



Implementation of Traditional Malay Design Values in Contemporary Malay Houses

Elham Hosseini^{1*}, Gurupiah Mursib¹, Raja Nafida bt Raja Shamninan²

¹Department of Architecture, Faculty of Built Environment, Universiti Teknologi Malaysia, Johor Bahru

²KALAM, Department of Architecture, Faculty of Built Environment, Universiti Teknologi Malaysia, Johor Bahru

*Email: elyhosseini74@yahoo.com

History:

Received: 05 January 2016

Accepted: 10 April 2016

Available Online: 30 May 2016

Keywords:

Traditional Architecture, Malay Traditional House Architecture, Design Values, Contemporary Malay House Architecture.

DOI:

10.11113/ijbes.v3.n2.125

ABSTRACT

Traditional houses are the most essential architectural experience that is in harmony with the people's culture, beliefs, environment and lifestyles. The development of design values in contemporary architecture by tracking traditional design values in architecture paves the way for arguments concerning the implementation of authentic Malay traditional house design values in contemporary Malay houses. In addition, it is hypothesized that the Malay traditional houses theoretically provide a constructive innovative framework for the design performance of the contemporary Malay house. In this research, data was compiled through field observation and documentary review. The evidence revealed that Malay traditional houses convey a concrete message of richness encompassing architectural design values and theoretical propositions. The credibility of the results was improved and confirmed by a confluence of evidence via a confirmation process. The findings suggested that there is a rich source of subjective support, lending proof to the premise of the research investigation. The research has highlighted the significance of traditional architectural design values towards innovative design in the architecture of contemporary Malay houses as a workable pattern for use in the design of contemporary architecture.

1. Introduction

Throughout the various stages of architectural history, the richness of architectural design values has contributed to the independent concepts for the formation of novel ideas. The injection of traditional design values has generated significant impacts on the overall quality of the built environment. Implementation of traditional design values in contemporary architecture acts as a manifestation between past, present and future (Rapoport, 1969). Design values of the Malay traditional houses have recognized as one of the rational architectural movements in the context of time. Additionally, design values have been adopted based on pure ideology and belief as a notable architectural style that can be highly accretive to the contemporary Malay house design (Ismail & Sani, 2002).

Despite the richness of architectural design values in the Malay traditional house, inattentiveness to the values of traditional design in contemporary Malay house architecture has become a controversial subject among scholars and practitioners (Heynen, 2005). Currently, the manifestation of design values in contemporary Malay house architecture is the core of discussion on the problematic issues in architectural design. The contemporary Malay House architecture is an outcome of this inattentiveness. It loses its originality and becomes a hybrid global architecture with existential conflicts between its origins and new architecture (Gurupiah, 2008).

Numerous efforts have been attempted by scholars and practitioners to address the relevant issues. For instance, Pallasmaa (2007, p. 134)

asserted that the spirit of time and place through an unorthodox juxtaposition of modernist vocabulary and traditional design has been rooted in the viewpoint of the architectural practice. This perspective was adopted as a creative approach without borrowing any possible origins from elsewhere, to achieve modern approval and a modest atmosphere in the design of buildings. According to Allsopp (1977, p. 13) traditional architecture embodies the experiences of ancient designers that are highly significant to contemporary architecture. The consistency of the design in contemporary architecture produces a positive sense of the visual aspect, experiencing physical and spatial features as an honest approach to the form, materials, organization of spaces and cultural symbolism (Saleh, 1998, pp. 571-589). Although, scholars agree to have demonstrated various models, ideas and design approaches to the issues, inattentiveness to the design values and concepts of traditional Malay houses as an interactional bridge between past and present is perceivable and occurs across the country. The traditional architecture is now being modified by unfettered ideas and bad imitations. Traditional Malay houses have a positive impact on inspiration of meaning of tradition design concepts and values in contemporary Malay house.

It is becoming a crucial subject to utilize the idea of traditional design values in contemporary architecture, particularly based on theoretical approaches such as critical regionalism, vernacularism, and modern regionalism (Gurupiah, 2008). Modification and adaptation of contemporary architectural design by means of traditional design experiences are vital to the development of new trends in the design processes of contemporary Malay houses.

Given the general significance of traditional architecture, this paper argues that the design values of traditional architectural of Malay houses should be incorporated into the implementation of contemporary Malay architectural houses designs. The relevance and benefits of this implementation are demonstrated by Shahedi (2004), who attempted to utilize the most fundamental principle of historical precedents that significantly develop values, meaning and order in contemporary architecture.

The assessment of arguments has been achieved through cross examine the evidence, providing a series of facts which connect in a logical theoretical foundation and followed by a confirmative process, discussion and justification of the outcome.

2. Overview of Architectural Design Values

The term “architectural design value” in this research is used in the context of traditional architectural design which has a considerable significance to the design of the traditional Malay house and consequently to contemporary Malay houses. Design values have always been important throughout history of architectural practice. Architectural design values represent the excellence of total design quality. Such qualities include but not limited to goodness, wholeness, art, craftsmanship, integration, user quality and so on. The concept of design value in architecture cannot be isolated from history, tradition and theory as a historical momentum to clarify design values in a specific context. A comprehensive design value speaks not only to the individual, but to the society's cultural context. In the composition of traditional Malay house compounds in rural Melaka the significance of historical momentum was brought up as a series of predetermined explorative concept (Ani, Mohamed, & Rahman, 2012) such as minimalism, spirit of place, etc.

Similarly, the significance of architectural design values was brought up in relation to historical and traditional background, particularly the design value of structural honesty which has been specified not only as "considerable historical and traditional roots but as an architectural design value which is commonly found within many design movements and among many individual architects" (Holm, 2006). Although some technical aspect of architecture can be measured quantitatively in unproblematic ways, such as cost, energy performance and overall ecological performance, the value of design is not measurable because it is not a quantifiable quality of architectural design. Additionally, design values are the rational inquiry vs. the intuitive. Architecture was an expressible societal functional system that can be made according to a rational inquiry (Schumacher, 2011). Successful architectural design values must be the same as the final products of a total design process. In the process of designing, the ultimate outcome of design is a product and not framing the issues of concept and design principles (Prins, 2009). Architectural design values begin with a concept and ordering principle. The ordering principle applied as part of the architectural design principle. The establishment of design values in architecture creates a unique expertise or core of proficiency in legible organization of the built environment in relation to the community, the framing, the structuring and priming of social communicative interactions. Additionally, stabilize the patterns of communication to be supported by means of spatial framing.

3. Bridging Tradition and Contemporary

The contribution of the architectural design values of precedent traditional architecture and its role in contemporary architecture generally understood as a treasure-store of design values and attributes (Shahedi, Keumala, & Yaacob, 2013). Contemporary architecture

demands a deep understanding of societies' background and awareness of traditional architecture. Bird (2008) concluded, "The iconographies of indigenous culture and local geological conditions have been very productive players in the making of contemporary architecture in building and urban development scale." The implementation of indigenous materials it's a harmonious process in the nature of the contemporary house setting. This includes effective ventilation, protection from direct sunlight thus regulating the indoor temperature, maintaining and utilizing the various indigenous building materials while preserving the authenticity of the design values of the Malay traditional houses.

Traditional architecture is a mixture of tangible elements that perceived through the eyes and are discernible through the overall visual character; and intangible elements which are perceived through the senses. However, both are laid in the physical and spatial characteristics of Malay traditional architecture, creating a valuable combination of the values of architectural design of the house. The characteristics of traditional architecture with respect to its context are a result of dwellers' perception and experience of the built environment. The notions of traditional architecture have always demonstrated the quality of its design values through an understanding of visual shape, form, materials, trim, opening, projection, exposed structure and setting in relation to the environmental context. In addition, conceptual elements of design also contribute to the individual space, related space, sequential space and adjacent (Figure 1). These elements of design values depict in the form of humanistic architecture of the local people who are ethically tied up in their traditional houses.



Figure 1: Conceptual elements of design contribute to the individual space, related spaces, sequential spaces and adjacent spaces.

The history of architecture has shown society's influence on the respectfulness of the natural quality of life in the development of the built environment is one of the substantial factors (Eben Saleh, 2001). Hence, the inspiration of traditional design values in contemporary architecture is manifested through physical and spatial design, which considers the importance of a user's interaction and their built environments. On this subject, Traditional Malay Houses are illustrative samples, characterized by layers of regional qualities, cultural and local beliefs.

Generally, traditional architectural houses reinforce the connection between people's lifestyle and the built environment. The position of traditional architecture is based on architecture and the philosophy of order, ethics, logic, consistency, harmony, aesthetics and perception, which all have their parallel in the meaning and space conception in architecture. Usually these philosophical ideas demonstrate traditional architectural houses according to functional relations and manifesting the idea of symmetry, hierarchy and axes that integrate the whole parts of the house into a coherent and understandable component. The traditional Malay house is based on their beliefs, morality and religion (Tajuddin & Hussain, 2005). One of the rational connections between the dwellers' needs and customs of the Malay people constitute their architectural design values in physical aspects as well as its site and environment, Figure 2. As a result, the overall design values of Malay traditional architecture shows a wise adaptation of the users' livelihood, custom, natural beauty, and identity (Wen, 2010).



Figure 2: The Design Values of Malay Traditional Houses, characterized by regional qualities, cultures and beliefs

The interrelations between past and present reveal how implementation of traditional design values are adjusted to contemporary design through the implementation of new progressive ideas (Arandjelović, 2008, p. 73). The experience of traditional design values in architecture constitutes a high position within contemporary architecture via adaptation and modification of ancient qualified ideas, matching the contemporary lifestyle. The injection of traditional architectural design values and its characteristic within the cultural context is a source of the applicable signature for the architecture of contemporary Malay house, acting as a workable production (Vellinga, 2012, pp. 23-24). The essence of the traditional architecture can bridge the ideas of the past to the present by modification and adaptation in contemporary architecture. This attitude acts as an effective device for the implementation of design values, which characterize the physical and spatial organizations among components of contemporary architecture (Langhein, 2005, p. 6) as shown in Figure 3.

According to Langhein (2005, p. 6), The application of architectural design values has contributed to the constitution of new development schemes in the language of architecture. Representation of the traditional essence in contemporary architecture relies on the responsibilities of practitioners who have increased the social consciousness of society. The discourse among scholars indicated, there is a common idea that exists among researchers to bridge the old architecture to a novel trend highlighting the honesty and simplicity of traditional architecture in contemporary architecture. This type of synergy between the tradition and contemporary architecture is carried



Figure 3: Implementation of traditional design values characterize the physical and spatial organizations among components of contemporary architecture.

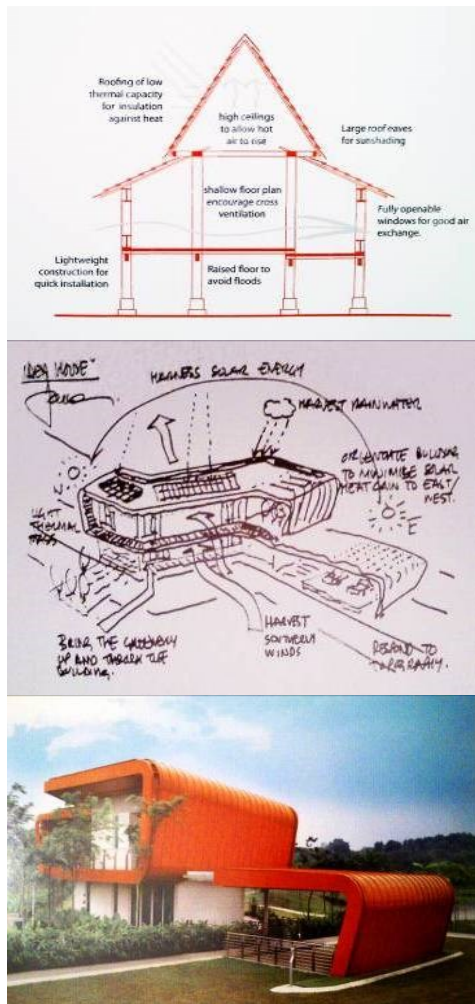


Figure 4: Adaptability and mobility of traditional design values in creative architectural design. Source: Idea House (Pomeroy, 2011)

essence. In this respect, utilization of various aspects of traditional Malay design values have been intertwined with its ideology, and philosophy of simplicity and purity, which found as a humanistic form of architecture suitable for human society. The architecture of the past to the present produces such humanistic design values, which are accomplished by perceiving and understanding the essence of traditional architectural characteristics. The values of design in today's architecture demonstrate the rationality of a design's success, which uncovers new elements and criteria from tradition. The implementation of these design values provides a balance between traditional and contemporary architecture. Integration of past into present is a key to the new way of life, by continuity of the modern movement based on traditional ideology (Fister, 2001). This interplay between cultural context and traditional architecture is a unique intellectual development procedure in contemporary lifestyles. As such, Shahedi and his co-authors (2012) hypothesized based on relevant studies that users' perception of traditional historical buildings could result in a more satisfying architecture than those recent ones without any meaningful background.

4. Theoretical Approaches: Traditional Design Values in Relation to Contemporary Design

The incorporation of traditional design values in contemporary architectural design expresses different components of the built-form in the language of architecture. The level of combination between the Past and present, theoretically, makes the circumstances possible to match contemporary architecture with the state of the environment and present contemporary architecture in a sensible manner. Different theoretical viewpoints have been posed by scholars to implement several approachable solutions by utilization of traditional architecture as a social instrument to provide solutions to the issues of contemporary architecture.

Rasmussen's (1964) asserted, Diversity of architectural design values has been found throughout history in great buildings from ancient to modern times. This diversity is an important part of a logical relationship that interplays within the context of traditional and contemporary design values. Hence, design values independently cannot be treated as an element by itself, unless we relate it to several qualities of design about expression, originality of honest materials and form. The significance of architectural history indicates a special relationship of wholeness to create a pattern in which users manipulate to take charge of their own environment (Alexander, 1987). This process is embedded in the sequence of time through "theoretical and practical innovation." Contemporary architecture, through the principals of design relating to the expression of traditional Malay design values, gives rise to the sense of spatial and physical quality of the overall visual and conceptual aspect. It depicts the wholeness of the spirit of the time and the contextual interaction to the built environment Values. Theoretical perspectives including regionalism and vernacular as defined by scholars are embedded in the key elements of traditional architecture. The term "Vernacular' architecture" is a development of folk architecture that raised the spiritual aspect of architecture as a significant and symbolic means for man in relation to "nature, awareness, ideas, concept or philosophical idea" (Allsopp, 1977).

Vernacular architecture holds a central position in traditional design values that relied on the purification of its function. This can be used to uncover the factual meaning of contemporary architecture in a

out through the adaptability and mobility of traditional design values in creative architectural designs. The house are characterized by their deep overhang that provide shade and cut out low angle tropical sun, verandas space that act as a transitional, semi public zones; specification of local materials indigenous to the region to support the local economy and minimize the negative environmental effects of transportation, and the sensitivity to both local culture and topography as shown in Figure 4.

A reflection of architectural precedents reveals the various principles and values that are linked to what is known and understood as a system of thought. The sense of traditional Malay house architecture is accentuated on the use of order, scale, proportion, space, colour and natural light. Elements of structure, functions, and materials have considerable traditional values in the architecture of ancient times. The integration of traditional design values with contemporary design is confined to the particular situation of projects, contextual gesture and environmental demands (Holm, 2006, p. 257). Traditional design values are a cultural injection that improves contemporary architecture and reveals how design structuralism has characterized its values through traditional evidence. It is evident that the key factors to be sought in the traditional design values could be observed in its original

disciplinary theoretical manner of simplicity of order and style. A number of points of view exist, based on the theory of vernacularism, involving with the local needs and society's demands in contemporary lifestyles. As a result, a varying scale of traditional design values have influenced contemporary architecture (Gurupiah, 2008, pp. 103-334). By using a combination of the new techniques in construction and materials, a translation and interpretation of traditional outcomes is achieved through the foundation of vernacularism approaches (Gurupiah, 2008, p. 105).

Culture and identity are two modifiable issues that reflect the current condition of a region (Eggerer, 2002). From the regionalism point of view, seeking an acceptable universal architecture that follows the original expression of traditional design values may translate the customs, user needs and built environment (Lefaivre & Tzonis, 2003). For example regionalism has always emphasized the interaction between architecture and users based on and cultural and environmental contexts (Brown, 2009). Development of visual harmony among building components is chief among the accomplishment of purposive relations between the overall architectural design values and environmental characteristics. The design values of regionalism architecture are the most substantial issues in identifying folklore architecture (Lefaivre & Tzonis, 2003). According to Brown(2009) "traditional architecture can take a moral or ideological position where it demands that architecture expresses the shape or form of a better society". The contribution of traditional architecture to the issues of contemporary architecture is a theoretically approach, characterizing the values of contemporary architectural design, which rely on the cultural background of nations and environmental requirement of users (Mumford, 1941, p. 30). Architecture and tradition look at the uses of traditional design values in the pursuit of quality, character, style, place, language and sense of order, to the contemporary architectural design (Uysal, 2004).

Malay contemporary houses can have creative designs that bridge the past and the present. Thus, in these cases, the values of design and its attributes of traditional architecture are revealed through the tangible and intangible character of forms and spaces in contemporary architectural phenomenon. The values of design are notably recognized as being derived from the simplicity and minimal traditional design concepts bounded by the perception of ontology, diversity, spontaneous harmony, analogy and correlative mode of thinking. Recreation toward the traditional design values in contemporary design is an acceptable and appreciated style, preserving the balance between past and present as one of the crucial discussions among scholars and practitioners. Literal replication of traditional design values in architecture contributes to a creation of innovative design for contemporary architecture. The new form of built environment involves a new perception shaped by values of traditional design through theories as a complementary frame of reference in architectural practice (Brown, 2009).

Contemporary architecture is manifested through the identification of a particular environment and harmonization of buildings within the environmental conditions of a settlement (Gelernter & Dubrucq, 2005). The expression of contemporary architecture by implementation of traditional design values establishes a rational link between culture, architecture and its built environment. Critical regionalism is the key theme that synthesizes the local cultural meanings, which make the architectonic feature apart from any cultural prejudice (Canizaro, 2007, p. 374). Additionally,

regionalism presented an alternative approach to the development of contemporary architecture excluded from any dehumanizing aspects of forms (Ingersoll, 2007, p. 387). The modern regionalism performance is a compatible transformation of traditional design values into contemporary architecture that characterizes the quality of the current built environment. Traditional transformation reinterprets the values of design to the new trend in principles of design concerning culture, technology and climate, etc. (Gurupiah, 2008, pp. 103-107). Utilization of traditional design values has indicated the sustainability of architectural design in the discourse of modern regionalism, which generate innovative ideas toward the improvement of contemporary architecture (Moore, 2005, p. 433). To prevent the contemporary Malay house design from losing their regional character, design values and architectural language, different theoretical approaches can resolve the issues in contemporary Malay house design.

The influence of culture and geography as the factual phenomena in the determination of architectural design values are characterized without any constraints on material and construction of the overall design as a minimal with the actual condition of life and built environment. Hence, simplicity of design, material honesty, and interaction with the context of design are key values in contemporary architecture that symbolize the overall traditional architectural design, identifying the effective factors in the creation of contemporary architecture (Frampton, 1983). The



Figure 5: Design Values of the Malay traditional houses are linked to the habitants' spiritual, ethical, social interaction and ideology.



Figure 6: The geometry of high pitched roof, on-stilts structure, quality of materials, surface, craftsmanship and spatial segmentation of frontal and posterior zones contribute to the high level of values in the originality of Malay traditional house design.

indication of theoretical position is related to the spirit of time for which the architecture is made. The values of traditional design forming a new type of architectural concepts with a high level of originality that belongs to the people, expressing the communal feeling.

5 Observational Evidence

The observation sessions during the research sought to provide a complementary support to achieve the objective. The course of observation was augmented through interactional process with dwellers over the months. The overall organizational process of Malay traditional houses was connecting to the local culture, lifestyle, and conditions of the built environment. It was also observed to be linked to the inhabitant's spirituality, ethics, social interaction and ideology (Figure 5). The Malay traditional houses were woven to characteristics of the built environment with symbolic meanings as a complement to the components of Malay traditional houses. Without doubt, as one approaches the houses and moves through the different segments, he/she would discover that the design values of the houses express a reflection of originality, simplicity, honesty, minimalist character and sense of order that is built upon a firm structural stilted platform.

The spirit of traditional houses is manifested through a simple physical and spatial organization of form and space. For instance, the geometry of the high-pitched roof and its related design element are observed to be important to the Malay traditional houses' overall design values. The qualities of materials, surface and craftsmanship are observed to be important up-close qualities that contribute to the high level of values in the originality of design. During the observation session, the "Selang" is observed as a well defined joint, articulating the segments of the frontal and posterior zones of Malay traditional houses (Figure 6).

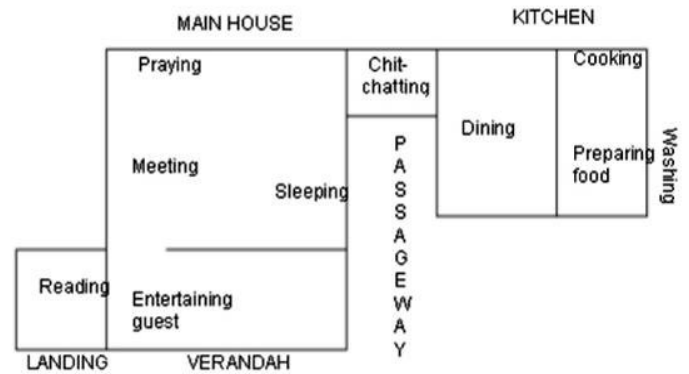


Figure 7: simplicity of plan and circulation movement.

Source: (Amad, Sujud, & Hasan, 2007)

The spatial hierarchy of Malay traditional houses reflects the interrelationship of functional requirements and spatial elements, which are closely tied to the spatial quality of the aesthetic design value of Malay traditional houses. The houses are constructed with simple geometry, plans and elements. The use of uncomplicated geometry indicated the architectonic typological design values of the overall layout of the house. Additionally, this clarifies the applicability of the simple geometric plan, relationships and logical organization of form, shape and spaces for the design of contemporary Malay houses that is enhanced by the intellectual and emotional perception of the systematic method of the Malay traditional house structure. A strong sense of geometric representation is also perceived through the building components, which not only functionally relate activities to other activities, but geometrically as well. The use of simple treatments in the organization of form and space in relation to the systematic process of the linear structural system is perceived as tangible in the overall spatial relationship. The plan and its circulation movement within the functional space were identified as simple adjacent spaces in relation to the circulation path of the house (Figure 7).

From the plans, it is easy to find a visual spatial connection in a sequential manner from the exterior stairs to the "Anjung", to the "Serambi Gantung", to the "Rumah Ibu", to the "Selang", to the "Rumah Tengah" and on to the "Dapur". The visual qualities of the spaces are related directly to the plan of the houses. Thus the shape of the space revealed an essential sequential design values as a part of the Malay traditional houses. In addition, the core of the observation revealed the use of natural materials, such as, timber and other tropical supplies. This express the meaning of honest structure that contributes to the values of true and authentic qualities of house materials and architectural significance that convey a sense of time and place associated with the dwellers. An indication of such originality is seen in the timber structural open system technique that is influenced by the local conditions.

The traditional Malay houses are not only perceivable through their visual character design quality, but also through the tangible experience of touching real and natural materials and even through the musty smell of timber. The sense of belonging to the spaces is observed to be a reflection of the traditional cultural beliefs of the Malay residents. The observation specified that the hierarchical design values formed, through the segmentation of the spaces depict into two distinct parts, the frontal and posterior zone. This expresses the levels of privacy on the basis of function and religion beliefs. This clear indication was understandable in

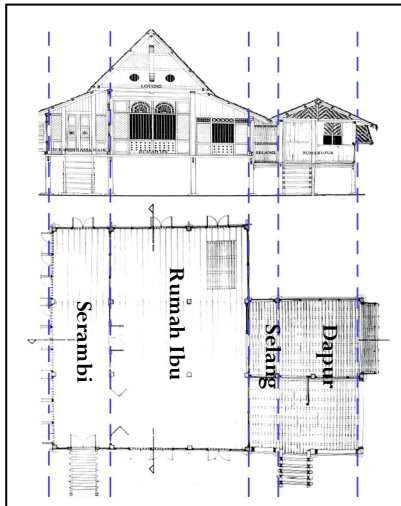


Figure 8: The Hierarchical relationship between Serambi, Rumah Ibu, and Dapur (Source: KALAM)

the tradition of the folklore architecture, as a succession in expressing the identity of the Malay community. The integration process of spatial design as a cultural pattern reflect the hierarchal relationship between Serambi¹, Rumah Ibu², and Dapur³ as a sense of cultural aspiration and creativity between architectural procession and or a sequence of movement in time (Figure 8). The sense of order was observed through the architectural elements and modularity in relation to the human body.

The Malay traditional house is observed to be representative of design values, which not only respond to the available regional materials, but also to the regional style, rather than representing the design of its period. For example, the traditional houses of Kampung Baru in Kuala Lumpur and Negeri Sembilan demonstrate the most appropriate regional architectures, respecting the characteristic of regional architecture while allowing for change by an innovative approach in a new tradition. The values of design in the Malay traditional houses have been experienced through the sensory factors, by touching, smelling, seeing and even hearing. The physical components of these houses experienced in two ways. Firstly it is experienced structurally, which is important to the firmness of the house. Secondly, it is experienced spatially, where the different zones of spaces for different functional activities are defined. The treatment of openings on the different sides of the house allows penetration of natural light while giving a special quality to the spatial characteristics of the interior spaces in different parts of the house. The quality of ornamental elements is perceived as a dynamic symbolic gesture, which is devoted to different parts of the house. As a result, a house can be observed as a complete unit of artistic work that represents a number of design values (Figure 9). The dynamic gesture of design elements devoted to the quality of different parts of the house. For example, a semantic reflection of the wooden craft pattern depicts the idea that relates to sacred beliefs, exhibiting the local arts and craft, and demonstrating the approach of delight to local cultural beliefs of the Malaysian society.



Figure 9: The quality of aesthetics perceived as a dynamic gesture of symbolic ornamental elements devoted to different parts of the house.

6 Confirmations

Although evidence from the body of the papers' in topics 2, 3 and 4 are cross examine and corroborate as a process of validation, the conformity of the implementation design values were also corroborated in the contemporary Malay houses to confirm the consistency of the research outcomes. The confirmatory process was conducted in the area of three single regional domestic architectural buildings to established support for the thesis argument (Kimmelman, Mogil, & Dirnagl, 2014). The samples were selected deliberately as the author's intention was to achieve a balanced literal replication through direct observation, based on the criteria explained in the following paragraphs.


The basis for selecting these confirmatory samples are derived from contemporary phenomenon within real life in order to examine the validation and assessment process (Yin, 2003). Each confirmatory sample selected to be a unit of human activity embedded in real life (Gillham, 2000). Having more than two confirmatory samples will produce an even stronger effect. In the face of these benefits, having at least two samples should be the goal. However, more than two make it

¹A type of verandah, which used to receive guests.

²Core Main area of house, which referred to as the „mother house“.

³The Kitchen.

Table 1: Conformity of Implementation of Traditional Design Values in Contemporary Malay Houses

Selected Samples			
Design Values	Sample No.1	Sample No.2	Sample No.3
			
The spirit of the time and Place	Yes	Yes	Yes
The structural, functional and material honesty	Yes	Yes	Yes
Simple forms, i.e. Aesthetics without considerable ornaments, simple geometry, smooth surfaces etc.	Yes	Yes	Yes
It strives to create a connection between past and present forms of building	No	Yes	Yes
The classic, traditional and vernacular design value	Yes	No	No
The regionalism design value	Yes	Yes	Yes
Relies on a belief on traditional designs as a preferred typology and template	No	No	Yes
Environmental design values	Yes	Yes	Yes
Natural lighting, ventilation,	Yes	Yes	Yes
Harmonize with the surroundings	Yes	Yes	Yes
Maximum opening	Yes	Yes	Yes

more valid as there are more experiments in experimental investigation (Yin, 2003, p. 54). All the three samples were influenced by a spirit of tradition and embodied a set of design values of the Malay traditional house that were integrated with modern techniques of architectural design. This conformity procedure illustrates the performance of traditional design values and their potential to be incorporated into particular samples of contemporary houses for more adaptability to their real context. Although there are apparent dissimilarities among the selected houses, factual evidence demonstrated considerable literal replication concerning the impression of traditional house design values of the contemporary Malay house. This established the applicable implementation of the research outcomes satisfactorily in the contemporary Malay architectural design house (Table 1). The confirmation process was drawn from the conceptual replication design method provides precise information in the right circumstances, supporting the argument and hypothesis that the implementation of architectural design values of Malay traditional houses increases the novelty of contemporary architecture and identity. This helps to retain the users, visitors, and society's interest.

7 Discussion & Conclusion

The design values of the Malay traditional house that takes place within this domain have revealed a diverse reality concerning the essence of traditional architectural design. One of the distinctive outcomes of this research had signified that fundamentally, architectural design values rely on the traditional beliefs and perception of society. Theoretical appropriate approach in harmony with the nature of Malay traditional house architecture is implemented through a constant relationship between the cultural background and theory of architecture. The Malay traditional house is significant in its sustainable use of traditional component that contributes to its architectural character. Additionally, it is based on the belief that Malay traditional house design values are in accordance with the particular characteristics related to the derivation of regional and national identity. Bridging traditional design values and contemporary architecture through the principles of design relates to the Malay traditional house design values. The traditional Malay house is imbued with a number of values that influences the development of the design reality, such as originality, simplicity, honesty, minimal, interaction, quality, character, style, sense of order and architectural language as well as several functional aspects and its site environment. These design values and their diverse expressions are, to some degree, a reflection of the development that has taken place in the contemporary

phenomena. Theoretical approaches such as critical regionalism, vernacularism, and modern regionalism are linked as a guide to utilize the key items of Malay traditional design values towards innovative design in contemporary Malay house architecture.

It is concluded that there exists a robust relationship between architectural creativity and originality based on traditional design values in Malay architecture. These values in architectural design are a valuable asset for the improvement of contemporary Malay architectural character. Collectively, evidence encourages further investigation into Malay traditional design values in the process of implementation in contemporary Malay architecture. In addition, an exploration of the traditional architectural essence can be considered as another line of investigation in the regional cultural design. Hence, this research recommends the implementation of the architecture of Malay traditional house design values in contemporary Malay house architecture that is based on various creative, applicable design value concepts derived from traditional architectural character. The exploration of concepts has to be considered as vital criteria in contemporary Malay house architecture that is based on theoretical approaches. This is in order to maintain the originality of the architectural identity of the Malay society.

References

Alexander, C. (1987). *A New Theory of Urban Design*: Oxford University Press.

Allsopp, B. (1977). *A Modern Theory of Architecture*. London: Routledge & Kegan Paul.

Amad, A. M., Sujud, A. e., & Hasan, H. Z. (2007). Proxemics and its Relationship with Malay Architecture. *Human Communication. A Publication of the Pacific and Asian Communication Association.*, Vol.10(3), 275-288.

Ani, A., Mohamed, N., & Rahman, N. A. (2012). Socio-Cultural Influences in the Composition of Traditional Malay House Compounds in Rural Melaka. *Alam Cipta, University of Putra Malaysia* Vol.5(1), PP.63-78.

Arandjelović, B. (2008). Historical Heritage and Contemporary Architecture Fusion at the Example of the City Center of Graz. *Facta Universitatis: Architecture and Civil Engineering* 6(1), 65-74.

Bird, C. (2008). Britomart Contemporary Public Transport Interchange Meets Traditional Maori Meeting House. In P. Herrle & E. Wegeerhoff (Eds.), *Architecture and identity* (Vol. 9, pp. 423-435). Berlin: Lit

Brown, A. (2009). A Theory of Theory of Architecture Retrieved from <http://archinoid2.blogspot.com/2009/10/theory-of-theory-of-architecture.html>

Canizaro, V. B. (2007). *Architectural Regionalism: Collected writings on Place, Identity, Modernity, and Tradition*. New York: Princeton Architectural Press.

Eben Saleh, M. A. (2001). The evolution of planning & urban theory from the perspective of vernacular design: MOMRA initiatives in improving Saudi Arabian neighbourhoods. *Land Use Policy*, 18(2), 179-190.

Eggeneer, K. L. (2002). Placing Resistance: A Critique of Critical Regionalism. *Architectural Education*, 55(4), 228-237.

Fister, P. (2001). Protection of Architectural Heritage, State of Art, New Aims and Possibilities in Urban Renewal: The case of Slovenia. Retrieved from www.arcchip.cz/w03/w03_fister

Frampton, K. (1983). Prospects for a Critical Regionalism. *Perspecta*, 20, pp. 147-162.

Gelernter, M., & Dubrucq, V. (2005). Historicism. In R. S. Sennott (Ed.), *Encyclopedia of 20th-Century Architecture* (Vol. 2, pp. 896). London: Taylor & Francis e-Library.

Gillham, B. (2000). *Case Study Research Methods*. Great Britain: TJ International Ltd., Padstow, Cornwall.

Gurupiah, M. (2008). *Pemikiran Dan Sahutan Regionalisme Dalam Wacana Senibina Malaysia*. University Technology Malaysia, Skudai Johor.

Heynen, H. (2005). Postmodernism. In R. S. Sennott (Ed.), *Encyclopedia of 20th-Century Architecture* (Vol. 2, pp. 896). London: Taylor & Francis e-Library.

Holm, I. (2006). *Ideas and Beliefs in Architecture and Industrial design*. The Oslo School of Architecture and Design, Oslo.

Ingersoll, r. (2007). Critical Regionalism in Houston: A Case for the Menil Collection. In S. Amourgis (Ed.), *Architectural Regionalism: Collected writings on Place, Identity, Modernity, and Tradition* (pp. 387-392). New York: Princeton Architectural Press.

Ismail, Z., & Sani, A. (2002). Modularity Concept in Traditional Malay House (TMH) in Malaysia.

Kimmelman, J., Mogil, J. S., & Dirnagl, U. (2014). Distinguishing between Exploratory and Confirmatory Preclinical Research Will Improve Translation. *PLOS Biology*, Vol.12(No.5).

Langhein, J. (2005). Proportion and Traditional Architecture. *International Network for Traditional Building, Architecture&Urbanism*, 1 (10),

Lefavre, L., & Tzonis, A. (2003). *Critical Regionalism: Architecture and Identity in a Globalised World*. Munich: Prestel.

Moore, S. A. (2005). Technology, Place, and Non - modern Regionalism.

Mumford, L. (1941). *The South in Architecture - The Dancy Lectures, Alabama College 1942*. New York: Harcourt, Brace And Company.

Pallasmaa, J. (2007). New Architectural Horizons. *Architectural Design*, Vol. 77 (2), 16-23.

Pomeroy, J. (2011). *Idea House, Future Tropical Living Today* (ORO editions ed.).

Prins, M. (2009). Architectural Value. In S. Emmitt, M. Prins & A. d. Otter (Eds.), *Architectural Management: International Research and Practice*. UK: Wiley-Blackwell, Oxford.

Rapoport, A. (1969). *House Form and Culture* (Vol. 10). London: Prentice - Hall, INC., Englewood Cliffs, N.J.

Rasmussen, S. E. (1964). *Experiencing architecture*: MIT Press.

Saleh, M. A. E. (1998). The Integration of Tradition and Modernity: A Search for an Urban and Architectural Identity in Arriyadh, The Capital of Saudi Arabia. *Habitat International*, 22(4), 571-589.

Schumacher, P. (2011). *The Value of Design is not measurable*. London: Business Design Centre.

Shahedi, B. (2004). *The prayer hall*. Omran-e-Zayandeh Rood Village, Isfahan: D.O.S. Design Organization Service.

Shahedi, B., Daud, N. I. M. K. H., & Yaacob, N. M. (2012). Users' Perceptions of Aesthetic Design Approach of Safavid Architecture, Iran. *Journal of Design and Built Environment, University of Malaya(UM)*, 10.

Shahedi, B., keumala, n. i. m., & Yaacob, N. M. (2013). Role of Architectural Historical Precedent in Aesthetic Design of Contemporary Architecture. *Built Environment Journal, University Technology MARA (UiTM)*, 10(2).

Tajuddin, M., & Hussain, N. H. (2005). National Identity and the Architecture of Malayan Architect Co-Partnership.

Uysal, Z. C. (2004). *Architectural Interpretations of Modernity and Cultural Identity: A Comparative Study on Sedad Hakki Eldem And Bruno Taut In Early Republican Turkey*. Natural and Applied Sciences of Middle East Technical University.

Vellinga, M. (2012). *New Vernacular Architecture*. Paper presented at the 6th International Seminar on Vernacular Settlements, Contemporary Vernaculars: Places, Processes and Manifestations, Estern Mediterranean University, Famagusta, North Cyprus.