

Research on the Design of Map Cultural Products – Taking Anhui Province as An Example

Xiaoyan Xu*, Xu Liu, Yong Yuan

Anhui Fourth Institute of Surveying and Mapping, Hefei, 230031, Anhui Province, China

Abstract: This paper systematically sorts out the development of maps and map culture, and takes it as a guide to focus on the design background, design ideas, production plans, and design results of Anhui map cultural products, providing a reference for the design and development of map cultural products in the future.

Keywords: Map culture, Design, Theme selection, Content design

1. Introduction

A map is a graphic representation of the geographical information on the earth on various carriers through scientific generalization and using a symbol system in accordance with the corresponding mathematical laws, so as to convey the distribution laws and development changes of their quantity and quality in space and time. It is impossible to trace back when the first real map appeared in human history, but according to the unearthed ancient Babylonian map and the "Nine Tripod Map" of the Xia Dynasty recorded in "Zuo Zhuan" in China, the history of human compilation and use of maps It has been more than 4500 years [1,2].

In the most primitive maps, human beings just try to use impressions to describe geographical information on carriers such as bark, pottery, and slabs to record locations and identify directions. With the gradual development of social productive forces, human production practices have become increasingly complex, and map compilation technology has also made great progress. Especially in the second century A.D., Claudius Ptolemy, who was born in Egypt, systematically proposed the meaning of cartography in his book "Introduction to Cartography", and gave cylindrical and conical projections. And the method of spherical projection, which pushed the cartography of the classical period to its peak. In China at about the same time, there was also a great cartography master who complemented him—Pei Xiu, who also put forward the famous epoch-making cartography theory "six bodies of cartography" in the preface of "Yugong Regional Map". It constructed the theoretical basis of ancient Chinese map drawing [3].

With the rise of capitalism in the 14th century, the classical maps with low accuracy have been difficult to meet the needs of production and trade, and the rapid development of science and technology brought by the industrial revolution has laid a solid data foundation for

the modern maps with higher accuracy. The science of cartography took a further leap forward.

In the 1950s, with the introduction of the three major scientific theories of information theory, system theory, and cybernetics, as well as the rise and development of computer science and technology, cartography entered the information age, and the functions of maps continued to expand. The integration with other disciplines continues to deepen, and the focus of cartography is gradually shifting from information acquisition to information deep processing.

2. The concept of map culture

"Map" and "culture" are two different concepts, but they are inextricably linked. Fundamentally, both are spiritual wealth created with the theme of human beings, and they are symbols of civilization. Maps are the product of culture. "Map" and "culture" are interrelated and inseparable. On the one hand, map is the carrier of cultural inheritance, and map activities are deeply influenced by cultural background. On the other hand, the cultural outlook is reflected through maps. It is precisely because of this close connection between the two that map activities have formed a special subculture, which can be called "map culture".

Therefore, map culture not only includes the scientific theories and scientific spirit formed in the compilation of maps, but also includes all the information carried on the maps, such as social phenomena, religion, philosophy, customs and customs, as well as the interpretation and recognition of maps by map readers [4,5].

It can be said that from map design to production and application to dissemination, every link contains a rich map culture. Map culture has penetrated into every link of the "dynamic system" of maps invisibly and powerfully,

* Corresponding author: 351348819@qq.com

forming a map science culture, map technology culture, map engineering culture and map industry culture.

3. Design of Anhui map cultural products

3.1 Design background

(1) Anhui's rich natural and cultural resources provide rich materials for the design and development of map cultural products

Anhui, located in the hinterland of East China, connects east and west and connects north and south. The territory has beautiful mountains and rivers, excellent scenery and various types of landforms. Because of its unique topography and location advantages, the land of Anhui has bred a rich history and culture. Traditional Chinese Taoism sprouted in the Huaihe River Basin, and Xin'an Confucianism matured in the mountainous area of southern Anhui... There are too many cultural heritages such as philosophy, religion, poetry, science, calligraphy and painting. The beautiful natural resources and rich cultural heritage provide rich materials for the design and development of Anhui map cultural products.

(2) The growing spiritual and cultural needs of the people have put forward new practical demands for map cultural products

General Secretary Xi Jinping pointed out in the report of the Nineteenth National Congress that "the main contradiction in our society has been transformed into the contradiction between the people's growing needs for a better life and unbalanced and inadequate development." The demand for maps is not limited to being a tool for travel and life. How to expand and enrich the connotation and extension of map culture, gain more room for development, integrate maps with various cultural products and cultural forms, and create new products and new forms, is what every colleague in the field of map studies should think about problems and directions of effort.

(3) The rapid development of society and technology has become an inexhaustible source of power for the design and development of map cultural products

With the continuous development of the theory of cartography and cartography, new techniques and materials for map printing continue to emerge, and the functions and application fields of maps are also expanding. Surveying and mapping geographic information is changing from specialization to popularization. The function of the map is no longer limited to simply indicating the direction, and its carrier is no longer limited to the traditional paper. The rapid development of society and technology has provided countless possibilities for the compilation and design of maps, and has become an inexhaustible source of power for the design and development of map cultural products.

3.2 Design and development ideas

The basic process of design and development of map cultural products in Anhui Province is shown in Figure 1. Since the development and design of map cultural

products is based on traditional map compilation, this article focuses on the design of map cultural products, so the conventional process of traditional map compilation will not be repeated.

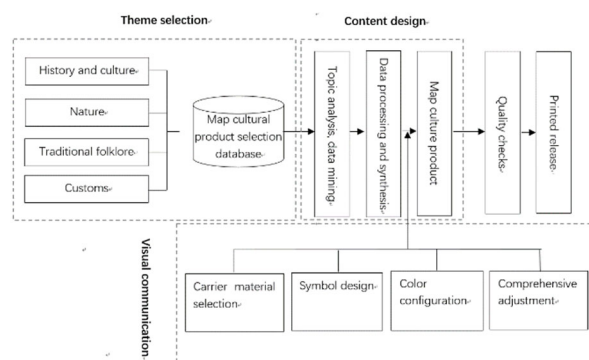


Figure 1. Basic flow chart of map cultural product design and development

(1) Theme selection

Today, with highly developed science and technology and abundant means of information acquisition, the underlying supporting data is no longer the bottleneck in the design and development of map cultural products. How to find the right perspective and direction, and analyze, mine, and handle the data are the core jobs.

In the process of selecting the theme of Anhui map cultural product design, we always strictly grasp the principles of map politics, science and artistry, aiming at highlighting Anhui's regional characteristics, focusing on promoting Anhui's profound history and culture and publicizing Anhui's natural scenery. After following the above ideas to determine the topic selection outline, further evaluate and analyze the subject matter, judge the depth and breadth of information mining, review the feasibility of mapping, and carry out data collection and integration in sequence.

(2) Content design

The development and design of map cultural products is by no means a new bottle of old wine, that is, to express the contents of traditional cartography simply and mechanically with new symbols and designs. The innovation of map cultural products should be an innovative process of content innovation and design innovation.

Therefore, from the perspective of information level, content focus, and narrative logic, we should select content that is easier for readers to accept and love, and dig out content that can better reflect the cultural outlook and humanistic attributes of the selected topic. Compared with traditional map making, the content design of map cultural products generally presents the following characteristics: lower information density, more humanistic content selection direction, more prominent content focus, and more distinct layers.

(3) Visual communication

At the level of visual communication, map cultural products should avoid stereotyped and paradigmatic map design, make full use of modern design thinking methods, and integrate national characteristics, local cultural colours, life interest and the trend of the times. In terms of

the carrier and media selection of map cultural and creative products, we should also fully open our minds. According to the application scenarios and reader groups of map cultural products, we can choose fusion media, antique rice paper, silk, ceramics, paper-cut, etc. Through the innovative use of rich artistic design and visual communication methods, the map cultural products have both cognitive and aesthetic functions, achieving the effect of not only helping the communication of map information, but also enhancing its artistic appeal.

3.3 Display of cultural products of some maps in Anhui

(1) Hand-painted map

The hand-painted map of Eight hundred miles of the Anhui River is shown in Figure 2. It organically combines modern surveying and drawing techniques with traditional Chinese painting freehand brushwork, and explores the integration of abstract Chinese painting freehand brushwork and concrete scientific measurement. To find a balance between the actual function of maps and artistic appreciation, according to the unique characteristics of the Anhui River, draw a map that combines scientific rationality and artistic sensibility. On the basis of the practicability of the map itself, it also adds softness, uniqueness, the emotional expression of the designer and the characteristics of highly refined Anhui River culture, which make it different from traditional hand-painted works and traditional maps. It has truly realized "one picture in hand, and you can see the cultural essence of the Eight hundred miles of the Anhui River".



Figure 2. Hand-painted map of Eight hundred miles of the Anhui River

(2) Paper cut map

Anhui Wind and Anhui Rhythm - Paper-cutting Art Map is shown in Figure 3. It takes the natural resources and human resources of Anhui Province as the object of artistic creation, and takes the world-renowned Chinese quintessence-the ancient oriental folk paper-cut as an artistic reference, combining material landscape and non-material culture. It is presented in a form that is more in line with the requirements of cartography and modern aesthetics, highlighting the artistic atmosphere and profound artistic conception of geographical space. The spirit is depicted in shape, meticulously crafted, the blend of landscape and humanities, the collision of tradition and modernity, the picture shows the natural geography and cultural treasures of Anhui Province, and the charm of Anhui Province is vivid on the paper.

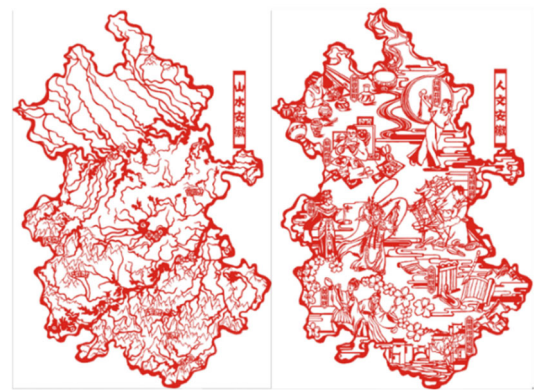


Figure 3. Anhui Wind and Anhui Rhythm - Paper-cutting Art Map

(3) Scarf map

"Anhui Wind and Anhui Rhythm, Ink Jiangnan" silk scarf map is shown in Figure 4, the map data comes from an ancient map "Nanjing Map" in "Anhui Provincial Historical Atlas" (ancient map volume), through the matching and coordination of colours, artistic expression is added Elements, an ancient map printed on silk, to achieve the perfect fusion of science and art.

3.4 Future directions and ideas

At present, the design and development of map cultural products in Anhui Province are mainly based on macro narratives, and most of the topics are selected to promote the profound history and culture of Anhui and present the beautiful landscape of Anhui[6].



Figure 4. “Anhui Wind and Anhui Rhythm, Ink Jiangnan” silk scarf map

In the next step of work, we will focus more on traditional folk customs, customs, and daily life that are closely related to the lives of the people, such as traditional music, drama, dance, local specialties, gourmet snacks, flower viewing, hiking, mountaineering, etc. The choice of the carrier will also be eclectic, from silk scarves to hand ornaments, and strive to take into account functionality, practicality and aesthetics; and strive to

focus on details, start from a small place, let the map cultural products moisten things and infiltrate the public life silently, let the map culture take root among the masses and gain strong vitality.

4. Conclusion

Cartography is a vigorous science with a long history of thousands of years, but it is constantly updated and iterated under the guidance of new science and technology and social needs. Map workers should take the initiative to change their minds, follow the pulse of the times, and use new ideas, new perspectives, and new techniques to develop a series of unique map cultural and creative products on the basis of solid theoretical knowledge of cartography. This is an innovative practice of deep integration of contemporary maps and culture, and also opens a wonderful cultural window for the world to know and love Anhui. We look forward to cooperating with more map colleagues at home and abroad to develop more better and updated map cultural products in the future, so that the ancient cartography will glow with more vitality.

References

1. Liao Ke. *Research and Practice of Cartography* [M]. Beijing: Surveying and Mapping Press, 2003.
2. Gao Jun. *Tracing in Cartography* [M]. Beijing: Surveying and Mapping Press, 2012.
3. Ling Shanjin. *Map Aesthetics* [M]. Anhui: Anhui Normal University Press, 2010.
4. Yu Jiangpei, Huang Sisi, Feng Ping. Analysis on Design and Features of "Wuhan Silk Scarf Series Cultural Map"[J]. *Urban Survey*, 2018(05):115-117.
5. Hu Xuemei, Wang Jing, Guo Xin, Dong Zhaoxin. Design and thinking of creative cultural map publications—Taking the creative cultural map of "Romantic Qujiang" as an example[J]. *Cultural Industry*, 2020(35): 19-22.
6. Li Yongfeng, Wang Bing, Li Wei, Zhang Jingli. Research on the Integration of Map Culture and Natural Resources[J]. *Geospatial Information* 2021,19(05):31-33.