



RESEARCH ARTICLE

Exploring the Wave Motif in Pictorial Maps: From the Perspectives of Chinese Painting Theory and Water Culture

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ARTICLE INFO	ABSTRACT
Received: May 25, 2024	As a kind of traditional Chinese motif, the wave motif appeared as early as in the Neolithic age, and has been utilized in various artistic works, daily utensils, and decorative objects in the Song Dynasty. This study explores the visual features of the wave elements in the pictorial maps, combined with the analysis of Chinese painting theory and water culture. Through this study, the wave motif's value, including visual and cultural value, can be found and utilized in contemporary tourist maps. This study can enhance the practicality and cultural value of tourist maps, fostering the preservation and development of water culture.
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INTRODUCTION

Chinese traditional society relied on agriculture for its sustenance and progress. Water, sun, earth, fire served human survival and production in the early civilization (Wang, 2019). By observing rains and rivers in nature, ancient humans created patterns, just like the totems, on objects to convey the fear of nature. Wave motifs have been found as early as on the pottery in the Neolithic period (**Figure 1**). For example, pottery in the Hemudu Site from 7000 BC to 5000 BC has wave motifs. Some pottery has continuous angular wave motifs in the Dawenkou Site (4300 BC to 2400 BC). Two intertwined wave lines were painted on the pottery in Da'xi Site (4400 BC to 3300 BC). Until the Majiayao Site (3300 BC to 2900 BC), the wave motif was more rich and diverse, with the motif of a spray type. These potteries with wave elements were unearthed in rivers and lakes.



Figure 1. Wave Motif in the Neolithic Period: (a) Pottery in Hemudu Site (7000 BC - 5000 BC). (b) Pottery in Dawenkou Site (4300 BC - 2400 BC). (c) Pottery in Da'xi Site (4400 BC - 3300 BC). (d) Pottery in Majiayao Site (3300 BC - 2900 BC).

The early form of the wave motif was relatively simple, manifesting the elements in nature at that time. Until the Tang Dynasty (AD 618 - 907), with the development of production technology and integration of multiple cultures, the wave motif was changeable and appeared in a variety of material objects. In ancient times, water has consistently appeared in decorative objects or paintings, rather than in the theme of artworks. Maeda (1971) claims that water can be treated as an independent role, which began during the Tang Dynasty and reached its zenith in the Song Dynasty (AD 960 - 1279). Stavrianos described the Song Dynasty as the “Golden Age” because of its economic and cultural importance (Zhang, 2023). Liu (2017) claimed that during this period, the proportion of utensils, furniture, and decorations with elements of wave motif was vast. In a book dedicated to recording the construction of buildings in the Northern Song Dynasty, there are many designs of wave motifs (Lin, 2016) (Figure 2).

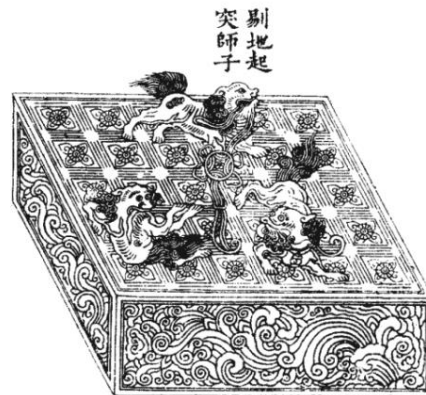


Figure 2. Wave Motif in the Architecture of the Song Dynasty (figure from Book of Yingzao Fashi)

According to the classification of wave motifs by Zhou (2021), wave motifs can be divided into three styles: vortex-type, wave-type, and surf-type (Zhou, 2021). At the same time, these wave motifs can be combined with clouds, mountains, flowers, and others to form a new combination motif. By summarizing the wave motif of each historical period, Li (2023) divided it into wave-type, surf-type, scale-type, and vortex-type (Li, 2023). After several scholars' research, the wave motif is assorted into original forms, simple use of the form, and decorative forms, according to the complexity of the forms (Table 1).

Table 1. The Classification of Wave Motif (most of the figures come from Li's MA thesis, Li, 2023)

Type Form	Wave-type	Surf-type	Scale-type	Vortex-type
Original Form				
Simple Using Form				
Decorative Form				

In Chinese painting, Ma Yuan drew twelve pictures of the water theme. Through careful observation, Ma Yuan expressed the changes in the properties of water under different environments in the paintings. The wave motif was well represented in these paintings using smooth and rhythmic lines, and similar motifs are also used in the pictorial maps. Taking the map of Yangzhou Prefecture as an example, there are different forms of wave motif used in the map (

Figure 3).



Figure 3. Wave Motif in the Map of Yangzhou Prefecture (AD 1594, Ming Dynasty)

Since ancient times, water has been regarded, as a significant part of Chinese culture, as Ball (2017) believed water nurtured Chinese civilization and fostered Chinese culture. In recent years, China has taken the protection, inheritance, promotion, and utilization of “water” as the main line that promotes construction and the sustainable development of water culture. By vigorously developing tourism in China, water is not only a valuable ecological resource, but also a valuable cultural resource. Tourist maps can make the landscape of water theme in tourism resources into visual elements, attracting tourists and developing water culture.

From the systematic research by Liu (2017), Ding (2020), and Li (2023) on the ancient wave motif, the motif has excellent cultural and artistic value to modern design, and they can better serve contemporary decorative art through diversified designing methods. However, they are not involved in the wave motif in Chinese paintings and pictorial maps (Ding, 2020; Li, 2023; Liu, 2017). Zhao (2016) introduced techniques of drawing water and its schema in Chinese paintings, but failed to systematically explore from the perspective of the motif in visual expression. Maeda (1971) discussed the water theme in Chinese painting and researched the cultural background from which it originated. However, the function and significance of water, as motifs in paintings, have also yet to be sufficiently explored (Maeda, 1971).

Moreover, research on the specific applications of wave motifs in pictorial maps is limited, especially as visual elements appear in modern tourism maps. Furthermore, Lu et al. (2020) highlight the importance of water culture in tourism development, especially in discussing the relationship between tourism and culture. However, there has no discussion from the art field. Consequently, existing research has not adequately elucidated the wave motif in modern cultural transmission and tourism development, thereby emphasizing a distinct research gap.

The aim of this study is to explore the visual features of the wave elements in pictorial maps, by combining the analysis of Chinese painting theory and Chinese water culture. Through these visual features, we can explore how to use and redesign the wave motif in contemporary tourist maps to inherit and promote Chinese traditional culture, especially in advocating the culture of water theme in China in recent years.

LITERATURE REVIEW

Haron et al. (2014) defined the motif as a visual element or image that serves as a foundation or recurring pattern in specific artworks. Wave motif came from the deformation of water. Different wave motifs are used according to water sources, such as rain, lakes, rivers, seas, etc. Water represents an element of nature, the first of the five elements in China, and has a fundamental

symbolic significance on the spiritual level (Williams, 2012). In traditional Chinese culture, water and mountains are often linked together, representing “longevity and good fortune as unlimited” (Welch, 2013). As Williams (2012) stated, water refers to the philosophy of religion, for example, in Taoism, Yin Yang and Feng Shui. In the philosophy of Yin Yang, water usually acts as an attribute of Yin, opposite to Yang. From this, five elements constitute the power of nature: metal, wood, water, fire, and soil, called the “Wu Xing” (Graham, 1986). The relationship of each element, positive and negative effects, is also in line with the philosophy of Taoism.

As Shaw (1988) claimed, religion in ancient China impinges on the development of art, including connotation, function, and form. In particular, Chinese religious culture deeply influences Chinese landscape painting (Shaw, 1988). Due to this, Chinese landscape, an important part of Chinese painting, generally believes that the mountains and water refer to nature and the spirit of “the unity of humans and heaven” behind the paintings. Maps and paintings from ancient times were perceived from similar origins (Gang, 2020). Rees (1980) stated that Geography and art have a shared foundation when viewed from a historical standpoint. As a type of cartography, pictorial maps use symbols or illustrations to depict a specific theme, incorporating features such as landmarks and buildings (Naz, 2005). They show a deep comprehension and manifestation of geographical features and cultural aspects, based on the aesthetic principles of Chinese paintings. Therefore, as a part of Chinese culture, water presents different motifs from visual expression. In addition, the traditional water culture can also be represented by connotation. Feng Shui is a very ancient theory in China, even earlier than Chinese landscape painting, and is a product of the harmonious relationship between humans and nature. Because of the reflection of the interactive relationship, it also gradually integrates into the drawing of mountains and water in Chinese landscape painting. Ho (1989) defined it as the harmonious impact of natural elements on a landscape and its inhabitants. Water is a vital element in Chinese painting and its philosophical theories.

In Chinese traditional culture, water is a variety of motif aesthetics that reflect the philosophical connotation of the source of life. Sullivan (1962) elaborates that the mountain is the main body of the universe, in the opinion of the ancient Chinese people, and water is the blood flowing in the veins. This unique perception and imagination of nature produced a language of visual symbols, which has gradually evolved into images. At the same time, studying ancient Chinese literature, he believes water is an essential symbol in Chinese philosophy. He cites the famous Taoist theory, “The highest good is like that of water,” highlighting how water embodies vital virtues such as adaptability, humility, and the nurturing of life, which are central to Chinese cultural values (Sullivan, 1962). Mozaffari (2002) defines culture as a pattern of habitual behaviors among a group of people. It is an intricate mental structure including values, beliefs, conventions, and other subjective aspects, collectively shaping human behavior (Hsu & Huang, 2016). Perkins et al. (2011) argue that the relationship between maps and culture is not neutral and objective, but that maps, as part of the cultural system, can reflect the politics, economy, technology, and behavior of the society at that time. In Chinese culture, water is revered for its natural qualities and capacity to represent symbolic and philosophical concepts, and reflect societal contexts.

METHODOLOGY

The research methods employed are qualitative methods. Qualitative research is a comprehensive approach to gathering information based on a specific scenario and an individual (Piaw, 2008). In order to investigate the wave motif in ancient pictorial maps, which look more like Chinese paintings, this research adopts the historical methods to collect and analyze visual elements from 45 pictorial maps, most of which are from the Ming Dynasty to mid-Qing Dynasty (AD 1368 - 1840), a fastigium of pictorial maps. In addition, combined with the theory of Chinese landscape painting, the use of wave motif in vision and culture is deeply discussed by case analysis.

The painting techniques of water are divided into lines and planes in Chinese painting. Among the techniques, there are many methods to draw lines, and the methods of planes are divided into the ink dyeing method and the blank space method. This study pays more attention to the wave motif that uses lines. Taking “Shui Tu” of Ma Yuan as an example, he painted the twelve motifs of water, which are used in landscape painting to depict different forms of water (Ma, 1212). Ma Yuan, a famous painter in the Southern Song Dynasty (AD 1127 - 1279), was good at expressing the forms of water in different flowing environments and movements, with different drawing techniques. The painting scroll has a simple composition and mainly with lines expression, which is a representative artwork that perfectly combines Chinese landscape painting and motifs in the real sense (**Figure 4**).

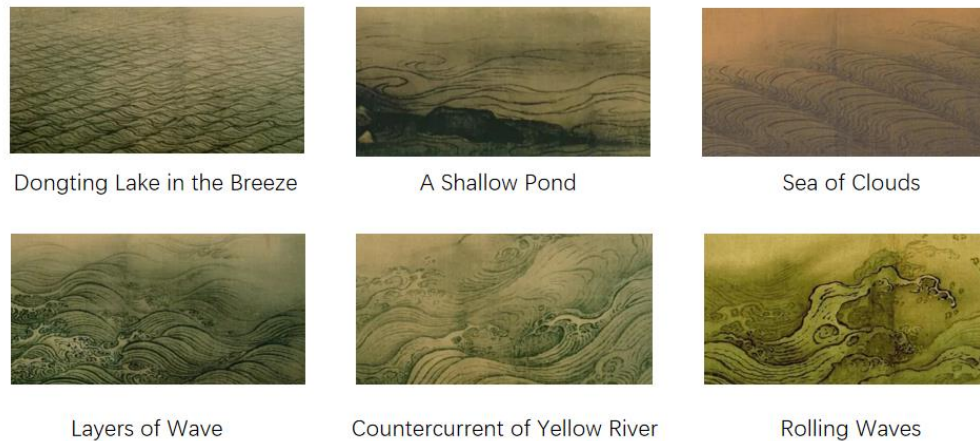


Figure 4. “Shui Tu” of Ma Yuan (Ma, 1212)

The lines of wave motif in Chinese landscape paintings are classified and sorted out. There are several kinds of wave motif, such as Wave-shape, Net-shape, Vortex-shape, Scale-shape, and Surf-shape (Bai, 2019; Yang, 2023). The shape is arranged with wavy lines, which are used to show the calm ponds and lakes. From the perspective of vision, the smooth curving lines guide the viewers' eyes to follow the flowing movement, making the painting peaceful and quiet, and giving the viewers spiritual comfort. The net shape, named for its motif, is like a fishing net, showing the ripples from the breeze blowing into the lake. Parallel lines intersect with oblique lines, presenting a dense “net-shape” in the painting. The scale-shape is more like fish scales to show the sparkling of the lake in the sun. The shade of ink and the lines' density make the painting more elastic as if in the lake, to feel the wind blowing. The vortex shape is more intense than the previous several motifs, so it is also used to show the turbulent streams, which are visually presented as an S-shape. The last is the surf-shape, assembled by the surf and waving lines. Moreover, these kinds of motif can also be found in the pictorial maps. The following table is from Chinese landscape paintings and pictorial maps, respectively (**Table 2**).

Table 2. Shape and Expression of Wave Motif

Shape	Wave-shape	Net-shape	Scale-shape	Vortex-shape	Surf-shape
Expression					
Motif by Line					
Chinese landscape painting	 Chunqian Xiyao Tujuan (Partial), Qing Dynasty. Collection at the Cleveland Museum of Art.	 Xiangxing Chuxue Tu (Partial), Five Dynasty. Collection at National Palace Museum Taipei.	 Huanghe Lou Tu (Partial), Qing Dynasty. Collection at National Palace Museum Taipei.	 Min You Tu (Partial), Ming Dynasty. Collection at the Museum of Liaoning.	 Huangjiu Jujin Tu (Partial), Ming Dynasty. Collection at the Palace Museum, in Beijing.
Pictorial Map	 Military Map of Menghe Brigade (Partial), Qing Dynasty. Collection at British Library.	 Atlas of Jiangxi Province (Partial), Qing Dynasty. Collection at British Library.	 Illustrated Atlas of Quanzhou Prefecture(Partial), Ming Dynasty. Collection at Library of Congress.	 Map of the Grand Canal water course (Partial), Qing Dynasty. Collection at Library of Congress.	 The Silk Road Landscape Painting Map (Partial), Ming Dynasty. Collection at the Palace Museum, in Beijing.

The table shows that the use of wave motifs, such as Wave-shape, Net-shape, Vortex-shape, and Surf-shape, in Chinese landscape painting, is very similar to those in pictorial maps. This comparison shows that wave motif in Chinese landscape paintings and pictorial maps share a similar visual language. The research of wave motifs in both domains can be further analyzed through Chinese painting techniques. In Chinese landscape painting, the brushwork and ink technique are crucial for depicting the fluidity and dynamism of water. Cartographic representations also reflect these techniques, which can convey visual aesthetic and geographical information. When exploring Chinese painting techniques, scholars often study Xie He's "The Six Principles" (6th century AD), which provides a foundational theory for understanding the visual specification and spiritual connotation of Chinese painting. Cheng (2018) translated "The Six Principles," which are six critical aspects of painting, including "spirit resonance," "bone-manner brushstroke," "conformity in form with the object," "coloration according to type," "well-planned composition" and "model copying" (Cheng & Hung, 2018). Therefore, the visual analysis of wave motifs will be generally based on the theory of "The Six Principles."

Brushwork in a Wave Motif

The brushwork, the second principle of "The Six Principles," with black ink, can create an infinite variety of lines and dots. According to Kwo's (2012) statement, the brush can generate different strokes, light or heavy, swift or slow, concentrated or diluted, dry or moist, shallow or deep, scattered or clustered, all of them making harmony and vigorous expression of the painting or calligraphy. In Chinese landscape painting, both the form and trend of water are inseparable from the use of lines; the brushwork forms different densities and wetness. Take the Map of the Grand Canal, painted during the reign of Emperor Kangxi in 1702 AD, and now held in the British Library. This map, in the form of a scroll measuring 944 cm long, shows the entire route of the Grand Canal from Beijing to Hangzhou, and depicts the geographical environment of the canal, river, mountains, etc. The canal passes through the Yangtze and Yellow rivers and finally flows into the sea. To distinguish all kinds of geographic information, the wave motif in this map is drawn according to the flow of water and terrains. These elements of wave motif were extracted and compared with the previous table of shapes. It can be seen that a calmer flow uses Wave-shape and Net-shape, while a faster flow uses several other kinds of wave motif (Table 3).

Table 3. The Water Classification and Shape in the Map of Grand Canal

Shape	Wave-shape	Net-shape	Scale-shape	Vortex-shape	Surf-shape
Canal		/	/		/
Lake			/	/	/
River		/		/	/
Sea		/			

Color Theory in a Wave Motif

Chinese painting uses color to depict the subject's features rather than focusing on light and shading effects. Green can be used on leaves and trees, gray on stones, and blue on water to represent the qualities of these natural components. Color can also enhance a main subject's prominence or create a perspective illusion, with objects closer to the viewer being more vibrant (Gambarov, 2006). In the landscape painting principles of Xie He (479-502), the fourth principle is named "coloration according to type". Its meaning is drawing different colors with different categories of objects based on reality; this conception of category does not refer to a particular object, nor to objects in a particular environment, but to different objects that are identical or similar (Cahill, 1961; Cheng & Hung, 2018). In this map, the color of the water is generally cyan, green, and ochre. Take the partial of the Yangtze River and the Yellow River into the sea as an example; the Yangtze River is roughly green, the Yellow River is ochre, and the sea is cyan. Of course, according to the water flow, the color is expressed as dark and light (**Figure 5**). This section is exceptional on the map, where the estuary of the Yangtze River and the Yellow River are drawn in the same frame, and the viewers can clearly distinguish them by colors. The estuary of the former is in the East China Sea, while that of the latter is in the Bohai Sea. Moreover, these three colors, cyan, green, and ochre, are common in typical green-blue landscape paintings. The most essential colors in blue-green landscape painting are Cyan (blue with green) and Green. In the *Shuo Wen Jie Zi*, it said, "Cyan is the oriental color," which is a symbol of the germination of plants and the growth of everything in the world (Chun Xiang, 2023). The implication of the growth is derived from the philosophy of Taoism, which hopes to live forever, so Cyan and Green are particularly valued in the color theory of Wu Xing. This thought of pursuing a longer life is not only in the writers and painters, who want to stay away from politics and indulge in the landscape, but also in the emperors who pursue immortality of life, representing the continuation of power.

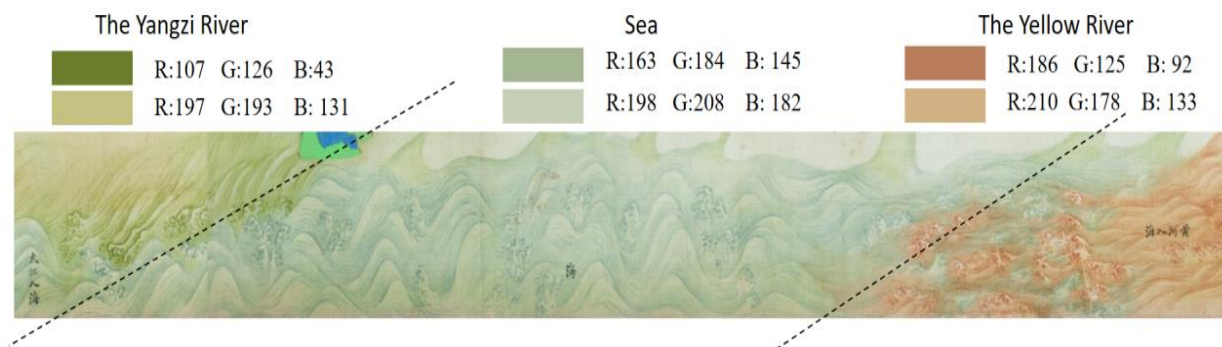


Figure 5. The Color Analysis of the Map (Partial)

Composition in a Wave Motif

The composition of paintings comprises the interrelation of colors, light and shadow patterns, and object arrangement—all of which reflect the artists' creative intentions (Zheng et al., 2015). In the

six principles of Xie He, the fifth principle is called “well-planned composition”, which means the elements in the painting should be arranged in the proper placement, and deal with suitable spatial logic and relationship. Internally consistent spacing and direction are required for the primary and background elements, which correspond to place, space, and depth (Chávez, 2023). The philosophy of Yin Yang, which is the birth and growth process that cannot be divorced from Taoist culture, impacts traditional Chinese landscape painting. These ideas emphasize the significance of natural element organization for the energy from universal. In addition, Yin Yang is essential to the theory of color and Feng Shui, and balance is also what the painters pursue in Chinese landscape painting (Cao & Kong, 2014; Gambarov, 2006). Ghilardi (2021) asserts that dynamic harmony and balance are achieved through the animation of the “Vital Breath,” which is generated by Yin and Yang. The map of the water theme can be named “Shui Kou”, which is used to show the “Vital Breath” in the water composition. Take the part of Hangzhou Prefecture as an example; this section depicts the part of the Qiantang River flowing into the East China Sea. On the left of the frame, and also on the top left of the scroll, there is a red sun rising from the East China Sea, representing hope and luck in Chinese tradition. At the same time, the land is surrounded by mountains, forming an incomplete closed area, leaving appropriate blank space, which means “Shui Kou” or “Vital Breath” (Figure 6). Painter Chen (2022) believes the completely closed space lacks vital fluidity and artistic conception.



Figure 6. The Vital Breath (Shui Kou) of this Map (Partial)

Cultural Conception in a Wave Motif

Chinese landscape painting pursues the combination of “External Aesthetic” and “Internal Aesthetic”. The former refers to the visual aesthetic, while the latter is concerned with the resonance of the mind and emotion, which enables viewers to integrate with nature, in order to achieve the most optimal emotions, and to identify the spiritual home in the landscape painting (Cao & Kong, 2014). According to Xie He’s “Six Principles” theory, the first principle is “spirit resonance.” That.” What we mentioned is “Vital Breath” in the last section. In China, water is regarded as a spiritual symbol. Wave motifs, mountain motifs, and cloud motifs are used to connect with physical objects, convey a concept, and evoke a feeling. Li (2022) stated that the cultural symbol formed by Chinese civilization is shown in formal expression, philosophy and values. After long-term development, the connotation can be realized, while the cultural value is established (Li, 2022).

The Use of Wave Motif in Pictorial Maps

Using the Map of the Grand Canal for an in-depth visual analysis, combined with the theory of Chinese landscape painting, this case aims to gain a deeper understanding of wave motifs in Chinese pictorial maps, by examining specific examples in detail. After the case analysis, a table listing 45 pictorial maps with wave motif from the Ming and Qing dynasties will be compiled (Table 4).

Table 4. The Use of Wave Motifs in Pictorial Maps (Partial)

No.	Name	Chinese Name	Year	Function of Map	Thumbnail	Brushwork					Color
						Wave-shape	Net-shape	Scale-shape	Vortex-shape	Surf-shape	
7	Selden Map of China	塞爾登地圖	1620 - 1629	World Map		/	/		/	/	Green
8	Coastal map of Shandong, Zhili, and Shengjing	山東、直隸、盛京海疆圖	1634 - 1652	Military Map			/		/		Blue
9	Huang Ming zhi fang di tu	皇明職方地圖	1636	Administrative Map					/	/	Ochre, Green
10	The Atlas of Thirteen Prefectures in Jiangxi	江西十三府道里圖	1682 - 1691	Administrative Map				/	/	/	Green
11	Geographical map of Taiwan Island	台灣地圖	After 1684	Administrative Map			/	/		/	/
12	Canal Map of Beijing to Hangzhou	京杭運河圖	1688 - 1690	Embankment Map		/					Light Ink, Light Blue
13	Administrative Map of Shanxi	陝西輿圖	1697 - 1721	Administrative Map		/			/	/	Ochre, Green

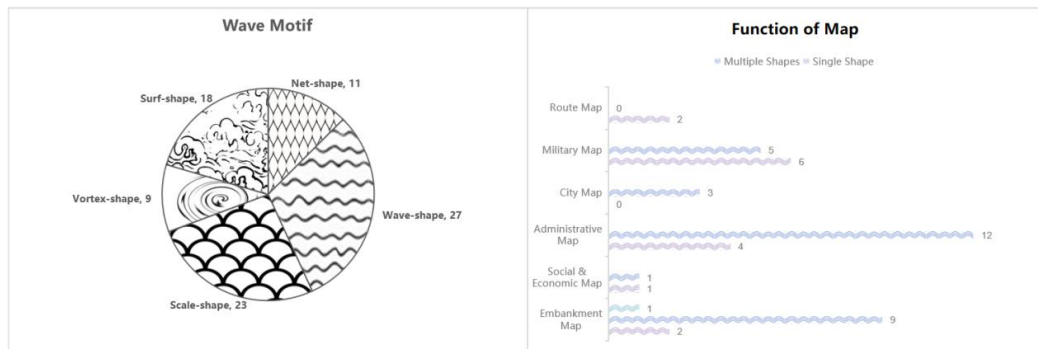


Figure 7. The Figure from 45 Pictorial Maps: (a) The use of wave motif in pictorial maps. (b) The kinds of shapes in different functions of maps

From these 45 maps, the most used wave motifs are Wave-shape and Scale-shape, 27 and 23, respectively. Surf-shape is usually used in maps themed on "sea". Through color analysis, it can be seen that ochre, blue, and green are most used in wave motifs. Generally speaking, city maps and military maps, expressing a smaller territory, usually only use a single kind of wave motif. However, more kinds of wave motifs are used to represent larger territory maps, especially water-related maps, such as coastal defense maps, navigating route maps, and embankment maps. It can also be seen from the tables that the wave motif is related to the actual water resources, both in terms of shapes and colors. By vividly describing the water resources in various geographical situations, the painter conveys water's visual and cultural information to the viewers (**Figure 7**).

DISCUSSION

Chinese landscape painting and pictorial maps share a common appreciation for the beauty and complexity of nature, influencing each other in aesthetic representation and symbolic significance of geographical features. A profound grasp of the cultural, philosophical, and aesthetic frameworks that have historically influenced landscape representation in China, can be gained by examining the visual elements of pictorial maps through the lens of painting theory and water culture. The Chinese traditional motif is the significant carrier of culture, which is the expression of cultural and aesthetic consciousness, and the expression of social productive forces at that time. The wave motif has also been applied in many modern design works as a Chinese traditional motif.

Under China's vigorously developing water culture, various cities have launched tourism projects with "water" as the core. Tourist maps promote tourists' cognition of local culture and local tourism development. It can integrate local buildings, natural resources, and other aspects through visual design into a map. Of course, under the influence of today's technology, it is no longer a visual design of two dimensions, but multiple effects combining AR, VR, and other technologies. However, the ultimate goal of the technological changes is to serve the dissemination of culture better. In recent years, China has developed the construction of water culture, and several cities have taken the forefront in the tourism of "water culture", while designing relevant tourist maps. However, most of them are cartoon elements or images of natural scenery. As some designers pay more and more attention to traditional culture, they seek inspiration from Chinese landscape paintings, and apply these traditional visual elements to tourist maps.

In the design of tourist maps, some only learn colors from ancient paintings, while others use Chinese painting techniques. Compared to ancient pictorial maps, the modern tourist maps of water culture-theme still fall short in the representation of the wave motif. Although maps with wave motifs are not the only types of ancient maps that can be found, many ancient symbolic maps do not represent water resources as motifs, but instead, use large blank spaces or color painting. Another limitation of this study is that its findings are particularly relevant for tourist maps highlighting water resources, and water culture tourism attractions or cities, and may only apply to some tourist maps.

Take the tourist map of Yichun City in Jiangxi Province as an example. The entire map follows the style of Chinese landscape painting, but the architecture becomes the visual focus, while the various water resources become easily ignored elements (**Figure 8**). Yichun City is renowned for its diverse mountain and water landscapes, with many attractions famous for their water resources. Enhancing the visual effect of water elements on the tourist map could better promote water culture and attract greater tourist interest.

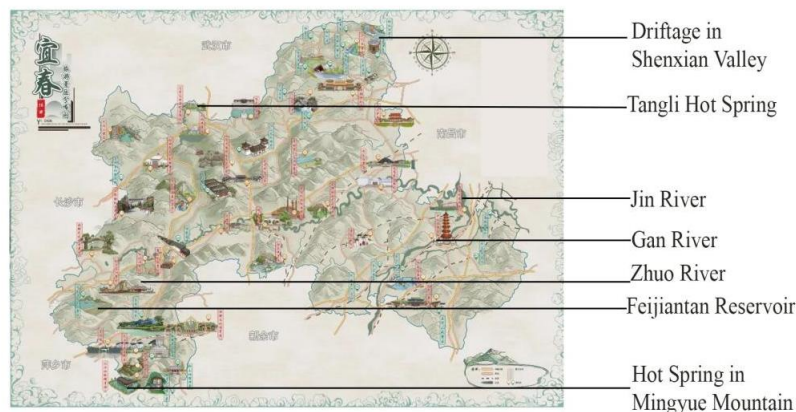


Figure 8. The Tourist Map of Yichun City

CONCLUSION

This study conducts an in-depth analysis of water motifs in ancient Chinese pictorial maps, focusing on the Map of the Grand Canal, and integrates the theory of Chinese landscape painting to explore the regulations and values of wave motifs in these maps. Through the visual analysis of 45 pictorial maps featuring wave motifs, it can be seen that these motifs have practical significance in representing water resources, and can better help viewers understand water culture.

This research provides a new perspective on wave motifs in ancient pictorial and modern tourist maps, contributing to promoting Chinese water culture and developing the tourism industry. Designing modern tourist maps themed around "water culture" requires emphasizing visual

representations of wave motifs such as rivers, lakes, and waterfalls, while integrating traditional Chinese landscape painting styles with modern cartographic techniques. Through the visual design of the wave motif, the practicality and cultural value of tourist maps can be enhanced, fostering the preservation and development of water culture.

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