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Geomancy Theory in Housing Design: Architects Perspective

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Abstract: Geomancy is a Chinese's tradition used as an art of placing to gain harmony between people, buildings and environment. Architects and other building professionals support the geomancy theory in building design for the mentioned harmony concept. Besides that, one of the aims of sustainable design is to obtain harmony in a whole through integration of different system and elements. This is similar to the Chinese holistic view and geomancy approach to the built environment. This research aims to investigate the basic criteria of geomancy theory in housing design and the architect's perspective on the applied geomancy theory in housing design. Furthermore, this research also studies the implementation of geomancy theory on the architect's perspective. Ten architects from Selangor were chosen as interview respondents. Framework analysis and matrix analysis were used to analyze the data. This research serves to increase the awareness and benefits of applying geomancy theory into residential house designs. The findings showssustainable and geomancy concepts in residential design criteria are the same in the terms of sustainable development which final result aims to reduce the impact to the nature and enhance the quality of the environment and living quality at the same moment.

Key words: Geomancy, architects, residential design, sustainable, quality, environment

INTRODUCTION

In Chinese, the term geomancy is known as Feng Shui where feng means wind and shui means water. Wind and water are the two main nature elements that ensure human's survival needs (Webster, 2012). Theoretically in geomancy the wind is a medium that carries the energies and water is the medium which retains the energies. These two fundamental elements are profound, yet, always influenced human subtly (Shen, 2001).

Geomancy theory is a study of our physical environment and how we can live in harmony with it. According to most interpretations, geomancy theory refers to the movement or breath of the universe. In the geomancy theory practice, things such as the shape and orientation of the site and building, design, chosen materials, colors, residential numbers, land lot numbers are deemed to affect happiness, health, wealth and well being of the occupants (Mak and Ng, 2005).

The local housing industry in Malaysia practices geomancy theory in the development of residential houses (Bramble, 2003). Past case studies and researches which related to the geomancy theory in property development has also proven that geomancy theory trend is real. Besides, the studies also show that applied

geomancy in living environment give positive environment impact to the surroundings and promotes harmony.

Interaction between the nature and human is common in daily life. In the current western architecture, the interaction between the nature and built environment is known as sustainable design. Sustainable design is the designing of built environment to integrate the principles of economic, social and ecological sustainability (McLennan, 2004). Sustainable focuses on eliminating the negative environmental impacts throughout the design and development process. The goal of sustainable design is to gain harmony through integration of systems. The design process is quite similar to the Chinese's holistic view and geomancy approach in regards to the built environment.

Nowadays as researcher's effort in seeking to deepen relationships between human and natural environments, architects and building professionals too began to recognize geomancy as an ecological-architecturally connected paradigm.

Architects and other building professionals spend efforts to apply the concepts of geomancy into development with the desire to improve the co-relationship between humans and the nature. It is

suggested that interpreting geomancy knowledge would embrace the sustainability architecture design. Hence in this study, explores the compatibility of architect's perspective on each geomancy design criteria. It also provides better understanding on the application of geomancy theory in the residential designs among the architect in Malaysia.

Literature review: The goal of geomancy as practiced today is to situate the human-built environment on spots with good Qi. The "perfect spot" is a location and an axis in time. Accordingly, it is believed that some areas are not suitable for human settlement and should be left in their natural state. Geomancy is about adapting and living with nature and achieving harmony between both humans and the nature environment. If human are surround with negative energy and unaligned with the life and nature, humans will corrupt in the process. Positive energy such as kindness, compassion, empathy, good environment are able to elevate human's life (Mak and Ng, 2005). These are within the context of geomancy as well.

Superstitious perspectives of geomancy: Some geomancy theories are superstitious. Geomancy's outcome are not totally fool proven by the researches yet. Thus, the hypothesis such as "Chi" shooting and "Tai Sui" year curses are severely criticized by other cultures. Geomancy shows that the natural philosophy is the thing. The human lives are profoundly determined by the forces of the universe-wind, water, earth, metal and fire-that they can influence people's life and fate through mediums of architecture, construction interior design and landscaping (Mak and Ng, 2005).

Scientific perspective of geomancy: Geomancy is a pseudoscience because it consists of scientific facts such as geography, meteorology and astronomy, however, the geomancy does not analyse these facts with the current scientific procedures. There's a possibility where if geomancy is throughout developed it could be evolved into a branch of true science.

The ancient Chinese geomancy anticipate the cosmos in a way comparable to that of the modern physicist, who cannot repudiate that his model of the world is decided by psychophysical structure. Geomancy evolves and changes along with the surroundings, the layout and the orientation of workplaces and houses. Environmental psychology is the "study of the inter-relationship between behaviour and the natural and built-environment". They argued on the important behavioural effects of certain interior architectural designs including lighting aspects, colour and the building's

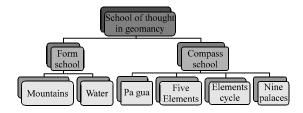


Fig. 1: School of thought in Geomancy (Mak and Ng, 2005)

aesthetics. In regards to geomancy, it emphasizes similar aspects such as dimension, layout, lighting and colour scheme (Bramble, 2003).

School of thought in geomancy: Based on the geomancy principles, there are two main schools of thought and practices have been developed which are the "Form School" and the "Compass School" (Mak and Ng, 2005). The form school emphasizes mainly on the external environment while the Compass School focus on the internal spatial arrangement and directional aspects of the building. The principles of both schools are congruent in areas such as cosmology, topography and architecture. It is important to take account the harmony relationship between geomancy and people, between geomancy and time and between geomancy and future infrastructure developments (Kim *et al.*, 2005) (Fig. 1).

Geomancy design criteria: A set of "standard rules-of-thumb" was developed by in accordance with the Form School of principles. These rules-of-thumb include:

- Instead of valley, a building should be constructed on high ground
- In front of the main door, it is not favourable to plant a tree
- An open field or garden facing the Southern of the building is ideal. Windows and doors are desirable to face North and South
- To minimize the circulation space, the most important area of a building should be centrally located
- The back door must be available inside a building and not in the same line with the front door

The rule-of-thumb was expanded and applied to the interior design considering the elements of direction and location of doors and windows, room's orientation and shape, building components like walls, ceiling and structural components such as structural beams and columns, staircases, etc., furniture arrangement; the

Table I	The '74	1 Iz esz	geomancy	degron	criteria

Surrounding	External	Internal	Interior
environment	layout	layout	arrangement
Topography	Shape of site	Layout	Door openings
Front	Main entrance	Doors	Bedroom
Back	Building's shape	Windows	Kitchen
Sides	Orientation	Room shape	Living room
Street location	Greenery and trees	Staircases	Water closet
Water view	Ponds	Ceiling	
Wind direction	-	-	-

(Mak and Ng, 2005)

placing of the stove, refrigerator and sink in the kitchen, lounge seats in the living room, bathroom layout and other similar criteria.

The principles of form school geomancy approach can be applied to houses in term of surrounding environment, external layout internal layout and interior arrangement where the houses that are located in cities or suburban areas. Table 1 shows the 24 key geomancy design criteria.

Geomancy with regard to outer form: The first step in determining the geomancy is evaluating its surrounding environment, especially, the surrounding terrain and climate. With respect to terrain, the dragon, sand and water are viewed as the key factors in geomancy (Mak and Ng. 2005). Dragon and sand are represented by mountain and hills, respectively. A home in front of mountains or hills will have good protection against winds. Water represents the source of water, often a river. In general geomancy principle, water is the most important element when selecting a home as the tenants are be able to access good quality of water and to be protected against flooding (Mak and Ng, 2005). The other fundamental elements in geomancy which are the wind and sunlight relates to the belief that Qi is easily scattered by wind gust and the lack of cold or strong winds will allow the vital energy from sunlight to be stored and accumulates (Lu and Jones, 2000).

Furthermore, orientation of sun is important for the source of heat and light, for example, the homes in the Northern hemisphere should face South direction (Mak and Ng, 2005). The ideal geomancy for a home is one that backed by mountains, surrounded by hills and facing South with a view of a mountain peak.

Contrary to norm beliefs, it is ominous to build a house at the top of a hill. Such a house lacks of support and may cause its occupants to feel insecure and lonely. The occupants are believed that full expose to the nature's forces causes more vulnerability to ill health, particularly those associated with the lungs and the skin illness. Houses are best built on a gently sloping hill as the incline is believed to provide support at the back. Whereas flat land is also acceptable when flat land level

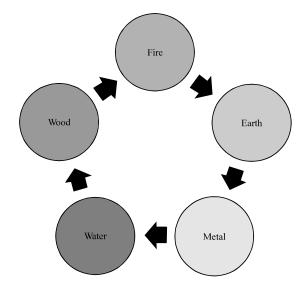


Fig. 2: Productive cycle of five geomancy elements

is far from the flood level. People also have to be aware of low-lying areas that are landlocked by surrounding hills. Such areas can cause illness to the occupants through the stagnation of the "Qi" (Mak and Ng, 2005).

Geomancy with regard to inner form: Geomancy theory is also applied in the internal orientation of the buildings. The compass school implies that occupants are affected by the building's flow of Qi. The shape, layout interior design and furniture placement are all believed to be able to affect the internal flow of energy within a building. The direction which the property faces and sits are the fundamental principles and issues in Qi flow (Mak and Ng, 2005).

Geomancy relies on the foundation of the 5 elements which are the water, fire, wood, metal and earth as shown in Fig. 2. These 5 elements can be presented in either mutually productive or destructive cycle. The 5 elements are also associated with the use of shapes, spaces, colours and symbols. Numbers is another part of the comprehensive geomancy system and there are certain numbers are believed to be lucky or unlucky as the pronunciation are similar to of the Chinese's meaning (Shen, 2001). For example, eight is a lucky number because "Ba" sounds like the word prosperity while four is unlucky as "Si" sounds similar to the word death. Consequently, believers in geomancy are likely prone to choose lucky numbers for any items ranges from their telephone number, address, residence number or even floor numbers in a multi-storey building.

Sustainable design: Sustainable design is the ecologically friendly design that harmonizes between the environment

and human. Sustainable design preserves natural surroundings and produces economic benefits such as results in decrease construction material cost and increase of energy efficiency. The increase in cost of energy and the demand for sustainability driven the designers be more responsible to plan for their design (Jones, 2008).

For sustainable design, architects and designers should find the definition of natural environments and human-made environments. People use natural environments to create human-made environments for meeting human purposes such as protection, safety and aesthetics. Whereas sustainable design considers the relationship between nature and manmade buildings. Environmental design is concerned with achieving a balance between human-made physical creativity and the reciprocal influence of natural forces (Golany, 1995). The most important thing is to seek harmony between the environment and human being. Furthermore, the environmental design field is the study of the complex relationship within each of the town environments as well as between the two environments.

MATERIALS AND METHODS

Research methodology is a set of systematic or methods to guide the research to achieve its objectives. It is deemed as a valuable item to assist in solving problems, especially social and economic problems. It is important so that the research not deviate from the original (Phophalia, 2010).

Research flow: The research flow is categorized into four key stages as shown in the Fig. 3 which further explained.

Stage 1; Preliminary findings: The initial stage of research is to find out and define the topic of research with relevant issues and problems regarding it. The conceptual idea of the topic is being written down in this stage, differentiating hypothetical questions and real-time problems of study. Literature review regarding the geomancy theories were identified in this stage too. The identified problems will then form the appropriate research methodology. Semi-structured interview was chosen as the method of data collection in this geomancy theory research. A total number of 28 questions were used to obtain the data for the research.

Stage 2; Data collection: The data collection is carried out among 4 of the architects which practice geomancy theory in Selangor. Relevant information was being collected through semi-structured interview with the respondents.

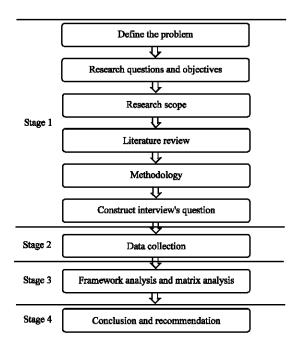


Fig.3: Research flow

Stage 3; Data analysis: The third stage in research is to analyse the data obtained to identify the key points and to solve the problem stated. The general perspectives of the architects are analysed using framework analysis. While the compatibility of geomancy theory between architecture designs is analyse using matrix analysis. The data's validity and reliability were being confirmed.

Stage 4; Research outcomes: The final stage of research is to group all findings and results is documented and arranged. All findings and results from the research were being documented into the project report. The summary of geomancy theory from the study is concluded in this part as well as the recommendation for future studies and the limitation of the study. It is identified that the geomancy theory may be biased towards the Chinese culture or the feng shui concept and the small sample size implies that the correlation of the built environment theories and the geomancy theories are not significant, however this is due to the lacking in numbers of practitioners in emphasizing feng shui design concept.

RESULTS AND DISCUSSION

The data collected are arranged accordingly to the data analysis method and the analysis with a reasonable explanation for semi-structured interview done. It split into three parts where the first cover the architect's

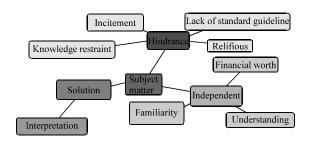


Fig. 2: Framework analysis map

perspective on geomancy theory in housing design and follow by compatibility of the geomancy theory and architecture housing design.

The perspective of architects on geomancy theory in built environment: Framework analysis is used to identify and analyse the outcomes for the respondent's perspective in geomancy theory. Three subjects matter are identified through the analysis process which are "hindrance", "independent" and "solution". Based on the framework analysis map, the significance of each subject matter is being explained through the researcher's understanding on what the subject matter is portraying. The subject matter is then breakdown into several sub-subject matters and further explained for each of their significances. The framework analysis map is shown in Fig. 4.

The subject matter "hindrance" refers to the deterrent factors that restrict the geomancy theory to be used in modern residential house design. This subject matter is derived into four sub-subject matters as follow.

Knowledge restraint: There are limited geomancy consultancies available and the cost to learn geomancy under geomancy course is expensive.

Incitement: All the architects conclude to that there is no push from the government to practice geomancy theory in housing design and implementation of geomancy theory related policies.

Lacking of standard guideline: The architects mentioned that the lacking of standard guideline is one of the hindrance for the application of geomancy theory. At the same time, some of the geomancy theories are too superstitious and not backed by the actual geomancy theory's practice.

Religious: The architects point out that the multi-racial and multi-cultural feature in Malaysia is one of the factors

that not all races practice geomancy. The Malaysian architects who are aware of geomancy implement it on Chinese clients.

The second subject matter is known as "independent" for it is an unbiased factor that does not affect the result. This subjects matter 2 covers three sub-subject matters as follow.

Understanding: The four architects have been administered with the similar question on awareness of geomancy theory. The responses are instantaneously positive however this understanding is based on personal attention on the subject.

Familiarity: The four architects have been administered with a common statement on the acceptance of integrating geomancy theory into residential housing design. The answers are generally positive; however the essential for familiarity deepness is based on the provided standard guideline.

Financial worth: The four architects have been administered with a same question on the add value of geomancy theory. The answers are generally positive; however, the cost-effectiveness of this added value is based on one's perception to appreciate the value of the geomancy.

The third subject matter is "solution" and it comprises the architect's suggestion to resolve most of the identified hindrance's problem. There is only one sub-subject matter under this subject matter as follow.

Interpretation: All respondents think that geomancy theory needed to be translated into the standard guide in order to solve the hindrances, backing up by scientific facts and figures.

Similarity and relationship between geomancy and built environment of outer form and inner form: By developing research study in architecture design and geomancy, similar consideration toward perspective of architects on each criteria are recognized. In this study, the relationship between built environment and geomancy will be discussed based on each geomancy criteria in outer form and inner form. The outer form of a house is assessed through landforms, soil quality, the shape and quality of watercourses, other buildings and objects, roads and vegetation around the foundations. The outer form is classified into two modules which are surrounding environment and external layout. The similarity and relationship of the architecture design and geomancy will be explained based on these two modules.

Table 2: Compatibility of architect's perspective on the 24 key geomancy design criteria

Surrounding environment	Compatibility	External layout	Compatibility	Internal layout	Compatibility	Interior arrangement	Compatibility
Topography	√	Shape of site	√	Layout	√	Door openings	√
Front	√	Main entrance	√	Doors	√	Bedroom	×
Back	√	Building's shape	✓	Windows	√	Kitchen	√
Sides	√	Orientation	✓	Room shape	√	Living room	×
Street location	√	Greenery and trees	√	Staircases	√	Bathroom	√
Water view	√	Pond	×	Ceiling	√	-	-
Wind direction	×	-	-	-	-	-	-

Yes (\checkmark) ; No (\times)

In the inner form, several house elements are focused such as the principal room where the householder lives, toilet, stove, living room and others. The inner form is classified into two modules which are interior layout and interior arrangement. The similarity and relationship of the architecture design and geomancy will be explained based on these two modules. The analyses for the compatibility of architect's perspective on the geomancy design criteria based on the 24 key geomancy design criteria are outlined in Table 2.

In this research, the similarities and differences between architecture design criteria and geomancy concepts are determined. From the analysis, the contemporary architecture design concepts focus on the space creation for human interactions and the balance between the nature and the built environment which can be identified with the geomancy theory criteria condition.

The finding shows that not every condition of each criterion will similar to the architecture design. Pond is referring to the position of ponds in relation to the building such as in front yard or in backyard. For this criterion, architects would not consider deeply due to the position of the pond do not affect much to the building. The position of pond is based on the shape of building. Based on the architect's perspective, they are more concern about the safety issue of the pond such as the depth of the pond rather than the position of the pond.

While most of the geomancy designs criteria condition in similar to the architecture design. With all the consideration of architects on the geomancy design criteria, the architecture design concepts on residential house are similar to the geomancy theories. Normally architects prefer to design house at higher ground to avoid flood and to have spectacular environment view. This is similar to the geomancy theory where higher ground can avoid the stagnation of Qi flow (Mak and So, 2005).

For the contemporary design concept considerations, the energy efficiency and market demand that focus on the sources and consumptions of natural resources are translated into measurement of physical attributes through elements such as light, thermal, water, air quality, etc.

Contemporary design focuses on how the man-made environment affects people and their performances. In contrast, the geomancy theory emphasize on the balance of physical forms and spatial arrangement. It also focuses environment but these aspects are difficult to be measured and qualified.

CONCLUSION

Geomancy theory has been adopted, accepted and applied by the Western world in the built environment context. The principles of the geomancy and the architecture design are similar in harmonizing the relationships between human and the built environment, at the same time focusing on human's wellbeing, even though the structure, principle and criteria of the western differs from the eastern.

The distinct feature of sustainable design in the western emphasis more on the sustainability in physical attributes such as efficiency of water and energy consumptions whereas geomancy emphasize on the balance of Yin and Yang, congruency of interior and exterior design in geomancy context and the harmony relationship between human and surrounding environment.

The geomancy knowledge embraces the current western's sustainability concept as well. The geomancy concept should be integrated more with the contemporary architecture design to promote the sustainable development in buildings and the natural environment.

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