

An Analysis of the Cross-Cultural Historical Connotations Carried by Map Media in the Early Modern Context

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Abstract: From the 16th to the 17th century, the flow of knowledge and the exchange of materials between the East and the West significantly accelerated. Maps, as important carriers of knowledge, underwent significant changes in their material forms, from printed paper in Europe to silk, screens, and woodblock prints in East Asia. This transformation of material forms itself is a micro-sample of the cross-cultural history of art. Centered on the dissemination lineage of Matteo Ricci's *Complete Map of the World*, and comparing it with Martino Martini (Wei Kuangguo)'s *The New Map of China*, Michele Ruggieri (Luo Mingjian)'s manuscripts, and Japanese Nanban screens, this article starts from the material of the carrier, the drawing techniques, the relationship between text and graphics, the translation of knowledge, and the usage scenarios, to analyze the artistic historical implications carried by the map carriers in the cross-cultural flow. Map carriers are not passive media.

Keywords: Early modern, map carrier, cross-cultural history of art, *Complete Map of the World*, material culture.

1. Introduction

From the late 16th century to the early 17th century, Jesuit missionaries came to the East (East Asia), bringing with them the Ptolemaic cartographic system and the knowledge gained from the great geographical discoveries. In 1584, Matteo Ricci engraved *The Map of Mountains and Seas* in Zhaoqing. Over the next three decades, this map was revised and reproduced in three versions: *The Map of Mountains and Seas*, *Complete Map of the World*, and *The Diagram of Two Instruments and the Celestial Body*. It gradually spread. In 1602, Li Zizao published *Complete Map of the World*, which is the earliest Chinese world map completed by a collaboration between Chinese and European scholars. Martino Martini (Wei Kuangguo) published *The New Map of China* in Amsterdam by Blauw in 1655, presenting the provincial maps of China for the first time in a systematic way in Europe. Michele Ruggieri (Luo Mingjian) began compiling a Chinese-language atlas of Western China in the 1580s, although it was not published, the manuscripts left in the Roman State Archives already show traces of map reproduction and place name translation. In Japan, *World Map Screen and other Nanban screens kept by the Imperial Household Agency* transformed the image resources of European world maps into elements of local screen art.

The cross-cultural dissemination of the above map text raises a question: When maps cross cultural boundaries, what role do their carriers-the physical materials and presentation forms that carry the maps-play? Map history research has traditionally focused on the organization of geographical knowledge and mapping techniques, while art history research has more often focused on the image style and visual language of maps. Maps as "objects"-materials, forms, framing, and the corresponding viewing methods and application scenarios-are rarely included in the analytical scope [1]. The carrier is not a passive reliance on map information. From European printed paper to East Asian silk, screens, and woodblock prints, the change in materials alters the appearance of the maps and also influences their

knowledge positioning, artistic attributes, and social functions. This article takes the map carrier as the entry point and examines how this material aspect constitutes a path for the writing of art history in the context of early modern cross-cultural flow.

2. Choice of Carrier Materials: The Cultural Logic of Silk, Paper, and Woodblock Printing

There are significant differences in carrier materials between maps from the East and the West. After Gutenberg's printing press became widespread in Europe in the 15th century, maps were mostly circulated in paper-based formats produced by movable type printing. Paper is convenient for replication and dissemination. The map-making tradition in China was different. Silk, paper, wooden tablets, stone tablets, and other carriers coexisted for a long time. Different carriers correspond to different production techniques and usage methods - wooden tablets were used for tomb burial or architectural planning, silk maps were convenient for carrying and storage, and stone tablet maps were placed in public spaces for viewing. After Matteo Ricci's maps were introduced, the choice of materials was not only a technical issue but also had deeper cultural considerations [2].

Complete Map of the World has both woodblock-printed ink editions and painted copies. In 1608, court artists of the Ming Dynasty copied the illustrations onto paper, originally consisting of six scroll-like panels. In traditional Chinese culture, silk and cloth carry the identity of "painting" (hua) rather than "diagram" (tu), and are regarded as works of art with aesthetic value rather than mere information recording tools. Cheng Fangyi discovered that *Complete Map of the World* evolved from a wall-mounted map to a screen, and the painters and printers made modifications based on the traditional Chinese painting and cartography traditions. When the world map was drawn on silk and presented in the form of a screen, its scientific text attributes in the original European context gradually faded, and it transformed into a "painting"

that could be hung and appreciated in China. The change in the material of the carrier actually accomplished a redefinition of cultural identity—from a scientific text to an artistic image, from a functional carrier to an aesthetic object [3].

In "The History of the Jesuits and the Spread of Catholicism into China", Matteo Ricci used "carta di Giappone" to refer to the paper used for mapping. Song Liming verified that this was a clerical error and should actually be "Goryeo tribute paper". The source of the paper is not a trivial detail; it concerns the physical preservation of the map and also participates in the construction process of the map's cultural identity. Different sources of paper have different textures, colors, and lifespans, which directly affect the appearance and circulation range of the map. Goryeo tribute paper was regarded as high-quality paper in the Ming Dynasty and was used for map drawing itself carrying a certain "tribute" quality suggestion. Ricci did not notice this detail, but inadvertently revealed an information: even the paper used for a map carries more complex meanings than technical requirements in a cross-cultural context.

3. Integration of Drawing Techniques: The Negotiation of Traditional Cartography between China and the West on the Medium

After the selection of materials, the next step is drawing. How to draw becomes another important site for visual negotiation in the development of Chinese and Western cartographic traditions. *Complete Map of the World* adopted the Western projection method, with latitude and longitude marked on the map, and the theory of a round earth, climate zones, and the layout of the five continents were all presented. The European cartographic knowledge was transferred into the Chinese medium, but it was not fully adopted. Instead, it underwent a series of adjustments during the specific drawing process.

The differences in color between China and the West are the most obvious. The 16th-century European print editions of Ptolemy's "Geographia" (Geography) were mostly black-and-white line engravings, with line engraving as the main method, and color was not necessary. Chinese silk-painted maps took the path of the green landscape style. In the color version of *Complete Map of the World*, the ocean was depicted with deep green water waves, Asia was painted in earth yellow, North and South America were colored in pink, and mountains were outlined in light green. These practices were very close to the traditional coloring habits of maps. On the map borders, the drafter also added many marine and terrestrial animals—9 sailing ships, 15 marine animals, and 8 terrestrial animals on the Antarctic continent. These images placed the European cartographic "scientific schema" into the symbolic framework of Chinese visual culture [4]. Cheng Fangyi believes that this "Chineseization" modification expanded the dissemination of the map in East Asia, but it also gradually deviated from the original "graphical" and "scientific" direction. From another perspective, the so-called "deviation" can be understood as an adaptive adjustment in cross-cultural communication—each change in drawing techniques is a specific negotiation between different cartographic traditions on the material medium. Matteo Ricci's world map was widely spread in China largely due to this kind of visual localization treatment.

Wei Kuangguo's *The New Map of China* demonstrates

another approach. He used the cartographic maps of China's successive provinces, counties, and towns as the base, systematically collected such materials during his stay in China, and then reorganized them on his way back to Europe in 1650. Finally, it was published in Europe. The carrier form changed from Chinese album maps to European printed atlas—hand-drawn revisions were printed, single images were combined into compilations, Eastern binding was replaced by Western binding, and the logic of visual presentation also changed. The convergence of Chinese and Western drawing techniques has never been a one-way output; rather, it is a process where two traditions repeatedly converse and constantly adjust on specific material carriers [5].

4. Reconstruction of the Relationship between Text and Graphics: Maps as Cross-Cultural Visual Texts

After discussing the images, let's look at the text. The map titles, place names, captions, and prefaces are combined with the graphics to form a complete meaning. The localization of the text was an important factor for the wide circulation of Matteo Ricci's maps among the scholars of the Ming Dynasty.

Place name translation is a clear example. Matteo Ricci introduced the unfamiliar geographical concepts of "Yaxiya" (Asia) and "Yamelijia" (America) into Chinese. Taking "Yamelijia" as an example, the character "Ya" in Chinese carries a secondary or subordinate connotation. When placed alongside "the first is Yaxiyazhou" in Ricci's map, this choice of characters created a hierarchical order among the continents. These translations not only record the pronunciation but also take into account the reading habits of Chinese readers when choosing words. From a visual perspective, the arrangement of text on maps of the East and West also differs greatly [6]. On European maps, place names are mostly written in Roman script, with the size of the font representing the level of the settlement. On Chinese maps, place names are written in regular script, arranged vertically, with the word spacing and line spacing coordinated with the overall layout of the page, which is similar to the traditional reading experience of inscriptions and books.

On Matteo Ricci's map, there were also numerous explanatory texts, covering the customs, products and history of various countries. *Complete Map of the World* depicted 9 sailing ships, 15 marine animals and 8 land animals. Next to each type of image, there were corresponding textual explanations. These texts varied in length; the shorter ones merely listed the names, while the longer ones provided detailed descriptions of the local customs and conditions. The explanatory texts were mainly placed in the blank corners of the map, neither obscuring the main graphic elements nor hindering readers from viewing them at any time. Thus, the map no longer merely indicated geographical locations but expanded into a comprehensive knowledge carrier. Zou Zhenhuan's research shows that Matteo Ricci precisely utilized these images and textual descriptions of marine and land animals to engage in specific knowledge dialogues with the Chinese scholars of his time. When the Ming Dynasty scholar Li Zhizao wrote the preface for this map, he specifically mentioned the exotic information contained in the text, believing that it could broaden the horizons of readers.

This method of combining pictures and text also echoes the ancient Chinese tradition of "left with pictures and right with text". Geographical chronicles use text to record geographical

features, while maps use pictures to display topography and landforms. The arrangement of picture and text together lowered the threshold for scholars to acquire knowledge about foreign lands. For the scholars of the Ming Dynasty, the map no longer represented an unfamiliar Western object but became a readable work [7]. This presentation method also enabled new geographical knowledge to more smoothly enter the cognitive scope of Chinese intellectuals.

5. The Interweaving of Knowledge Translation and Material Transposition

The material properties of the carrier, the drawing techniques, and the relationship between text and graphics all fall under the "material aspect" changes of a map. However, cross-cultural communication has another thread. As maps travel from Europe to East Asia, they undergo two transformations: knowledge needs to be translated, and the material also needs to be transcribed. The translation of knowledge is to convert the geographical knowledge within a certain cartographic tradition into a form understandable to another culture. The transposition of the material is to change the map from one carrier form to another. In the actual cross-cultural flow, these two events usually occur simultaneously and are difficult to completely separate.

Ruggieri's compilation of the Chinese map collection is an example. His manuscripts are still preserved in the Roman National Archives. From those drafts, we can see his working process: first, find a Chinese map, enlarge the map area, then translate the place names written in Chinese into Western characters, and finally re-draw it. Enlarging the map area changes the visual proportion and reading experience of the map. Translating the place names changes the ownership of the map's knowledge. Re-drawing involves a change in the drawing technique and the carrier material. These steps may seem like technical operations, but each step redefines the cultural significance of the map.

The subsequent dissemination process of *Complete Map of the World* was similar. This map was originally printed using woodblock printing, then someone copied it onto silk and re-colored it with pigments. Later, it was made into a screen and placed in the room as a decoration. After being introduced to Japan, Japanese painters modified it again, making it a part of the Nanban screen. The change in the carrier led to a change in the map's identity. From a printed item to a silk painting, it transformed from a book that could be read to an image that could be hung on the wall. After being transformed into a screen by the Japanese painters, it changed from a geographical map to an object with both decorative and social functions [8].

From these examples, it can be seen that the carrier of the map simultaneously undertakes two tasks [9]. It not only needs to carry geographical knowledge but also needs to carry cultural identity. This also explains why some scholars advocate that the history of maps should be combined with the history of art. Maps are not only containers of knowledge but also objects of art. They not only express geographical cognition of the world but also visual imagination of the world. The various forms of change that a map undergoes during its cross-cultural dissemination is itself a process of the entanglement and mutual generation of knowledge and matter.

6. From Wall to Screen: The Meaning Re-Shaping in Scene Transformation

The previous chapters discussed the materials, drawing, graphics, and knowledge translation of maps. But after maps reached East Asia, there was a more obvious change—where they were placed and what they were used for were completely different from those in Europe.

In Europe during the 16th and 17th centuries, maps generally had two destinations: either they were placed in books for people to consult and study; or they were hung on the wall for public lectures. After being introduced to China, the situation was different. Besides books and walls, maps also had styles such as screens, scrolls, and folios. The change in the carrier led to a change in the way people interacted with the maps.

Cheng Fangyi used the phrase "from wall to screen" to describe the experience of the Matteo Ricci world map in East Asia. The wall map was fixed and couldn't move once it was nailed to the wall. People stood in front and everyone could see it. The screen map was different. It could be folded, opened, and moved freely in the room. Screens were not just simple furniture in traditional Chinese dwellings; they separated spaces and also indicated the owner's taste. Guests could use them as topics when they came. Once a world map was placed on a screen, it no longer served as a reference material for research in the study. It entered the hall where scholars entertained guests and became an object that could be appreciated slowly.

Japan has gone even further [10]. *World Map Screen and other Nanban screens*, with eight panels per set and painted on paper with gold accents, is nearly five meters wide in each section. What does this size signify? When you stand in front of it, you can't get close to examine it closely; you have to step back several steps to fully appreciate the entire image. The way of viewing is completely different from flipping through a book and also different from looking at a wall-mounted map. The paired figures of men and women on the screen, which were not simply copied from Western images, were re-created by Japanese painters who studied Western images and incorporated their own artistic sensibilities. On this screen, the map elements still exist, but it is no longer a geographical document that requires careful identification; rather, it is more like an object specifically designed for viewing.

The social role of the map changes accordingly [11]. In Europe, it was a teaching tool; in East Asia, it became an art piece. Whether it is a scientific instrument or a social medium does not depend on the map itself, but on the occasion it appears. The medium has changed, the usage has changed, and the life of the map has also changed.

7. Conclusion

Through the analysis of these five aspects, a basic judgment can be made: The map carrier does not merely passively carry information during cross-cultural circulation; instead, it deeply participates in the generation and transformation of cultural meanings. Each change in material will reshape the appearance of the map and its cultural identity; the repeated adjustment of drawing techniques is essentially a continuous dialogue between Chinese and Western cartographic traditions on the specific material platform; the

reconfiguration of the graphic-text relationship enables the map to carry knowledge capacity far beyond geographical information; the interweaving of knowledge translation and material transposition allows the map to undergo deep transformation simultaneously at the cognitive and material levels; the shift of usage scenarios from walls to screens fundamentally changes the social role of the map.

Of course, the limitations of this research are also quite obvious. The discussed materials are concentrated on Matteo Ricci's *Complete Map of the World*, Wei Kuangguo's *The New Map of China*, Ruggieri's manuscripts, and the Japanese Nanban screen, with the time period mainly confined to the 16th to 17th centuries, and no other periods or regions of map cross-cultural circulation are involved. The limited scope of materials restricts the applicability of the conclusion. Moreover, the interrelationships and interactions among the five dimensions, although mentioned in the text, have not been fully elaborated. How each dimension interacts with and jointly shapes the cross-cultural appearance of the map carrier still needs to be deeply explored.

Further research can be carried out in two directions. One is to extend the time axis and examine the cross-cultural evolution of map carriers after the 18th century. The other is to broaden the spatial perspective and incorporate regions such as Southeast Asia and South Asia into the comparative framework to investigate whether there are common patterns in the changes of map carriers in different cultural contexts. Whether this research perspective of map carriers can be elevated from case analysis to a more universal proposition still needs to be tested on a broader material basis.

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