

Traditional Feng Shui Architecture as an Inspiration
for the Development of Green Buildings

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Abstract

Feng Shui, one of the three pillars that support China's ancient architectural theory, was the soul of Chinese traditional architecture during its five thousand years history. It advocated the harmony between mankind and nature which perfectly coincides with the concepts of modern green buildings. Feng Shui includes geomantic astronomy, geography, human information science, and other fields. Because of the lack of systemic scientific knowledge associated with Feng Shui, it has a mystical character bordering at times on superstition. This paper analyzes the culture essence of Feng Shui and explores the relationship between traditional geomantic omen and architectural aesthetics. This paper also examines the application of traditional Feng Shui in site selection—indoor and outdoor, environment controlled, and other areas. The paper aims to help absorb and inherit the essence of Feng Shui and provides the cultural foundation and methods for the development of green building.

Keywords: architecture, green building, Feng Shui

Introduction: The Concept of Feng Shui Architecture

Feng Shui architecture is a discipline focusing on the study of the concept of *Feng Shui*. Guo Pu, Taoist mystic and prolific writer of the Jin Dynasty, says in his *Book of Burial* (2012) that Feng Shui involves a knowledge of the flow of *qi*, or life energy writing, “The air is scattered with the wind and is blocked by water” (p. 26). The ancients tried to gather it and not scatter it, move and control this energy. This was called Feng Shui. In the ancient book of *Ci Hai*, Feng Shui is also called *Kan Yu* and defined as geomancy and a superstition of the old Chinese. In this view, the dwelling resident’s fortune is determined by the house base or wind flow from one’s graveyard which causes differential potential energy. Feng Shui thus provides the guide for house base and tomb site choice.

In 1989, in the book *Study of Natural Science*, Yin Hongji wrote, “Feng Shui is a science for seeking auspicious building sites” (p. 12). Professor Pan Guxi pointed out in the preface of *Headstream Exploration of Feng Shui* (1990) that the core content of Feng Shui is the knowledge of selection and processing of the living environment. Its scope includes residential palaces, temples, tombs, villages, and cites, among others. Drawing on an ancient distinction, the mausoleum is called Yin house, and the residence is called Yang house.

The Cultural Essence of Feng Shui

Historically, the pre-Qin period is the birth of Feng Shui, such as *Shang Shu*, (*Book of Filial Piety*), followed by *Guideline of Geography* written by Guanluo in the Wei dynasty. Qingwuzi of the Han dynasty wrote *Zangjing* and described systematically the law of house and tomb site selection, and Qingwuzi was recognized as the ancestor of geomantic masters. Liu Ji in the Ming dynasty had rich knowledge of Feng Shui and wrote *Discussion on Geomancy*. Gao Yuxiang advocated the use of physical methods to interpret the knowledge of Feng Shui in buildings through the combination of ecology and geomantic omens.

In fact, Feng Shui Architecture in Chinese culture has a long history, which is broad and profound. It contains the ancients’ philosophical ideas, such as the unity of outlook on life, the view of nature with combination of

time and space, the value of view with unity of knowledge and action (Yu Zhuqun, 2012). Feng Shui, construction theory, and landscape architecture are the three major theoretical tools of Chinese ancient architectures. From the viewpoint of architectural planning, Feng Shui inherently requires a different approach to site selection and designing the outdoor environment.

Ancient Feng Shui architecture strongly advocates keeping harmony between mankind and nature and closely aligns construction and the ecological environment, consistent with the concept of green building. Feng Shui had a great following in the past century in China. After the 20th-century liberation, its theory and implementation in architectural practice both received a heavy blow. Recently, due to the importance of its applicability and international attention, the ancient principles of Feng Shui have been given a new vitality and have been introduced to the modern world. We should take the essence, discard the dregs, evaluate and interpret it more scientifically, combine it with modern science so as to better benefit mankind.

The Basic Elements in Ancient Feng Shui

The ancient geomantic omen contains four elements: dragon, hole, sand, and water (Yu Yi, 2009). Dragon's spirit means the floating air of the mountains. The air originates underground (hole). It runs along the winding and bumpy road and moves with the serpentine flow. Point means the mountain peak and location of air coalescence. Sand refers to the surrounding mountain caves; "ring sand" refers to the excellent natural environment point created by the peaks of the surrounding mountains which makes the air coalesce and resist being scattered by the wind. Water refers to the water flow related to points; "water circle" means water flows around the hole which make the air gather and not be lost.

Select Principles of Feng Shui Architecture

Overall System Principles

The theory of Feng Shui considers the environment as a whole system. The system takes the human as the center and includes the universe. Feng Shui's function is to grasp the relation between each subsystem, optimize the structure, and seek the best combination. The overall principle of Feng Shui

deals with the relationship between human and environment; this is also the basic characteristic of modern Feng Shui.

The Principle of Utilization of Local Conditions

Utilization of local conditions also means human should adapt to nature according to the objective environment (Liu Jiaping, 2012). Zhou Yi (Zhou Zhenfu, 2012) puts forward this principle: stop before going too far. China has a vast territory, diverse climate, different soil characteristics, and different architectural forms. The northwest has little rain with drought conditions, so people dig caves as dwellings (Fig. 1a). The southwest is moist and has many insects and animals, so people construct residential bamboo buildings suspended above the ground, (Fig. 1b). The prairie herders in Mongolia have portable housing with grass mats allowing them to migrate easily (Fig. 1c). People in the mountains of Guizhou and Dali build stone masonry houses, but people in the central plains build houses with soil (Fig. 1d). These building forms are in accordance with specific, local conditions. According to the actual situation, making buildings and residences suitable for nature, returning to natural materials, reverting to simplicity, and keeping harmony between man and nature is the true meaning of Feng Shui.

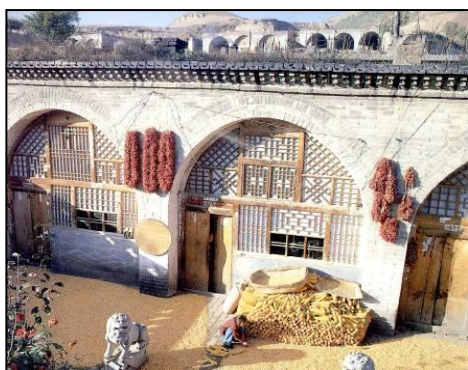


Fig. 1a. Caves as Dwellings in Northwest China



Fig.1b. Bamboo Buildings in Southwest China

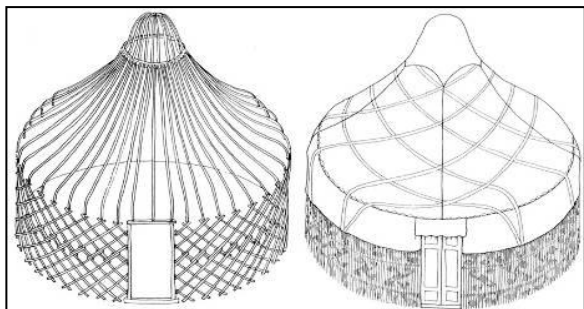


Fig. 1c. Mongolian Tent Houses



Fig. 1d. Stone Masonry Houses

The Principle of Sites Surrounded by Hills and Beside Rivers

One form of adaptation is where the buildings are surrounded by hills. Three faces of the residence are circled by mountains, one side is open, and the houses are hidden by tree leaves, just as the Zhang Guying village in Hunan which is located in this terrain. The Mufu Mountains extend five hundred miles here. Three big peaks raised in the east, north and west sides, such as a lotus with three large petals (Fig. 2a).

Another form is where the hills are covered by large groups of houses. For example, Wuhan University (Fig. 2b) is situated in the LuoJia Mountains and built against the mountainside. The student dormitories are close to the hillside, ringed with curved walls with a gate-shaped entrance. The mountain platform takes the city gate entrance as its axis. The libraries and teaching buildings are situated on both sides respectively, which is in hierarchical order and strict symmetry.



Fig. 2a. Zhang Guying Scenery: Village in Hunan Province



Fig. 2b. Wuhan University

The Principle of Sitting at the North and Facing South

Facing south not only gives access to light but also provide shelter from the wind. Chinese climate belongs to the monsoon type and includes cool and warm winds. Feng Shui principles of orientation are to choose sites facing toward the east and south which can accept the pleasant and warm wind called *Yang Feng*. However, a site facing to the north and west suffers a cool or chilly wind called *Yin Feng*. Without a wind block nearby, the family may experience decay due to bad weather. So conforming to the heavens, acquiring the mountains' spirit and taking sun baths are the best way to keep healthy and edify sentiment. For example, the traditional quadrangle courtyard in north China is the typical building which has experienced three thousands of years of use (Fig. 3).



Fig. 3. Quadrangle Courtyard
in North China



Fig. 4. Screen Used for
Indoor Design

Principle of Winding

The straight river or road is taboo according to Feng Shui. In outdoor environment design, the “grey space” is often used, such as the long corridor or shelter wall. The air will flow along the shelter wall, fitting the theory of feeling the wind. For indoor design, *Ping Feng* or a screen is used as shown in Fig.4. It is usually used to control air flow. It can avoid direct air flow and make the resident feel more comfortable.

Conclusion

China has a long history of over 5000 years of civilization. Different from western architecture which focuses on the building entity, housing

aesthetic effect, and specific functions using advanced technology and materials, Chinese ancient architecture pays more attention to the harmony between architecture, the human environment, and the compatibility between nature and mankind. Traditional Feng Shui architecture provides valuable principles accumulated during the long architectural history of China. China currently faces the great challenge of environmental problems. Besides introducing advanced technologies from the other countries, Chinese architects should look back to their history and draw from the essence of ancient architectural geomantic omens. It is a good method that can make buildings not only turn “green” but also maintain Chinese national characteristics, such as "embracing mountain and circling water" or "screen."

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Author Biography



Bo Su is an associate professor at Jiangsu University of P.R.China. He received his Ph.D degree in Civil Engineering at Tongji University in 2009. In the past five years, he has focused on teaching and researching wind engineering and sustainable building development in China. He has published more than 30 articles in Chinese journals and beyond, and received two Chinese patent authorizations. He serves as a member of Chinese Vibration Association and the leader of green buildings computer simulation centre in Jiangsu University. He is in charge of several research projects sponsored by the Chinese government and advocates development keeping traditional essence in old China.