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Metaphysical Approach for Design Functionality in Malay-Islamic Architecture

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Abstract

This paper presents the findings of a study on metaphysical approaches to building design. Three major Asian cultures, the Chinese-Buddhist, Indian-Hindu, and Malay-Islam, are reviewed. There are similarities found in principles towards achieving the occupants' well-being. Functionality became priority and rituals are performed at ensuring the well-being and prosperity of future occupants. Whereas, the Chinese-Buddhist practice is called Feng Shui, the Indian-Hindu tradition is based on Vastu-Vidya. The Malay-Islam is extractions from religious teachings written in a manuscript titled Tajul Muluk. The paper concludes that metaphysical approach could still play its roles in the design today.

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Keywords: Metaphysics; functional; geomancy; environmentology

1. Introduction

Contemporary building designs have been criticized for having little or no reference to the natural and spiritual context in which the building stands. Such neglect had probably contributed to failures of buildings to function as intended. We have some information about traditional approaches based on old practices that take care of every aspect but have not seemed to be considered, or just forgotten. In many instances, certain failures of are just

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unexplainable. Thus, it would be beneficial to rediscover the ancient systems that may be useful for consideration during the design process.

2. Literature review on functional design and traditional practices

Le Corbusier and Van Doesburg in 1924 had stressed the importance of functionality that shall be the ultimate goal of the design. Eventually, it became the philosophy of most architectural schools all over the world. 'Functionality' is a quality criterion of a building that makes it sustainable and serving the needs of people. Designing for the "well-being" became the end goal of any buildings that brings together a sense of dignity and pride within the design environment (Caan, 2011). Caan insists that the design is to create a comfort zone in satisfying human five senses, health, and harmonious feelings; thus, encouraging towards a sense of inspiration and motivation.

Such philosophy had already been practiced by a populace of the Malay ancient kingdom (Al-Ahmadi, 2006; Gibbs, 1987) and peoples in other Asian countries like China and India. These old practices had established systems that became guidelines in planning and designed for their buildings or settlements. It can argue that in the case of the Malay practices, the system had undergone various transformational changes; from Animism, Hindu-Buddhism, and then Islam, which still survives in the present form.

The metaphysical approach system is a guide to satisfy the human's enthusiasm for a more successful life; harmonious, healthy, upholding and advancement. It provides a set of followed rules to have the best alignment of the proposed building with the entire universe (Gibbs, 1987; Koh, 2003; Pegrum, 2000). This alignment was relating to the sciences of the cosmos or cosmology (Akkach, 2005) and is interrelated to the arts and science of Geomancy (MacLean, 1997). Today, the term 'environology' is commonly used to denote this practice (Malaysian Institute of Geomancy Sciences, 2014).

Metaphysics is a branch of philosophy that consists an abstract theory that beyond the reality (Oxford University Press, 2014). It relates to the unseen flow of energy forces that can felt through experiencing. The word 'energy' was identified as the ability to be active in terms of the physical or mental strength. It allows people to behave which relates to naturally enthusiasm and effort; usable power that comes from heat, electricity, etc. (Merriam Webster, 2014). The Metaphysical approach revolves around the Universe and the Earth. It was interconnecting to each other by an 'electromagnetic field' and other forces, such as gravity, uptake of earth forces, cosmic forces, etc. The same nature applies for buildings designed by humans, aiming to achieve sustainability.

2.1. Relevance of metaphysics consideration in the design of modern buildings

According to Dr. R. Tatang Santanu Adikara, the Head of Bioenergy Research Centre in Surabaya, human gets energy from two sources: inside the human body and outside the human body (Mustofa, 2011). The inside energy comes from chromosomes and genetic inheritance such as spirits (parents and ancestor), motivation (religion and culture), and belief (lifestyle and personal). Whereas, the outside energy comes from food, water, and interaction with the surrounding natural environment.

The cosmic energy consists visible (physical) and invisible (metaphysical) energy forces that can maintain the harmony of the universe by controlling it. It may also influence all events on earth, including a home, as a microcosmic level. The Chinese Feng-Shui regarded the energy forces as 'Qi' (Huang, 2012), and Indian Vāstu-Vidya considered it as 'Purusha' (Pegrum, 2000) Meanwhile, Malay Tajul Muluk called it 'Semangat' (Fee, 1998; Gibbs, 1987) and 'Rijalul Ghaib' (Al-Ahmadi, 2006). N. Annadale in 1903 wrote about the Patani's Malays in the 20th century regarding the Malay house and its 'semangat rumah' or 'house soul' (Fee, 1998). It was claim that the 'semangat' would automatically exist once the wall and the roof are fitting together. The vitality and the well-being of the house and its occupants are regarded as interdependent.

David Koh, an acclaimed environology master, has stated; 'When people built the house, the energy inside the house is static. Once the people live in, the energy inside the house is dynamic. People may affect the building, and the building may affect the people. And it's not positive thinking that the people need, but it's energy that makes people think positively'. Koh's statement echoes what Gibbs (1987 cited in Idrus, 1996) described; "The house is similar to human beings. It also requires 'semangat'. A house without 'semangat' looks empty and isolated". Today,

the modern science proved that it is the 'ions energy' which involves the interactions of positive and negative charges- electromagnetic (Campbell & Reece, 2002). Energy is needed by humans and all creatures in sustaining life.

The Islamic description of the energy as 'Zat'. As stated in the Quran: "And of everything We have created pairs" [Al-Qur'an 51:49], "Glory to Allah, Who created in pairs all things that the earth produces, as well as their own (human) kind and (other) things of which they have no knowledge." [Al-Qur'an 36:36]. A contemporary Islamic scholar, Dr. Zakir Naik also says that; "This refers to the things other than humans, animals, plants, and fruits. It may also be referring to a phenomenon like electricity in which the atoms consist of negatively- and positively- charged electrons and protons. The Qur'an here says that everything is created in pairs, including things that the humans do not know at present and may discover later". (Naik, 2001). These statements strengthen the existence of the magnetic energy that is governing the whole universe as macrocosmic level, and human, as microcosmic level.

According to Pegrum (2000), the Greek understood the existence of magnetism as early as 600 BC, and in the first century, the Chinese had already invented a magnetic compass. Meanwhile, the ancient Sages of India were aware of a geomagnetic field of the earth which forms a grid around the globe. Koh (2003) notes that according to the Chinese cosmology the universe is the union of 'ying' (positive energy) and 'yang' (negative energy). All those culture-religion belief systems are interrelated, but interpretations from people of different cultures varied considerably. The Malay-Islamic architectural tradition as represented in 'Tajul Muluk' is a clear example of this circumstance.

The practice has integrated biophysical building features with the cultural traditions. The cultural tradition gives shape to the building, especially the interior space, creates images to its users and can lead to a social interaction. Ayalp (2013) describes as 'cultural identity'. The method requires a total sensory system i.e. sight, hearing, smell, taste, and touch, which associated with the interaction between people and the natural environment. Kaplan (1996) finds that the interaction supports human's spiritual path that affects the human body, mind, and motivation that is still relevant today.

3. The Chinese Feng Shui

In the Chinese tradition, this belief system, which originated some 1000 years ago, is known as 'Feng Shui' (Lip, 1997). The word 'feng' means wind and 'shui' means water (Huang, 2012). Feng Shui is the art of placement with reference to the physical landform, climatic conditions, and geographical location, and so on. The theory of five elements is a concept on how human got benefit from the balanced interaction with nature. The five elements and producing cycle in chronological manners are water, wood, fire, earth, and metal. The other considered way is contrasting cycle that should be avoided. The ancient Chinese believed that the universe consisted of the union of 'yin' and 'yang'. It was symbolized by the sign of Taiji and the eight trigrams as the primary and fundamental references as shown in Figure 2(a). There are a few other methods of practicing systems by Feng Shui Master over the century, such as Eight Mansions Method, Flying Stars Method, and the Magic Square.

There are four basic Feng Shui methods in Environology practices: identification, selection, matching and energizing the internal or even external environments. It involves a very sophisticated system with a combination of numerical binary number sectors with a magnetic compass that can only be done by a professional Environology Master. The Environology Magic Square became the main essential guidance of the practice system beside other cycles such as the cycle of nature's elements, cycle of forces, and cosmic cycles (governing planet and 3-killers). The eight sectors of Magic Square, shown in Figure 1(b), demonstrate how the Environology practices were determined as the good and bad areas in a given space. It includes the position of the entrance door, the rooms, the kitchen, and the position of enhancing elements. Meanwhile, Figure 1(c) shows the movement sectors in creating a dynamic atomic movement inside a built space.

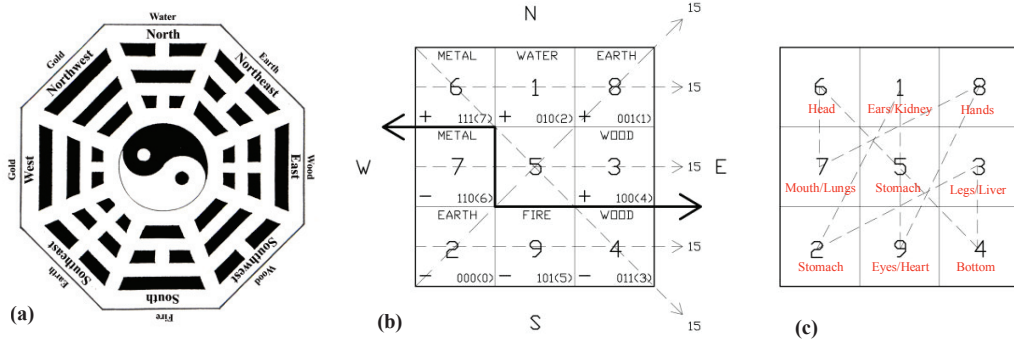


Fig. 1. (a) The ‘Taiji’ Symbols and The Eight Trigrams, (b) The Environment Magic Square and (c) The Dynamic Atomic Movement in relation to the Organ Placement Sectors.

Source: Lip, (1997); Koh, (2003)

4. The Indian Vastu-Vidya

In Indian, ‘Vastu’ means dwell and ‘Vidya’ means science (Pegrum, 2000). Indian culture also believed that there are five natural elements – ether, earth, air, water, and fire – which are known as *Maha Bhutas* (Pegrum, 2000). All the five elements in the form of human’s five senses (hearing, touch, sight, taste, and smell). The elements need to be present within a space to make it vibrant and filled with positive energy. According to Indian philosophy, if the house is properly laid out according to the five elements, the living occupants will be normal and enjoy a good health.

The Vedic Magic Square: the ancients used Cosmic Symbols Numbers as a means of linking the microcosm to the macrocosm and show the flow of the cosmic energy (Figure 2(b)). The activities of the cosmic energy forces were illustrating with diagrams and symbols. According to Pegrum, the Ancient Sages of India claimed that the cosmic energy was receiving from the northeast (Eashanya) and moves towards the southwest. There is a must to create ‘preserving zone’, by keeping the southwest corner blocked (no doorways), the positive energy entering from the northeast will be prevented from leaving the space.

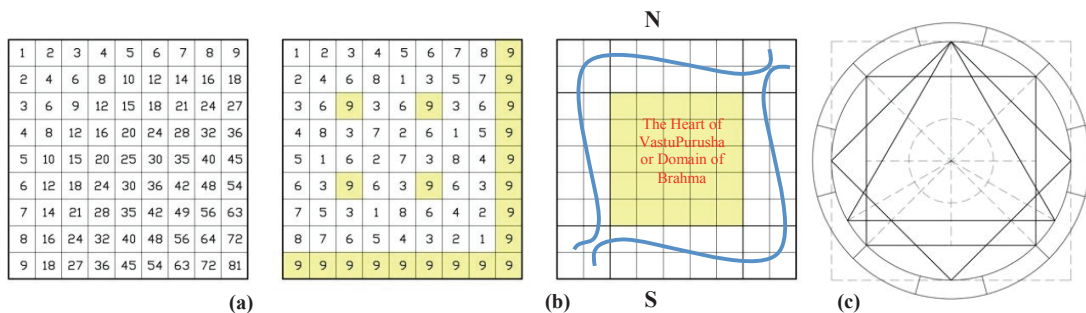


Fig. 2. (a) The Hindu Numerology: Calculation of Vedic Square, (b) The heart of Vastu Purusha and the gently meandering movement of Prana from northeast to southwest (c) The Ibnu Arabi Cosmic Order.

Source: Pegrum, (2000); Akkach, (2005)

The first produced diagram consists one square called Sakala. Then, it is divided into nine equal divisions on each side to make a total of 81 squares called Paramasyika or Vedic Square. Each square was numbering as in Figure 2(a), and those numbers above nine with two figures are reducing to one number by adding them together. The square is also considered Magic Diagram relating to the planets. It was claim that the origins of the Vedic

Square was from the Muslim artists and craftsmen for many hundred years in creating fantastic geometric patterns (Pegrum, 2000). It truly seems match with the Ibnu Arabi cosmic order diagram system that is based on geometric patterns as shown in Figure 2(c).

5. The Malay-Islamic traditional text on building planning and design

The Malay traditional architecture was well-known with its sophisticated systems and functional space. This traditional system has been using ethics anthropology as a proportion measurement of the building over many centuries (Al-Ahmadi, 2006; Gibbs, 1987). Malay people are also the most expert people in carpentry skill and knowledgeable in building their houses and even their boats or ships. In Malay kingdom, there is a book called ‘Tajul Muluk’ that means the Royal Crown of Jewels and dedicated to the Royal Family (Gibbs, 1987). It has combined the text with a charming book (belonging to a ‘bomoh’) called ‘Pawang Book’ as a guide in planning and design of buildings.

The book consists varieties of architectural rule prescriptions, the do's and taboos. Which if followed, the people will get the ‘positive payoff’ or ‘rewards’. The prescription scripts as shown in Figure 3(a) in a diagram form with detailed do's and taboos in Figure 3(b). The rules for identifying the auspicious date and site, the building orientation, and the placement methods of good and bad sectors of their space planning are describing in detail.

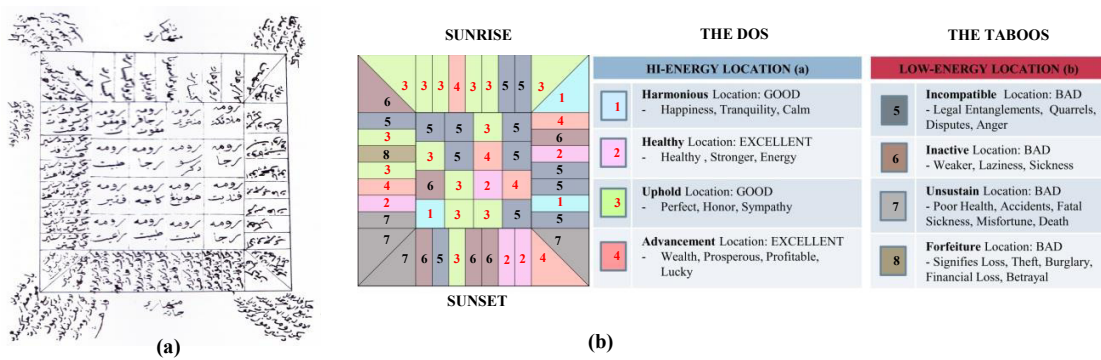


Fig. 3. (a) The TajulMuluk Scripts Diagram System (b) The Do's and Taboos scripts based on the Malay Tajul Muluk diagram system as translated by Al-Ahmadi.

Sources: Al-Ahmadi, (2006)

5.1. The influence of Islam on Malay architecture

The spread of religions throughout many centuries in the world is the primary controlling factor towards the changes in the belief system practiced by the Malay people. The system was modified to suit the changing religion and belief that influence them. The Hindu-Buddhism religion influences were spread in the Malay Kingdoms in the early C.E. (A. H. Abdullah, 2001). It is after animism and old ‘Dongson’ culture (Rasdi, Ali, Ariffin, Mohamad, & Mursib, 2005). The coming of Islam by traders then again influenced the Malay traditional architecture design practice system.

The Malay culture and Islamic religion believed that there were only four elements, ‘spirits,’ that shape nature: Earth, Water, Fire, and Air (Akkach, 2005; Gibbs, 1987). According to Ibn Arabi, there are four natures of the human biological structures derived from the four principal elements (arkan) (Akkach, 2005). The yellow bile came from Fire, the black bile from Earth, blood from Air, and phlegm from Water. In addition, God provided man with four natural forces —attractive, fixative, digestive, and repulsive — to enable the functioning of these natures.

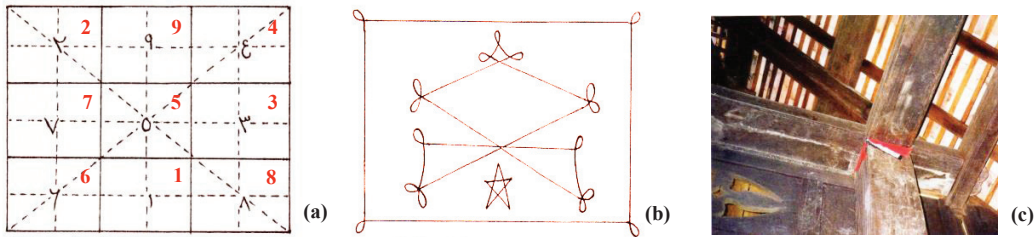


Fig. 4. (a) The 'Wufik' diagram with numeral numbers (b) Another types of diagram shows the line of admiral. Both (a) and (b) normally write-up on a piece of (c) white cloth located at the top of 'Tiang Seri' post.

Source: M. Y. Abdullah, (2012)

There is also a numerical magic square, and symbols were drawn on a piece of white cloth called 'wufik' in Arabic letters as shown in Figure 4(a). The cloth was placed at the top of the 'tiangseri' post, as Figure 4(c). It is believed to be a guard against the evil spirits. The numbering values surprisingly have the same value numbers as the Environology Magic Square, but in different position sectors. The Islamic practices had changed a few existing rituals, the orientation of the building and the carving motif towards geometric patterns with a combination of flora and fauna.

6. Discussions and findings

The chief goal for designing buildings in all cultures is to attain well-being for its occupants. Malay architecture had evolved through the years influenced by their religious beliefs which started from animism to Hinduism and finally, Islam. Islam believes that human's creation became the most significant invention and preferred by Allah. When the energy inside human generated by heart is able to be corrected, all other God's creations such as water, fire, wind, earth, animals, etc. will move correctly (Abidin, 1984). The Prophet Muhammad s.a.w also stated that, "There is in the body a clump of flesh - if it becomes good, the whole body becomes good and if it becomes bad, the whole body becomes bad. And indeed it is the heart".

The heart becomes the most important organ in the body that will directly affect human behavior. A soft vibratory frequency, called 'nuriman' or electromagnetic energy in modern scientific terms, is produced by heart and can influence the human mind and body (Mustofa, 2011). Meanwhile, the ancient Malay people called that energy as 'semangat'. The 'semangat' is linked with the breath of life - 'nyawa' and spirits of life- 'ruh' (Noor & Khoo, 2003). The combination of these three forces will be able to make people react rationally, intellectually, and creatively. It seems to be the same for a building to be designed by human in Islamic practice that is already applied in Malay-Islamic architecture.

6.1. The metaphysic principles of design in Malay-Islamic Architecture

There is 'tiangseri' in Malay architecture that represented the heart. Typically, it is located in the living area and has become the most important part and the first element to be raised up in any Malay building construction, representing the 'heart' of human creation. An Austronesian universal law related to the house post claimed that it must not be inverted (Fee, 1998). It should be 'planted' with the 'base' or trunk end down and the 'tip' up. According to Environology studies, everything at the top is the 'yang', and the bottom is the 'ying'. If the function of the heart is to control the movement of the energy forces such as the air and the water inside the body, the same is supposed to be true about the 'tiangseri'. The post perhaps functions as a magnetic bar inside the house. The 'base' is a negative charge, and the 'tip' is a positive charge. This magnetic bar forces the flow of the wind and water towards inside and surroundings of the building. It is similar to the concept of 'the right-hand rule'.

According to a renowned Malay tukang, there is a hole was made at the bottom of the post 'base' of the 'tiangseri' and is filled with silver or gold coins. According to Environology studies, living wood is accompanied

with wood living force. The wood in physical form known as ‘ying’ wood; meanwhile, the wood’s energy (force) is known as ‘yang’ wood. The living wood needs fire (electromagnetic energy) and is fearful of metal; meanwhile, all the dead wood needs metal and fears fire and being burned. The wood will die without living forces. Environology studies also claimed that nature’s elements such as wood, stone, metal, fire, and water can absorb energy (*semangat*). The energy could be either the lightness energy like the sun (electromagnetic energy) or darkness energy like deities.

The selection of types of wood for the ‘tiangseri’ and other posts consider a few characteristics and methods of preparation with appropriate rituals. Nature is containing lightness energy, also known as electromagnetic energy, is considering good. The types of land such black soil or near to sea and human settlements at higher altitudes find that the wood is good and stronger ‘semangat’ (Noor & Khoo, 2003). If the people disobey the rules in the selection of wood, perhaps a misfortune will ‘payoff’ towards the occupant because it hosts the darkness energy.

Islam believes that soft vibratory frequency (*nuriman*) can be produced by controlling human desire (*nafs*). The desire can be controlled with proper attitudes, uttering verses, humility of salat, patience, contributing benefits towards others’ life, group of salat, knowledge understanding, and healthy interaction with nature. According to Mustofa, the humility of ‘salat’ towards Allah s.w.t produces higher positive ion energy. That’s why group ‘salat’ (*jamaah*) becomes the compulsory rituals of Malay-Islamic people before inhabiting a new building. This practice is compatible with the modern science called resonance. Resonance happens when the same frequencies of energy that meet each other will automatically transform into an extra-large frequency of energy. Since the wood as an element of nature tends to absorb energy from surroundings, this ritual becomes a part of positive ion energy accumulation towards the center.

The interactions between the magnetic bar (positive ion energy) and natural energy forces such as the wind and water (negative ion energy) produce electromagnetic energy forces. This energy can accumulate with the proportion and auspicious shape, form, and space of the building. The forces (invisible) are acting as a shield for the house. The protection is working like security barriers to protect against the invisible and the visible darkness energy of intruders from entering the building. Deities are instances of the invisible intruders. Meanwhile, the apparent intruders’ examples are humans with evil intentions or animals. Besides, the building also acts like a comfort filter to defend against the effect of nature (heat, moist, cold, and dry) and decease (bacteria) carried by water and virus carried by wind). This practice is also compatible with the Islamic way of life. Since the positive ion energy of human with the God’s will, can heal and prevent sickness (healthy), besides calming the people’s mind (harmonious).

6.2. Assessment of functional performance on Malay-Islamic Architecture

As stated previously, the sources of energy inside human come from a chromosome and genetic inheritance such as spirits, motivation, and belief. The references to the Malay traditional house is the human’s cosmic structure characteristics as shown in Figure 5. The firmness of the form and the esthetics of the sense of the building were referring on how God created human structure and personal characteristics. The house is representing the owners to whom it belongs (Al-Ahmadi, 2006).

The external form of the house metaphorically represents the male owner (husband) and his personal characteristics. For example, in Melaka, the house is divided into three main parts: post as feet, body, and roof as head. Meanwhile, in Negeri Sembilan, besides the three main sections, people added other body parts such as neck, shoulder, eyes, ears, hair, and ‘songkok’. Meanwhile, the interior space of the house represents the inner body of the female partner (wife) and her personal characteristics. The internal measurement is referring to the size of the wife anthropology.

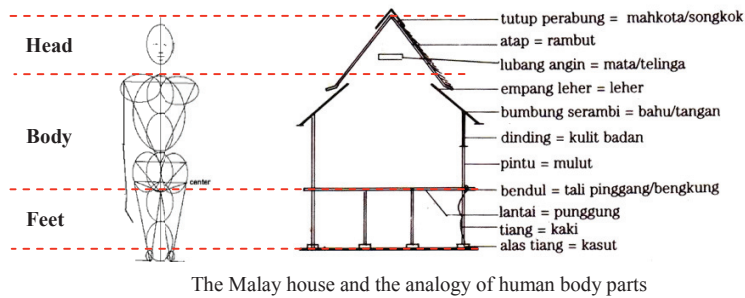


Fig. 5. The Human Body with the Malay House Analogy.

Sources: Idrus, (1996) (pg.67)

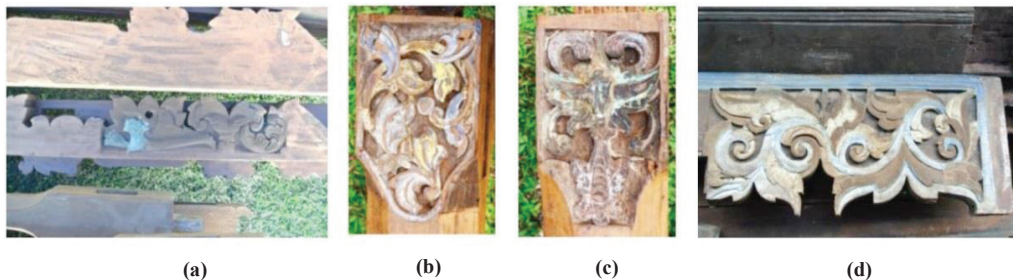


Fig. 6. (a) The carving motif that represented genetic inheritance symbolism. (b), (c) and (d) Shows the motivation and belief of personal characteristics in rumah Tukang Kahar, Negeri Sembilan.

Sources: Awang Lah, N.A., (2014)

There are different carving motifs that represent genetic inheritance symbolism and personal characteristics of the owner of the ‘Tukang Kahar’ (Kahar the Craftsman) house in Negeri Sembilan. It became one of the traditional Malay-Islamic architectures, more than 100 years old and still exists till today (Rasdi et al., 2005). Figure 6(a) shows the motif of carving tool of a craftsman. According to a renowned Malay tukang, the motif is the same with one found in Sumatera. Perhaps their ancestors came from the same origin and inherited a craftsmanship. The ‘Tukang Kahar’ is a well-known artist who designed and built the Istana Seri Menanti. He is very knowledgeable about Malay-Islamic architecture with high quality of workmanship through a combination of flora and fauna carving motif. His house became the evidence of his professionalism, for which the Malay ‘Tajul Muluk’ becomes his primary reference guidance. The experience of space should satisfy all human five senses, visual, smell, sound, touch, and taste, towards the psychological balance in human behavior. That basic design discipline and practices is still felt but less commonly carried out today. In traditional Malay-Islamic architecture, the sight of human should form the surrounding environment; for example, earthy colors and shape with proportion carving motif (geometric pattern and ‘awanlarat’ as shown in Figure 6).

The Malay-Islamic people are very concerned about symbolism, a reminder of the human being, since human is just a weaker servant of God, careless and always forgotten. The symbols, which appear inside and surrounding the house, became a reminder for motivation on their identity and Lord. The human’s hearing also should achieve a balance towards the natures’ surrounding sound. The nose should smell nature’s fresh odor. Meanwhile, the taste should be comfortable with the surrounding temperature, air pressure, and humidity in achieving thermal comfort. Lastly, the touch should explore the natural varieties of physical sensation. That’s fostering the design for the well-being.

6.3. The functions of the built space

There are four other principles besides the ‘tiangseri’, which can maximize the energy accumulation in the space. The first principle is the orientation of the building based on the cosmic structure. Frequently, the direction of the building is determined by four cardinal points (*baruh, darat, hilir, hulu*). The front façade of the building should face the baruh, and the back was considered as darat (Idrus, 1996). The *baruh* refers to a flat terrain land and should face the sunrise, but it sometimes faces the river or a mountain. The face of the building is determined by natural or built object that dominates the external environment. The adjustment depends on the site condition, for which nature’s element apparently dominates the surrounding environment.

The coming of the Islam to the Malay Kingdom around the 14th century has changed several principles of the previous practice of Malay architecture system. The Malay-Islamic buildings usually face the ‘qibla’, just like the Muslims do when they perform ‘*salat*’. Muslims believed that the ‘qibla’ is the strongest energy accumulation of the believers on earth that was directly connected to the heaven (Mustofa, 2011). That’s why the toilets are said to be best built away from the direction of ‘qibla’. However, there are exceptions towards this orientation as stated in hadiths; narrated Abu Ayyub al-Ansari: Allah’s Apostle said: “If anyone of you goes to an open space for answering the call of nature, he should neither face nor turn his back towards the qibla” (Sahih Bukhari, Vol. 1:106). Meanwhile, according to Idrus, the Malay house should face the ‘baruh’ and one of the longest building sides should face the ‘qibla’, even less accurate.

The second principle is the configuration of the building’s form and space which should metaphorically based on the concentric composition of the cosmic structure of human. The ‘*tiangseri*’ as the heart of the house becomes the center. Besides, the auspicious shape and form of the building such as square, triangle, and circle with a proportion hierarchy of space also becomes another character towards the energy accumulation. The result of the overlapping of the diagram system used by a different culture sphere as shown in Figures 7(a) and 7(b). There are concentric composition characteristics of form, mathematical numbers, and geometric pattern system.

It also shows interrelationship with the patterning of the sympathetic and the parasympathetic divisions of internal organ systems of the human body as shown in Figures 7(a) and 7(c). Based on the analysis of the positive attributes of the Malay *Tajul Muluk* diagram system, Figure 3(b) seems to have links with the placement of the human internal organ system. The third principle appears to be the spatial hierarchy of the building layout. It should base to the cosmic order of the internal organ system of the human. The ordering of spaces should be arranging in front-to-back order with the principles of the superiority of internal organ system and its function.

Based on the internal organ system placement, the ordering placement system is assessing a Malay house layout arrangement as the following Figure 8. It seems to be the mouth at the main entrance at the front. There are also secondary and tertiary entries at the ‘*selang*’ area and platform area. The ‘*pangkaiserambi*’ and ‘*hujungserambi*’ function as larynx or air passage. It works as a discussion area, but it sometimes becomes as the sleeping area.

The ‘*rumah tengah*’ or ‘*rumahibu*’ became the primary structure of the house and became the central area of family activity and sleeping. Therefore, the ‘*tiangseri*’ is placed at the heart of the house as already discussed previously. It functions to produce electromagnetic energy forces in space and surrounding the building. Environology studies claimed that space needs a dynamic atomic movement to prevent stagnation and to die. That makes the function of living area metaphorically as cardiovascular and respiratory system part of the human body. It became the main controlling center and energy accumulation.

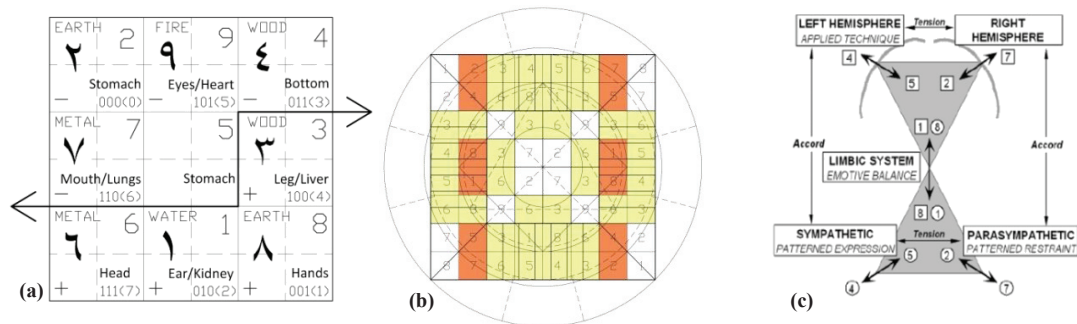


Fig.7. (a) The 'Wufik' diagram with Environology placement of organ system (b) The concentric composition characteristics of form, mathematical numbers, and geometric pattern systems in compare with Malay Tajul Muluk diagram system. (c) The numbers show interrelationship with the patterning of the sympathetic and the parasympathetic divisions of human body's internal organ systems.

Sources: Campbell, (1999)

The 'selang' divides the space between the 'rumah tengah' and 'rumah dapur'. The 'rumah dapur' is considered to have different energy forces such as heat and rubbish (darkness energy). The heat from the stove and the sunset needs to be filtered from transferring into the main living area. The extra heat gain will contribute towards thermal discomfort inside the space. It seems the same also with the rubbish; it provides uncomfortable smell and disturbs the occupant behavior psychologically. The placement of both elements is represented as the excretory system part inside the human body. It is placed at the back side of the house.

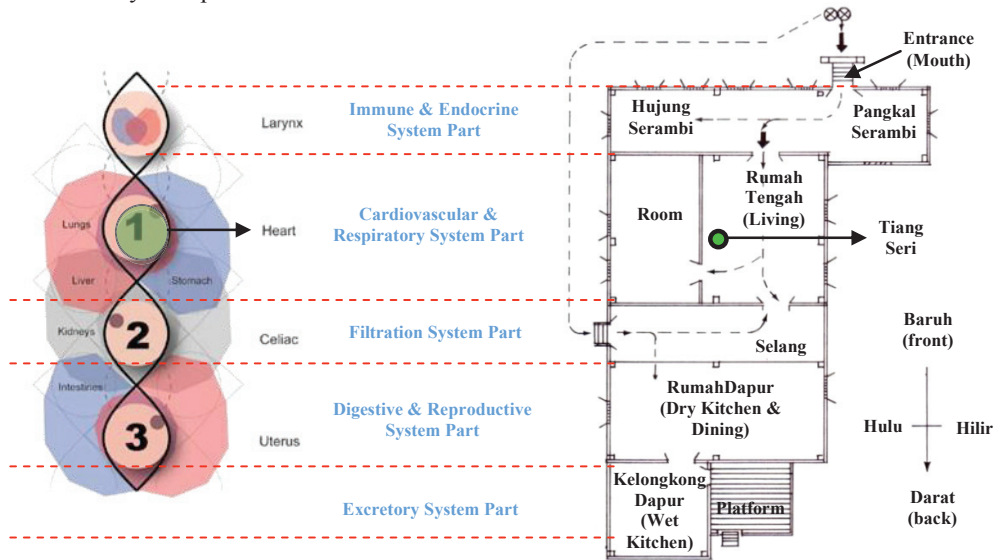


Fig. 8. The Internal Human Body Systems with the basic Malay-Islamic Architecture.

Source: Idrus, (1996); Merrick, (2014) (pg.50; pg.6)

7. Conclusion and suggestion

The Malay-Islamic people were practiced human oriented design principles towards their traditional architecture systems metaphorically. It's truly proof that the design of a building should begin from inside towards outside by modern architecture philosophy. The American poet Ralph Waldo Emerson claimed that every human creation was an extension of the body; "All tools and engines of the earth are only extensions of man's limbs and senses" (Caan, 2011). The meaning then further defined by Marshall McLuhan's in 1960's that our immediate environment is an extension of our body and our internal self.

Analysis of the design functionality performance characteristics of traditional Malay-Islamic architecture has highlighted some rationale of the practice system. The Vitruvian principles; function (*utilitas*), firmness (*firmitas*), and esthetic (*venustas*) seemly exist in the Malay Islamic Architecture. The study found the three areas of architectural principles in a subsequent order - the function of space, the esthetics of the senses, and the firmness of form. The metaphysical approach is used to produce energy accumulation inside space and maximizing it by getting the best alignment with the movement of the universe. The system is also used to get a functional area and to foster a design for the well-being.

There are three metaphysical factors that become the guidance: human cosmic order, human five senses, and human cosmic structure. The human cosmic order has been issued with four characteristic components; the energy

generator, the orientation, the configuration, and the ratio hierarchy. The human five senses shape the particular component of symbolic reminder inside space. The human cosmic structure factor has come out with two distinct components: the envelope (skin) and the structure. The building design metaphorically represents the internal and the external human body (Table 1).

Table 1. The Traditional Malay-Islamic Architecture characteristics and its influencing factors.

Architecture Principles	Metaphysical Approach	Needs for Enclosure	Traditional Malay-Islamic Architecture Characteristics	
			Components	Elements
1 Functional Space	Human Cosmic Order	Comfort, Security & Well-being	<ul style="list-style-type: none"> ● Energy generator/accumulation ● Orientation ● Configuration ● Spatial Hierarchy 	<ul style="list-style-type: none"> ● Magnetic bar (heart) ● Determined by four cardinal point ● Determined by natural/built object dominates external environment ● Concentric composition ● Auspicious shape/proportion ● Principles of superiority (internal human's organs systems)
2 Aesthetic of Senses	Human Five Senses	Well-being	<ul style="list-style-type: none"> ● Symbolism 	<ul style="list-style-type: none"> ● Spirits (parents & ancestor) ● Motivation (religion & culture) ● Belief (lifestyle & personality)
3 Firmness of Form	Human Cosmic Structure	Comfort, Security & Well-being	<ul style="list-style-type: none"> ● Envelope (Skin) ● Structure 	<ul style="list-style-type: none"> ● Auspicious shape/proportion (external human's anthropology and anatomy parts)

The traditional architecture is a simple in form, and the design is directed to fulfill the basic needs and daily functions of users. The building presents a manifestation of the unique culture and the way of life of the Malay-Islamic people. The reasons behind the esthetics of form is always functions that are logical yet practical. The hierarchical relationship and the flow forces produced inside the building create electromagnetic energy forces, which lead towards sustainability of the building and occupants. The study has shown that "metaphysics" have certain influences on the design of buildings and the built environments most in Asian Ancient cultures including the Malay-Islamic society. The traditional Malay-Islamic practice will be used as the primary instrument for a case study on selected building premises in the present study.

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