



# Research on the Visual Design of Information on the Evolution of Women's Clothing in the Tang Dynasty from the Perspective of Semiotics

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**Abstract:** This study focuses on women's clothing in the Tang Dynasty and provides a deep analysis of its rich symbolic connotations from the perspective of costume semiotics. By combining the information visualization design method, all kinds of information about Tang Dynasty women's clothing are presented in an intuitive and easy-to-understand way, aiming to reveal the cultural and social multiple meanings behind Tang Dynasty women's clothing, and provide new ideas and methods for clothing culture research, design innovation, and cultural dissemination. This study employs literature research, image analysis, case studies, and other methods to analyze the symbolic composition of Tang Dynasty women's costumes, develop information visualization design strategies, and verify their effectiveness through design practice. The results show that the information visualization design based on costume semiotics can effectively convey the rich information about Tang Dynasty women's clothing and enhance the public's understanding and appreciation of Tang Dynasty costume culture.

**Keywords:** semiotics, Tang Dynasty women's clothing, costume semiotics, information visualization, cultural communication

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## 1. Background and significance of the research

### 1.1 Background and significance of the study

In the current policy environment, where the cultural industry is booming, and cultural heritage and innovation are highly valued, research on the visual design of women's clothing information in the Tang Dynasty has important practical significance and a supportive policy background. At the national level, we will vigorously promote the creative transformation and innovative development of China's excellent traditional culture, and encourage the in-depth excavation and presentation of traditional cultural resources with the help of modern scientific and technological means. The "Opinions on the Implementation of the Project for the Inheritance and Development of China's Excellent Traditional Culture" clearly points out that it is necessary to strengthen the digital construction of resources related to China's excellent traditional culture, visualize and disseminate cultural heritage through digital technology, and let traditional culture enter the public eye in a more vivid and understandable way[1].

As a treasure of traditional Chinese culture, the visual design of Tang Dynasty women's clothing is in response to this policy call, and the profound historical and cultural connotation and exquisite production technology behind the costumes are transformed into visual information with innovative design methods, so as to promote the inheritance and dissemination of traditional culture in contemporary society. As one of the most glorious dynasties in Chinese history, the Tang Dynasty showed a high degree of prosperity and openness in its culture. Tang Dynasty women's clothing reached a very high artistic level during this period, not only with diverse styles and colors, but also with rich cultural connotations. As a discipline that studies the meaning and dissemination of costume symbols, costume semiotics provides a unique perspective for an in-depth understanding of women's clothing in the Tang Dynasty. Information visualization design can present complex information in an intuitive and vivid way, helping people quickly and accurately obtain and understand information. In the context of cultural inheritance and innovation, it is of great theoretical and practical significance to study the information visualization design of Tang Dynasty women's costumes from the perspective of clothing semiotics.

From the theoretical level, it is helpful to enrich the research content of clothing semiotics, expand the application scope of information visualization design in the cultural field, and provide new ideas and methods for interdisciplinary research. In a practical sense, on the one hand, it can promote the dissemination and inheritance of Tang Dynasty costume culture and enhance the public's awareness and interest in traditional culture; on the other hand, it provides rich inspiration and materials for modern fashion design, cultural and creative industries, etc., and promotes design innovation and the development of cultural industries[2].

## 1.2 Research status at home and abroad

In foreign countries, research on clothing semiotics—the study of signs and symbols as they relate to clothing—is relatively in-depth, and scholars such as Roland Barthes have conducted pioneering research on the structure and meaning of clothing symbols. In the field of information visualization, which refers to the graphical representation of information and data, foreign research and applications are also in a leading position, covering information visualization design practices in many fields. However, there are relatively few studies on traditional Chinese costumes, especially women's costumes in the Tang Dynasty, from the perspective of combining costume semiotics and information visualization.

The research on women's costumes in the Tang Dynasty in China mainly focuses on history, archaeology, art, and other fields, and conducts in-depth discussions on their styles, craftsmanship, cultural connotations, etc. In terms of clothing semiotics, domestic scholars also have many research results, sorting out the classification and function of clothing symbols. In recent years, information visualization design has gradually been valued in China and has been applied in some cultural projects, however, the research on the combination of information visualization and Tang Dynasty women's clothing is still in its infancy, and the current research is mostly focused on the digital processing and display of clothing images, and lacks in-depth excavation and visual expression of the connotation of clothing symbols. However, the research on information visualization design specifically for Tang Dynasty women's clothing is still insufficient. In general, there is a certain foundation in the related fields of this research at home and abroad, but the results of systematic research on Tang Dynasty women's costumes by closely combining costume semiotics and information visualization design still need to be further enriched[3].

## 1.3 Research methods and innovations

A variety of research methods were used in this study. The literature research method sorts out the current research status and lays a theoretical foundation for subsequent research by consulting a large body of literature on the history of the Tang Dynasty, clothing culture, clothing semiotics, information visualization design, etc. The image analysis method analyzes the images of women's costumes in Tang Dynasty paintings, murals, pottery figurines, and other cultural relics, and extracts the costume elements and symbolic characteristics. The case study method selects excellent information visualization design cases at home and abroad, analyzes their design ideas and methods, and provides a reference for the information visualization design of women's clothing in the Tang Dynasty. Field research method, visit museums, historical sites, etc., observe the physical objects and related displays of Tang Dynasty women's clothing, and obtain intuitive feelings and first-hand information. The innovation of this study is mainly reflected in the innovation of research perspectives and methods. For the first time, the combination of costume semiotics and information visualization design was used to study women's clothing in the Tang Dynasty, providing a new perspective for research in this field. In terms of research methods, multidisciplinary methods are comprehensively used to construct an interdisciplinary research system, dig deep into the symbolic connotation of Tang Dynasty women's clothing, and transform it into visual design, realizing the innovation of research methods and design practice[4].

## 2. Symbol Decoding: Semantic Layering of Tang Dynasty Costumes and Makeup

### 2.1 Historical evolution and cultural background of women's clothing in the Tang Dynasty

#### 2.1.1 Characteristics of women's clothing in different periods of the Tang Dynasty

The Tang Dynasty went through the early Tang Dynasty, Wuzhou, Prosperous Tang, Middle Tang Dynasty, late Tang Dynasty, and other periods, and women's clothing showed different characteristics at different stages. In the early Tang Dynasty, women's clothing inherited the style of the Sui Dynasty, which was relatively simple, and the style was mainly narrow-sleeved short jackets and long skirts. During the Wuzhou period, with the economic recovery at the end of the Zhen-guan period, compared with the early Tang Dynasty, it presented a more open and gorgeous style, the awakening of women's consciousness and the improvement of women's status, the popularity of high-waisted skirts, Hu clothing was prevalent, and women's disguise of round-necked robes and boots became the most popular thing in the Tang Dynasty[5]. During the prosperous Tang Dynasty, the national strength was strong, and the culture was prosperous, and the style of women's clothing became gorgeous and open, and styles with bare chests and arms were popular, such as bare collars and half-arms, high-waisted skirts, etc., with bright colors and rich patterns. During the Middle and Tang Dynasties, women's clothing began to undergo some changes, and the style gradually tended to be conservative, and the decoration of the costume was still strong. In the late Tang Dynasty, social turmoil, women's clothing styles were simpler, and the colors were relatively dull.

#### 2.1.2 The influence of Tang Dynasty culture on women's clothing

The open and inclusive cultural atmosphere of the Tang Dynasty had a profound impact on women's clothing. The exchange and integration of multiculturalism made Tang Dynasty women's costumes absorb elements such as Hu clothing

and Western Regions costumes to form a unique style. For example, elements such as narrow sleeves and trousers in Hu clothing were integrated into Tang Dynasty women's clothing, increasing the practicality and fashion sense of clothing. At the same time, the Tang Dynasty's poetry, painting, music, and other art forms also had an impact on the design of women's clothing, and the patterns and colors of the costumes often reflected the inspiration of artistic creation, showing the romance and poetry of Tang Dynasty culture.

## 2.2 Analysis of the symbolic components of Tang Dynasty women's clothing

The Tang Dynasty women's clothing symbol system is a visual code of social culture, and its multiple dimensions jointly construct the material carrier of the spirit of the times. The style symbol is not only the embodiment of aesthetic choice, but also a metaphor for social ethics - the soft and beautiful elements of the high-waisted skirt through the reconstruction of proportions, and the skin-revealing design that breaks through the constraints of etiquette with the half-arm with the collar form a tension between traditional norms and personality liberation; The evolution of the shape of the fence and curtain hat from "covering" to "half-exposed" directly reflects the loosening of women's body discipline in the Tang Dynasty society. The color symbol constructs a strict hierarchical coding system, and the use of authority of the chromatogram forms an intertextual text with the Yufu system in the "Tang Liudian". The monopoly of imperial power in yellow, the exclusive right of rank in crimson and purple, and the adaptability of crimson to the common people transform the invisible social hierarchy into a visible visual order through the hierarchical difference in color brightness and saturation, while the bold use of contrasting colors such as red and green injects folk aesthetics into the dissolution of norms within the hierarchical framework[6].

The pattern symbol is the crystallization of cultural integration, and the rich image of the peony and the religious symbol of the lotus coexist in embroidery, reflecting the symbiosis of the secular and the sacred. The Western Regions gene of the bead pattern and the Central Plains characteristics of the intertwined pattern are recombined through the printing and dyeing process to form a visual hybridization of "Hu Feng Han Yun." The imperial power symbol of the phoenix and the love metaphor of the mandarin duck complete the symbolic coverage from national ideology to individual emotional expression.

The symbolic value of material and craftsmanship is dual, the warp and weft density of silk and the difficulty of weaving directly correspond to the wearer's social capital, and the "five stars out of the east" pattern of Shu brocade has even become the carrier of political prophecy; The amount of gold thread used in gold embroidery and the number of color layers of wax valerian not only constitute a quantitative standard for process value, but also transform into a symbol of identity authentication through the system of "material engraving of work name". This coding mechanism that transforms material attributes into social attributes makes clothing a "social ID card" that transcends practical functions.

**Table 1. Comparison table of core symbolic elements of Tang Dynasty women's clothing**

| Period                       | Core style symbol   | Representative color symbols              | Typical pattern symbols                         | The core direction of symbolic meaning  |
|------------------------------|---|---|---|---|
| Early Tang Dynasty (618-712) | Narrow-sleeved skirt (sleeve width 15cm), half-turned bun     | Light blue, pomegranate red, plain white  | Simple curly grass pattern                      | In the early days of Hu and Han integration, the simplicity and pragmatism were revealed, and the hierarchy was beginning to appear |
| Wu Zetian period (690-705)   | Round neck robe (men's), cap, and sash                        | Crimson, purple, and black                | No prominent pattern (imitation men's clothing) | A visual manifesto of women's power awakening, breaking gender boundaries   |
| Tang Dynasty (713-766)       | Large-sleeved bare collar skirt (sleeve width 40cm), high bun | Crimson, turquoise, pink and purple       | Treasure flowers, bead patterns                 | The open and confident atmosphere of the Tang Dynasty, class differences became explicit  |
| Late Tang Dynasty (821-907)  | Wide belt (sleeve width 50cm+), multi-layer long skirt        | Dark purple, dark green (with gray tones) | Tangled patterns, pearl decorations             | The metaphor of the decline of dynasties implied in extravagance  |

## 3. Visual Translation: Design Strategies and Processes for Information Visualization

### 3.1 Information extraction and collation

#### 3.1.1 Determine the topic and scope of the information

Before carrying out the visual design of the Tang Dynasty women's clothing information, it is necessary to clarify the theme and scope of the information[7]. The theme can revolve around a specific aspect of Tang Dynasty women's clothing, such as style evolution, color symbols, pattern meanings, etc., or it can be presented as a whole. According to the purpose of the research and the needs of the audience, determine the level of detail and scope of the information. For example, if the

target audience is the general public interested in Tang Dynasty culture, the information content should focus on easy-to-understand and representative clothing elements; If you are a professional fashion designer or cultural researcher, you can provide more in-depth and comprehensive information, including clothing craftsmanship details, historical research, etc.

### **3.1.2 Information screening and classification**

From a large number of literature, image data, physical research and other sources, the relevant and accurate and valuable information is screened out. Then classify this information, which can be classified according to the symbolic elements of clothing, such as style, color, pattern, material and craftsmanship, etc.; It can also be classified according to historical periods, social classes, cultural connotations, etc. The purpose of classification is to better organize and present information, make the information structure clearer, and facilitate subsequent visual design. For example, the style information of women's clothing in different periods of the Tang Dynasty is classified into one category, which is convenient for comparative analysis of its evolution process; The color characteristics of women's clothing from different social classes can be classified and sorted out, which can highlight the relationship between color and identity. Authenticity requires that authoritative sources such as archaeological excavation reports (such as the physical data of skirts unearthed from the Tang Tomb in Astana), official historical documents (such as the records of the carriage and clothing in the "New Book of Tang"), and handed down paintings (such as "Pounding Pictures" and "Hairpin Flower Lady Pictures") should be used first. Representativeness emphasizes the selection of typical elements that can reflect the characteristics of the times, such as the length of the cloth in the Tang Dynasty, which generally exceeds 3 meters, which can be retained as iconic information; Relevance should eliminate content that is not related to the theme, such as the details of Tang Dynasty men's clothing can be briefly mentioned as background information, but should not occupy the core space.

### **3.1.3 Information hierarchy**

The information after screening and classification is divided into hierarchies to determine the importance and logical relationship of the information. The core information should be at a high level as the key display content, such as the most representative styles and patterns of special cultural significance in Tang Dynasty women's clothing. Auxiliary information is at the middle level, which is used to explain and supplement core information, such as the design details of clothing styles, the production process of patterns[8], etc. Secondary information is at a lower level as extended reading or background information, such as the impact of relevant historical events on clothing, the differences in women's clothing in different regions, etc. Through reasonable information hierarchical division, users can be guided to obtain information in accordance with the importance and logical order when browsing visual works, and improve the efficiency of information transmission.

## **3.2 Graphic design and color matching composition**

At the level of visual presentation of information visualization, this study draws on the Gestalt principle of Gestalt Psychology, and constructs complex clothing elements into an easily recognizable whole through visual organization laws such as proximity, similarity and closure. The graphic design adopts a modularity architecture to transform the clothing components into reusable visual units: the contour difference between the narrow-sleeved skirt of the early Tang Dynasty (sleeve width 15cm) and the long-sleeved shirt of the Tang Dynasty (sleeve width 40cm+) is accurately displayed using isothick line drawing icons, and the spatial relationship between the clothing and the human body is hinted at through negative space processing. Using the law of continuity, the shapes of the shawl in different periods are connected with gradient curves to form a visual evolution sequence. This design not only ensures the accurate conveyance of information, but also guides the audience to establish a complete cognitive schema at the subconscious level.

The color matching strategy deeply integrates the theory of color geography, and regards color as a carrier of the spirit of the times and cultural memory. Through the systematic analysis of the color records in murals, silk paintings and documents, we reconstruct the chromatographic system of Tang Dynasty costumes: gypsum white, stone green and cinnabar red extracted from the murals of Cave 220 in Dunhuang correspond to the magnificent atmosphere of the Tang Dynasty; Based on the digital chromatographic analysis of the "Hairpin Lady Picture", the color of the tulip skirt (bright yellow with a saturation of 85%) and garnet red (warm red with a hue of 10°) reproduce the gorgeous charm of aristocratic women. More importantly, we have made the color system itself a readable social stratification map by establishing a correspondence between color coding and social structure, such as transforming the system of "three ranks and above in purple" stipulated in the "Tang Liudian" into a gradient color scale from light blue (common people) to crimson purple (aristocracy).

## **4. Design Achievement Display and Related Derivative Design**

The primary vision system follows the principle of information layering to build a three-dimensional visual reading experience. The time dimension adopts an equal proportional timeline to mark the turning impact of major historical events such as the Wuzhou Restructuring (690) and the Anshi Rebellion (755) on clothing style; The morphological dimension ac-

curately presents the structural exploded diagram of 8 types of typical clothing through technical illustrations, among which the late Tang Dynasty’s “wide clothing belt” uses explosion diagrams to show up to six layers of clothing combinations; The social dimension innovatively introduces radar map visualization, and at the same time presents the differences in clothing materials, color complexity, pattern levels and other indicators of the three classes of nobles, ladies, and folk women. A material visualization legend has been specially developed to intuitively express the process span from coarse linen (warp and weft density 40\*20 threads/cm<sup>2</sup>) to Yueluo (warp and weft density 120\*80 threads/cm<sup>2</sup>) through texture density, so that the audience can intuitively understand the relationship between clothing and social status and the evolution history of clothing in the past century[9].

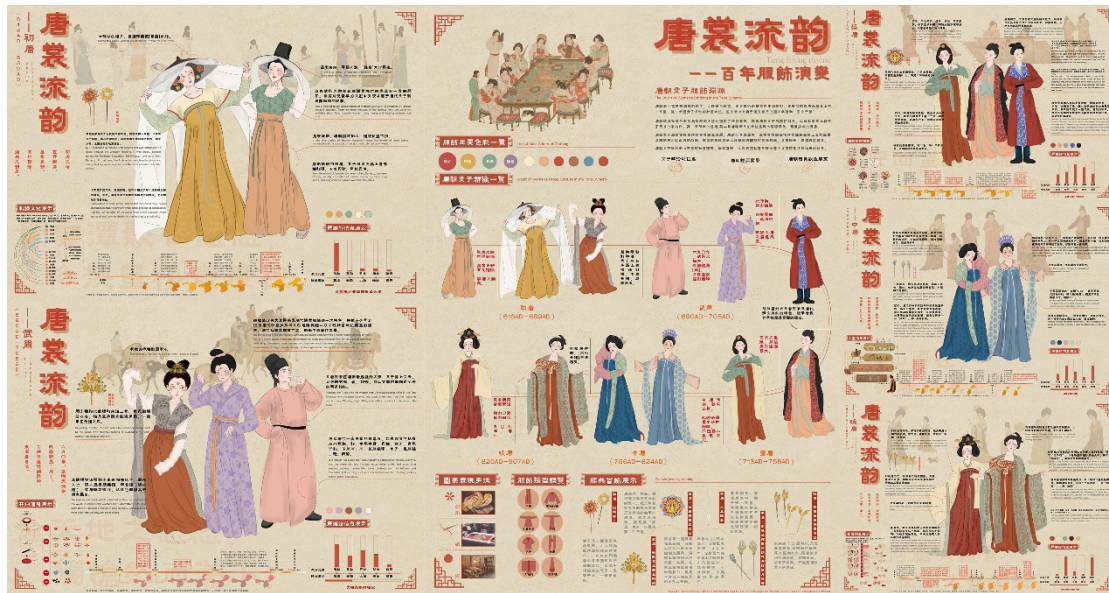


Figure 1. Information visualization display board



Figure 2. Design diagram of related derivatives

## 5. Theoretical Prospect and Reflection

This study constructs a complete Tang Dynasty women’s clothing culture communication system by integrating costume semiotics and information visualization design across disciplines. This methodological innovation not only verifies its effectiveness in practice, but also triggers our in-depth thinking about the digital translation process of traditional culture at the theoretical level. From a semiotic point of view, Tang Dynasty women’s clothing is essentially a complete symbolic system. Our research practice shows that the process of visual translation of this complex system is actually an important attempt to interpret traditional cultural symbols in a modern way, which involves both the in-depth decoding of traditional clothing culture and the creative use of modern design language.

At the methodological level, the most important theoretical contribution of this study is to establish a complete path of cultural symbol translation. This three-stage model begins with a systematic analysis of Tang Dynasty costume culture, through costume semiotic theory, not only to identify the clothing characteristics of different periods, but more importantly, to interpret the social and cultural connotations behind these visual characteristics. In the information reconstruction stage, we creatively use the information visualization design method to reorganize the decoded cultural symbols into a visual language that conforms to the cognitive habits of modern audiences under the premise of maintaining the spiritual essence of

traditional culture. In the final stage of communication and application, through diversified media channels, the translated cultural symbols can be re-entered into the contemporary life field and the living inheritance of traditional culture can be realized. This complete methodological framework provides a theoretical paradigm for digital research in other traditional cultural fields.

However, any research method inevitably has its theoretical boundaries and practical limitations. In the course of our research, we also recognized the inherent limitations of digital translation. Cultural symbols inevitably lose their meaning in the transformation from three-dimensional to flat, and experiential elements such as silk texture and dress etiquette are difficult to fully present. The reconstruction of the historical context also faces challenges, and it is difficult to restore the complete cultural ecosystem of Tang Dynasty costumes. These reflections point out the direction for future research: on the one hand, it is necessary to make good use of VR/AR and other technologies to build immersive experiences, and on the other hand, it is necessary to establish a scientific communication effect evaluation system.

From a broader academic perspective, the value of this study lies not only in its specific practical results, but also in the methodological significance of the modern translation of traditional culture. The “cultural symbol translation model” we have constructed and the experience and lessons learned in practice have important reference value for digital protection and innovation in other traditional cultural fields. In today’s rapid development of digital technology, how to maintain the essential characteristics of traditional culture and integrate it into contemporary life in a vibrant form is a topic of the times that needs to be continuously explored. We believe that through continuous deepening of theoretical reflection and methodological innovation, traditional culture will surely be revitalized in the digital age, and the theoretical framework and practical path proposed in this study will provide useful ideological resources and methodological support for the realization of this goal. Future research should further explore the deep integration of traditional culture and modern science and technology on this basis, and build a more systematic and perfect cultural inheritance and innovation system.

## References

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- [1] Relaxation. Research on Women’s Costumes in Tang Dynasty Ladies’ Paintings[D]. Yangzhou University, 2022. DOI: 10.27441/d.cnki.gyzdu.2022.001614.
- [2] YU Haiyan. The combination of women’s costumes and social and cultural trends in the Tang Dynasty[D]. Shandong Academy of Arts and Crafts, 2022. DOI: 10.27789/d.cnki.gsdgy.2021.000017.
- [3] Yuwen Taman. Research and Application of Women’s Clothing Style Evolution in the Tang Dynasty[D]. Shaanxi Normal University, 2013.
- [4] ZHANG Qiao. Aesthetic Research on Women’s Costumes in the Tang Dynasty[D]. Sichuan Normal University, 2013.
- [5] ZHANG Hong. Research on women’s clothing in the Tang Dynasty[J]. Art Education Research, 2018(13): 31+33.
- [6] Qin Jie. Analysis of the characteristics of women’s clothing in the Tang Dynasty in the “Hairpin Flower Lady Picture”[J]. Mangzhong, 2014(14): 253-254.
- [7] Shen Xiao. On the Character Costume Design and Its Humanistic Value in Zhang Xuan’s “Pounding Picture”[J]. Liaoning Silk, 2024(01): 37-38+60.
- [8] Zhang Hanshan. Research on Tang Dynasty Court Women’s Costumes and Tang Dynasty Women’s Aesthetics[D]. Northeast Electric Power University, 2024. DOI: 10.27008/d.cnki.gdbdc.2023.000388.
- [9] Feng Yulong. Characteristics of Hufu in the Tang Dynasty[J]. Yanhuang Geography, 2022(07): 44-47.

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