

The Scientific Elements in Fengshuishu (风水术) in Ancient China

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Fengshuishu (风水术) is a long-standing skill which had great influences in Chinese history. Mystical and even superstitious as it seems to be, it still contains some truth of the nature which the ancient Chinese believed, including some elements known as science today. Just as ancient witch doctors created traditional Chinese medicine and ancient alchemists developed chemistry and led to the invention of the explosives, Fengshuishu also had great contribution to the development of ancient Chinese architectural ecology, the accumulation of the knowledge of ancient geography and hydrology, and the invention and dissemination of the compass.

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The Basic Theory of Fengshuishu and Its Five Major Steps of Procedure

The core theory of Fengshuishu is “gathering Qi (气) to attract good luck and fortune”. The “Qi” mentioned here refers to broad sense of aura (a kind of generalized air), which includes many aspects, such as Qi of sky, earth, human being, and vitality, wealth, luck, righteousness, and blessing. The so-called “gathering Qi” means to bring together all the “Qi” mentioned above together instead of letting them dissipate.

In the view of Fengshuishu scholars, when we choose a place to build a residence, the most important thing is that it should be able to gather Qi. All the surrounding topography, landform, and geographical environment must serve this purpose. Any place where Qi can be gathered together is a place with good Fengshui. Living in such a place means being able to live a long and healthy life, with prosperous population, promotion, wealth, and promising prospects.

On the contrary, any place where Qi cannot be gathered is a place where Fengshui is not good. Living in such a place means falling ill or dying young without descendants, along with hard future and unsuccessful career surely. Therefore, the residential Fengshui will directly affect one’s future and destiny. The good residential Fengshui will bring more blessings and good fortune while the bad one will have less blessings and endless doom. This idea is the most basic and core theory of Fengshuishu.

Since the Fengshuishu scholars regard “gathering Qi” as the most important standard for the site selection of residential buildings, then what kind of place meets the requirements of “gathering Qi”? What kind of topography and geographical environment is a real treasured land of Fengshuishu? In other words, how to determine the best residential site according to Fengshuishu and what should the Fengshuishu scholars really focus on? We’d like to introduce the most commonly used methods of investigation by Fengshuishu scholars of

the ancient time, a set of procedure including five major steps. The five major steps are:

(1) Milong (觅龙)—Searching for the dragon (mountain):

The dragon refers to the mountains in Fengshuishi. As the mountains are geographically similar to the dragons in ancient Chinese legends, the Fengshuishi scholars likened the mountains to dragons. Milong is to explore if there is a mountain behind the buildings to lean on, and explore how the range and shape of the mountain is.

(2) Chasha (察砂)—Investigating the Sha (hills or mounds):

Sha refers to hills or mounds in Fengshuishi. According to the requirements of Fengshuishi, besides the dragon, which means a main mountain behind a building to rely on, there must be hills or mounds on both sides of the building to surround it. Chasha is to observe the distribution and trend of these hills or mounds.

(3) Guanshui (观水)—Observing the river:

Guanshui is to watch and inspect whether there are rivers, lakes, streams, ponds, and other sources of flowing water in the vicinity of the building, and to investigate the location, shape, and water quality of them. Water plays a very unique and important role in Fengshuishi. Fengshuishi scholars have always believed that “Lucky land cannot be waterless” and “The best way of Fengshuishi is the encounter with water”.

(4) Dingxiang (定向)—Confirming the orientation:

Dingxiang is to confirm building orientation. It means to select the best direction for the building which the gate faces towards. Orientation is a very important thing in the location and layout of buildings. In China, it is preferable for buildings to face towards South or Southeast.

(5) Dianxue (点穴)—Specifying the position:

Dianxue is to confirm the specific location of the building. In the view of Fengshuishi scholars, the terrain, like the human body, also has its “acupoints”. This “acupoint” is in the intersection of mountain and river, where Yinqi (阴气) and Yangqi (阳气) converge. This place is also the optimal place and the most ideal base point for residential buildings.

These five steps are the most commonly used methods by Fengshuishi scholars to investigate Fengshui and select the building site. Combining these five steps, we can roughly understand what kind of geographic environment is the ideal Fengshui land for Fengshuishi scholars.

Let’s look at the picture of “Optimal Residential Site Selection”:



Figure 1. Optimal Residential Site Selection, illustration I.

The North side of the illustration is the mountain, which is the so-called “Dragon” in Fengshuishi; the East and West sides are hills, which is the “Sha”; the South side is a curved river known as “golden belt

embracing” in Fengshuishi, which is the “Water”; the black rectangle in the middle is the residential building, which is the optimal point of Fengshuishi. The whole residential building is situated back up the North and facing towards the South, with the mountain behind and the river in front, which is the best residential site in Fengshuishi mode.

Let’s look at another illustration of the “Optimal Residential Site Selection” below:



Figure 2. Optimal Residential Site Selection, illustration II.

In the picture, there are also mountains in the North and ponds in the South, rivers in the East and roads in the West side. The residential building in the middle is surrounded by mountains, rivers, and roads. This is another Fengshuishi mode of the best residential building site selection.

These two Fengshuishi modes are not only suitable for the site selection of a single residential building, but also for the construction site of a village or even a city.

Let’s look at two more pictures:

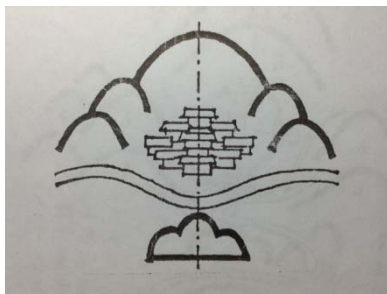


Figure 3. Optimal Village Site Selection, illustration III.

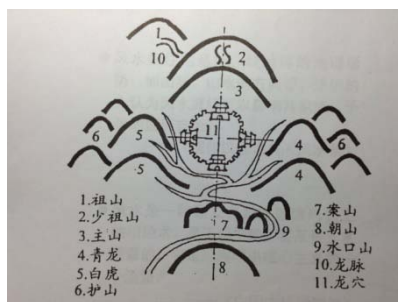


Figure 4. Optimal City Site Selection, illustration IV.

The picture above shows the site selection of a village and the picture below shows that of a city. The pictures seem a little more complicated than a single residential building, but in fact the requirements of Fengshuishi are the same: with the mountain in the North, the hills in both sides, and the rivers in the South. The building facing towards the South is surrounded by mountains and rivers.

The Knowledge of Architectural Site-Selection in Fengshuishi

In many aspects, the five major steps of procedure of Fengshuishi (风水术)—Milong (觅龙), Chasha (察砂), Guanshui (观水), Dingxiang (定向), Dianxue (点穴), accord with the geographical environment, meteorological characteristics, and other laws of nature in the region of China. Actually, it puts forward the ecological environment requirement and scientific standard of architectural site-selection suitable for Chinese people to live in.

Let's first look at "Milong"—searching for the mountain. The significance of "Milong" in building site selection is that there should be a range of mountains or a standing peak behind the building. As mentioned above, generally residential buildings in China should face towards the South or Southeast. If there are mountains and peaks behind them, it is equivalent to a natural barrier in the Northwest to block the cold air from the Northwest to the Southeast of the mountains; therefore it can minimize and reduce the disasters caused by the cold air from the North. This is undoubtedly more scientific and reasonable.

The second is "Chasha"—investigating the hills. "Sha" refers to the hills on both sides of the building. With mountains behind and hills on both sides, the district here becomes a semi-closed living space opening to the South or Southeast. It not only brings people a sense of security, but also helps to form the local ecological balance of the area.

The third is "Guanshui"—observing the river. Water is an indispensable resource for all living things and a basic condition for human survival. Without water, there would be no flourishing flowers, plants, and trees, nor the reproduction of cattle, horses, pigs, and sheep. Without water, all human activities, including agricultural production and animal husbandry production, could not be carried out smoothly. At the same time, rivers were the most important transportation resources in ancient times. It is convenient, fast, and economical to use boats for water transportation. Therefore, the investigation of water resources is absolutely necessary and important for building site selection.

The fourth is "Dingxiang"—confirming the orientation. For ancient people, defining the orientation of residential buildings as facing towards the South or Southeast is to maximize the use of sunlight and solar energy. It is the best and scientific choice not only for human production activities, but also for human health.

The last one is "Dianxue"—specifying the position. This is the final determination of the base site of buildings, in other words, to find an ideal specific location to build residential buildings in this ecological area. This location can neither be too close to the high slope of the mountain nor too close to the river. If it is too close to the high slope of the mountain, it would be too inconvenient to get water; and if it is too close to the river, the river flooding would collapse buildings and bring disaster to people. Therefore, the choice of the optimal position must conform to the natural laws and scientific principles.

To sum up, the five major steps of procedure in Fengshuishi are actually the five macro standards of Chinese ancients in their site selection of the buildings, which are in line with the natural laws of the geographical environment and meteorological characteristics of this region, and they indeed contain many scientific and reasonable contents. Because of this, the five major steps have become a general principle of the

site selection of ancient Chinese building. No matter to build a private house, or a group of villages for a big family, or even a fully-functioned large town, they are all inseparable from the guidance of these five principles and macro standards.

The Knowledge of Geography and Hydrology in Fengshuishu

Fengshuishu has another name in ancient times, called “Dili” (地理, the same word as geography in Chinese, which means the principles about the earth). Although “Dili” is not the geography what we are talking about now, it is an indisputable historical fact that Fengshuishu scholars take the terrain, landform, and hydrology of the earth as the object of observation and research. In their long-term exploration of landforms, terrains, rivers, and other activities, Fengshuishu scholars had accumulated a lot of knowledge of geography and hydrology, and contributed much to the development of geography in ancient China.

For example, Fengshuishu scholars engaged in searching for dragon veins, which exactly means to investigate and explore the location, direction, and characteristics of mountains in China. According to the theory of Fengshuishu, the origin of Chinese dragon vein is the Kunlunshan (昆仑山) in Xinjiang (新疆) and Tibet (西藏). The Southeastern branch of the Kunlunshan in China is divided into three main branches, which are called North Dragon, Middle Dragon, and South Dragon. The North Dragon originates from the Kunlunshan and goes to the Yinshan (阴山) and the Helanshan (贺兰山), and becomes the Taihangshan (太行山) after entering Shanxi (山西) Province, and the rest of this vein stretches to the Jieshishan (碣石山) by the sea. The Middle Dragon originates from the Kunlunshan to the Minshan (岷山), and spreads along the Minjiang (岷江), then to the Zhongnanshan (终南山), the Songshan (嵩山), the Taishan (泰山) and finally stretches to the sea at the Kunyushan (昆嵛山). And the South Dragon originates from the Kunlunshan to Lijiang (丽江) and Yungui (云贵) Plateau, then it is divided into three branches, and finally stretches to the sea at the Tianmushan (天目山). The main dragon veins and their branches depicted by Fengshuishu scholars roughly reflect the range, terrain, and location of the main mountains in China. They are a grasp image of important landforms of China and an initial cognition of geography in ancient China.

Fengshuishu scholars had also accumulated a lot of knowledge in the field of hydrology because they attach great importance to water. There was a legend that Guopu (郭璞), a Fengshuishu master in Jin Dynasty, once chose a place next to a big river (only a hundred steps away from the riverbank) as his mother’s burial site¹. Many people thought the tomb was too close to the river and worried that it would become flooded in the future. Guopu answered, “You don’t have to worry. Although the river is near the grave now, it will be far away from here slowly in the near future and the whole area here will become land”.

Just as he expected, it did not take long time for the area between the grave and the river to grow larger and larger, and the original riverbed area became the shore. Not only was the graveyard not flooded, but Guopu also got a lot of land out of nowhere. It is the reason that the graveyard selected by Guopu was located on the convex bank of a winding river (see figure below):

¹ The cemetery is called Yinzhai (the residence for the dead) in Fengshuishu, the requirements of which are consistent with those of residence for living.

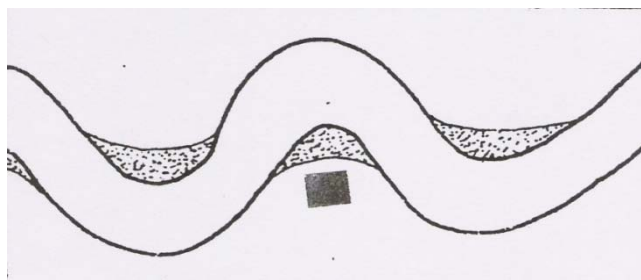


Figure 5. Illustration of the winding riverbed.

Under the impact of running water, the concave bank of the riverbed was constantly eroded, and the riverbank would be pushed towards a more concave direction. The eroded sediment was carried to the beach of the convex bank by the river, so that the beach of the convex bank moved to a more convex direction. And the distance between the graveyard and the bank will be farther and farther, and the land expanded larger and larger.

The riverbed change theory of the curved river is in accordance with the objective law of water impact and is an important content of modern hydrological theory. Guopu's Fengshuishu practice of the burial site selection shows that he understood the truth and grasped the law of hydrology.

From Luopan (罗盘, a Kind of Fengshuishu Tool) to the Invention of Compass

The compass is an important scientific invention of ancient China, and its earliest origin comes from Luopan, a directional tool of Fengshuishu scholars. As mentioned earlier, as one of the very important steps of Fengshuishu scholars, Dingxiang, namely confirming the orientation, the best tool to identify and tell the directions is Luopan. It can be said that Fengshuishu scholars had gradually discovered the earth's magnetic field in their long-term practice of confirming the orientation, and used it as the criterion for identifying directions, thereby making their contribution to the invention and application of the compass.



Figure 6. Illustration of the ancients' investigation for residential site.

This is a scene in which the ancient scholars were surveying Fengshui to investigate for residential site. The one in the middle was checking the Luopan placed on the bracket.



Figure 7. Illustration of modern Fengshui Luopan.

According to the existing ancient Fengshuishu classics, as early as the Tang Dynasty (about the 8th century A.D.), Fengshuishu scholars were already adept at using Luopan to identify the North and South. For example, in a famous Fengshuishu classic *Guan Shi Di Li Zhi Meng* (管氏地理指蒙) of the Tang Dynasty, it is said: “The reason why the needle of the Luopan can point North and South is as if the mother is attached to her children”.²

Bu Yingtian (卜应天), a Fengshuishu scholar in the late Tang Dynasty, also said in his book *Xue Xin Fu* (雪心赋), “To distinguish and confirm the direction, we must take the Zi Wu Zhen (子午针) as the standard”.³ Here “Zi (子)” refers to the North while “Wu (午)” refers to the South, and the Zi Wu Zhen refers to the Luopan.

In the book *Meng Xi Bi Tan* (梦溪笔谈) in the Song Dynasty, Shen Kuo (沈括) recorded the four specific types of compass in detail, and pointed out clearly that the content came from “Fangjia (方家)”, and the so-called “Fangjia” is the Fengshuishu scholars at that time. Shen Kuo also said in the book: “Fangjia used the magnet to grind the needle tip in order to make the iron needle point the South. But it is often slightly Eastward, not exactly South”.⁴

This shows that the Fengshuishu scholars at that time had mastered the artificial magnetization technology by grinding iron needles with magnets, and at the same time they had discovered the natural geography phenomenon of “geomagnetic declination”.



Figure 8. Illustration of geomagnetic declination.

² The original text is “针之指南北，顾母而恋其子也。”

³ The original text is “立向辨方，的以子午针为正。”

⁴ The original text is “方家以磁石磨针锋，则能指南。然常偏东，不全南也。”

As we know, the earth has two poles, the South Pole and the North Pole, which are the base points to indicate direction, and the straight line connecting the two poles of the earth is the meridian. At the same time, the earth is a magnetic field with North and South magnetic poles, and the straight line connecting the North and South magnetic poles is called magnetic meridian. Since the magnetic poles do not coincide with the earth's poles, the magnetic meridian and the earth's meridian form an intersection and get an angle called geomagnetic declination. The geomagnetic declination angle is not exactly the same in different parts of the earth.

It shows that the direction of the magnetic needle is just a little South by East in China. It can be seen from the records in *Meng Xi Bi Tan* that the ancient Fengshuishu scholars did make important contributions to the invention and application of the compass, the invention of artificial magnetization technology, and the discovery of geomagnetic declination.

In short, while we criticize the mysticism in Fengshuishu in ancient China, we should also note the elements in line with scientific principles contained therein, and evaluate correctly their status and value in the history of science and technology.