column. Upon investigation, purlins are supported by individual short posts with transverse beams slotted into each short post, indicating the *Cha-liang* tectonic configuration (see Plate 1).

Table 2. Common timber framework typology used in traditional Chinese temples in Southern Fujian, China.

<table>
<thead>
<tr>
<th>Timber Framework Typology</th>
<th>Illustration</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Chuan-dou</em></td>
<td></td>
</tr>
<tr>
<td><em>Cha-liang</em></td>
<td></td>
</tr>
<tr>
<td><em>Ge-lin</em></td>
<td></td>
</tr>
</tbody>
</table>

Source(s): Author
### 4.2.2 Short post variations

Four types of the Southern Fujianese timber frame structure short post variations are identified: (1) the common short post, (2) the short post on block, (3) the stacked *dou* (斗) short post and (4) the melon short post.

The common short post is placed directly on the transverse beams, taking the shapes of square, octagonal, rounded corner square, etc. (Plate 2a). The short post on block type depicts short posts placed on a square block carved with ornate decoration which is set on the transverse beam (Plate 2b). The stacked *dou* contains a group of three or four square blocks stacked on each other (Plate 2c). The melon short post resembles the form of a melon, a symbol of having many offspring which is seen as a blessing in Chinese culture. Some melon short posts have extended bottom ends enveloping the primary transverse beam, enhancing the decorative effect (Plate 2d).

Table 3 shows the common examples of short post variations found in Southern Fujianese traditional Chinese temple timber frame structure in West Malaysia. Referring to the San Duo Temple (built in 1795) and the Hokkien Association of Malacca (built in 1801),
both adopt a mixed configuration of the “melon short posts with stacked *dou*. The melon short post sits directly on the primary transverse beam. A square block is placed on its top which connects both ends of the second transverse beam and supports a group of stacked *dou* that reaches underneath the purlin. The blocks of the stacked *dou* are connected by bracers or tie beams. In the longitudinal direction, a cantilevered support arm (*gong*) is placed on each layer of the block. Its length is extended to support the upper *gong* until it reaches underneath the purlin.

The timber frame structure at the main hall of the Melaka Kuan Yin Tong Temple (built in 1894) uses the short post on block configuration where the square short post is placed on the block that sits on the main transverse beam. The common short post used on the timber frame structure of the Cui Mei Old Temple (built in the year 1875) has its bottom end resembling a cape, a typical Zhangzhou visual expression.

<table>
<thead>
<tr>
<th>Formal variations</th>
<th>Temple (year built)</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melon short post with stacked <em>dou</em></td>
<td>San Duo Temple, Malacca (1795)</td>
<td></td>
</tr>
<tr>
<td>Melon short post with stacked <em>dou</em></td>
<td>Hokkien Association, Malacca (1801)</td>
<td></td>
</tr>
<tr>
<td>Short post on block</td>
<td>Melaka Kuan Yin Tong Temple, Malacca (1894)</td>
<td></td>
</tr>
<tr>
<td>Common short post</td>
<td>Cui Mei Old Temple, Parit Jawa, Johor (1875)</td>
<td></td>
</tr>
</tbody>
</table>

**Source(s):** Author

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Table 3.
Short post formal variations found in Southern Fujianese Traditional Chinese Temple Timber Frame Structure in West Malaysia

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5. Discussions

5.1 Folk religion and temples forming the embedded Southern Fujian cultural identity
Comparative analysis of the timber framework configurations with the corresponding temple spatial layout shows a high similarity between Southern Fujian and West Malaysia. This may indicate a common factor guiding the structural disposition of the timber frame structure. Religion appears to be a strong force of Southern Fujian cultural expansion into Southeast Asia. Folk religion, a common religious practice among the Southern Fujian Chinese displays a strong embodiment of regional identity. The practice of Fen-ling establishes a connection with the homeland temples by “shifting” the spiritual force of the homeland deities into another statue to be placed and worshipped by members of the same clan at the new temples built in Southeast Asia. As such, the Southern Fujian regional identity is embedded into folk religion where temples became the social institution connecting the Chinese migrants in Southeast Asia with their native homeland (Zheng, 2018, p. 207). The recognition of native Southern Fujian as the spiritual motherland may lead to the inheritance of the native form and spatial layout in temples. Craftsmen and building materials were also brought from Southern Fujian, introducing the Southern Fujian cultural identity through its architecture.

5.2 Manifestation of Confucian and Taoist ideologies in the structural disposition of timber frame structure
The cultural practice of deities and ancestral worship has influenced the social behaviour in the temple space with embedded layers of cultural meanings. These multiple layers of cultural signs may be interpreted from the timber frame structure architectural language. Two key features demonstrated by traditional Chinese architecture are the solid-and-void spatial conception, and the rules of order and hierarchy derived from the fundamental aesthetic traditions of Confucianism and Taoism.

Columniation generates openness of the interior space for circulation to provide spatial experience. This demonstrates how the intangible void complements the tangible properties of the timber frame structure, a complete totality formed by two opposing elements in the Taoist ideology. The disposition of multiple timber framework configurations displays a strong Confucian ideology of social order and hierarchy. Based on the coded visual entities of the timber framework, the more purlins, beams and short posts are used, the larger the spatial span is, indicating the higher hierarchical status of the space. For example, the 3B5S configuration is commonly used in the main hall where the altar of the principal deity is placed. The front hall may use the 3B2S setting while 2B2S or 2B4S settings are adopted at the prayer pavilion. The hierarchical relationship may be shown as 3B5S > 3B2S > 2B2S or 2B4S, reflecting a clearly defined order of spatial configuration. This relationship shows the typical order adopted in most temples despite a few uncommon configurations used.

5.3 Common architectural language in the timber framework typology
Southern Fujian traditional Chinese temples in China typically adopt the Cha-liang timber framework configuration. The investigation conducted in this research validates the adoption of Cha-liang configuration in most Southern Fujianese timber frame structures in West Malaysia. This indicates a common architectural language in the timber framework typology used in both regions. A survey of examples in West Malaysia also reveals that the Cha-liang configuration may also incorporate other tectonic configurations such as Chuan-dou. The Cha-liang type commonly uses larger timber to achieve a wider span. By incorporating the Chuan-dou configuration, materials may be saved which is evident in smaller temples. Furthermore, the Chuan-dou type is commonly used in a folk residence, indicating its lower hierarchical status compared to the Cha-liang type.
5.4 Manifestation of Zhangzhou and Quanzhou regional identity in the timber frame structure formal articulation

Chinese sojourners from Southern Fujian originated from Zhangzhou, Quanzhou and Xiamen prefectures. Their respective regional culture is reflected through the traditional Chinese temples built in Southeast Asia. A significant visual indicator of the regional culture is displayed through the short post forms used in the main hall’s inner hall timber framework, reflecting the formal expression of the Zhangzhou and Quanzhou timber craftwork. Xiamen style is greatly influenced by Zhangzhou, hence this study does not take it as the major regional formal typology. The melon short post is commonly used in both Zhangzhou and Quanzhou styles, however, Quanzhou temples prefer the crawling melon short post and mu-gua (木瓜) short post forms. The Eng Choon Association Temple of Malacca, a clan association that originated from Yongchun district of Quanzhou prefecture, exemplifies this through the adoption of the crawling melon short post in the timber frame structure (see Plate 3). The Jin-gua (金瓜) melon short post used in the Cheah Kongsi ancestral temple testifies to its pioneer Zhangzhou origin in Penang (Jones, 2009).

6. Conclusion

This paper examines the relationship between traditional timber frame structure and the diasporic identity of the Southern Fujianese Chinese community in West Malaysia. It analyses the cultural semiotics of Southern Fujianese traditional Chinese temple timber frame structure architectural language. Findings reveal that the architectural language signifiers of

Plate 3.
(top) Timber frame structure of the Eng Choon Association temple of Malacca featuring the crawling melon short post; (bottom) The Jin-gua melon short post used in the Cheah Kongsi ancestral temple
the structural disposition of the timber framework and its corresponding formal articulation establish a clear statement of the Southern Fujian Chinese cultural identity.

The influence of the homeland folk religion on the social construct of the Southern Fujian Chinese in West Malaysia affects the expression of the architectural language of the timber frame structure. Comparison between the timber frame structure adopted in Southern Fujian and West Malaysia shows that both display almost the same configuration. There are, however, very few uncommon configurations not found in temples surveyed in West Malaysia. Investigation of the structural disposition of timber framework reveals the manifestation of Confucian and Taoist ideologies reflected in the social behaviour and its associated cultural meanings within the temple space. The configuration of the short posts-transverse beam depicts these intangible meanings through tangible visual entities of structural disposition. Formal articulation of its visual entities demonstrated through the timber framework typology and short post variations signify the regional cultural identity of Zhangzhou and Quanzhou prefectures. This also serves as a symbolic representation of the Southern Fujian Chinese community social structure in this country.

This study addresses the under-examined domain of Chinese cultural identity representation through the architecture of traditional Chinese temples in Malaysia. It contributes to the realm of cultural semiotics in architectural research. The evaluation of the cultural identity signifiers helps to understand the underlying structure and process of the Chinese cultural semiotics in architecture. Knowledge of the timber frame structure architectural language may assist in devising a proper conservation approach to ensure the authentic cultural meanings associated with the Southern Fujianese cultural identity is preserved. This paper substantiates the significance of timber frame structure in perpetuating the heritage values of the Southern Fujianese traditional Chinese temples and provides important references for conservation and cultural studies of such building typology.

References


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