

# *The Study of Tang Dynasty Costumes from the Perspective of Archaeology*

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**Abstract:** The archaeology of Tang Dynasty costumes has broken through the single dimension of form restoration and become a key path to analyze the power structure, technological network and identity politics of ancient society. This paper takes archaeological methodology as the core, systematically combs through the academic lineage and technical path of Tang Dynasty dress research, and reveals the multi-dimensional social value of dress as a carrier of material culture. Based on the framework of typological analysis, the study builds a spectrum of the evolution of Tang dress forms through the triple corroboration of excavated objects, pictorial materials, and documentary records, and discusses in depth its technical process, institutional norms, and cross-cultural interaction mechanisms. For example, the coexistence of Han-style turban and Tubo mincing belt in Dunhuang murals at confirms the academic value of dress as a "compressed history of civilization interaction", and provides material and cultural evidence for the understanding of the Tang Dynasty's pluralistic and integrated pattern.

## **1. The research history of costume archaeology**

The study of dress archaeology takes material culture as its core, relies on typology to build a genealogy of dress forms, and decodes the technical characteristics, social hierarchical markers and cultural interaction mechanisms of ancient dresses through the systematic integration of excavated objects, images and documents. The development of the discipline has been profoundly influenced by the paradigm shift of modern archaeology, with the Japanese academic system as the key driving force - Edward Morse introduced stratigraphy and typology for the first time in 1877 when he presided over the excavation of the Omori shell mounds in Tokyo; the Department of Anthropology of the Tokyo Teikoku University and the Archaeology Classroom of the Kyoto University built a system of professional training for human resources, and Tsuboi Masagoro Shogoro Tsuboi

introduced the concept of "customary archaeology" in 1894, which included clothing in the study of social structure. Shukito Harada pioneered the triple evidence method: in 1920, "The Costumes of the Tang Dynasty in China" established a classification system for Tang crowns and costumes by integrating objects such as Pipa bag brocade from Shojangwon and Astana stranded silks, mural paintings in the tomb of the Prince of Yi De,<sup>[1]</sup> images of Dunhuang silk paintings and other documents such as "The Six Canons of the Tang Dynasty" and "The General Canons of the Tang Dynasty",<sup>[2]</sup> etc; and in 1970, based on the Gao Chang migratory bird's robe of woven gold brocade excavated from the 206th Tomb of Astana in Turfan, the study of "Chang An - Borderland" was put forward. "In 1970, based on the gold brocade robes of Gaochang migratory birds excavated from Tulufan Astana Tomb 206, we put forward the "Chang'an-Frontier Clothing and Cultural Circle" gradient propagation model, which proves that the Tang dynasty set up clothing according to the customs in the frontier governance.

Table 1: Multidisciplinary cross-fusion of archaeological costume research.

Research Dimension	Key Technical Means	Typical Cases	Theoretical Contributions
Technological Traceability	Scanning Electron Microscope (SEM) + Mass Spectrometry Analysis	Detection of twisted gold thread at Famen Temple: 0.2mm thick gold foil wrapped around a silk core (0.1mm in diameter)	Quantification of the peak of Tang Dynasty's "knit-gold embroidery" craftsmanship
Spatial Reconstruction	GIS+radiocarbon dating	Dunhuang Costumes during the Tubo Occupation: Overture Rates Rise from 5% in the Sheng Tang to 62% in the Middle Tang Dynasty	Confirmation of the sudden change of dress due to political changes
Cultural Analysis	Machine Learning Cluster Analysis of Tattoos	Comparing Suit Brocade and Samarkand's Mural Paintings: The Path of Eastward Transmission of the Union Jack Winged Horse Patterns <sup>[5]</sup>	Repainting the Aesthetic Community of the Silk Road

Chinese scholars realized a breakthrough in localization in the late 20th century: Shen Congwen in 1981 took the embroidered robe with dragons, phoenixes and tigers of the Warring States unearthed from the No. 1 Chu Tomb in Mashan, Jiangling as a model, combined it with the jade pendant of the Jade People's Pie Juan Group in the tomb of Women's Hao of the Shang Dynasty and the curved-train robe with wooden figurines of the Warring States, and reconstructed the sequence of the evolution of the five stages of the form of the robe and overthrew the old theory of the "sudden change of the costumes of the Warring States caused by the riding of hu suits"<sup>[3]</sup>; its fabric-texture-cutting three-dimensional analysis method reveals that the Han Dynasty "letter period

embroidery" excavated in Changsha's Mawangdui is actually a linear simplification of the coiled chi dragon pattern in Chu. In 1993, Sun Ji revolutionized the study of institutional history with the theory of combination of artifacts: through the archaeological typology of Tang Dynasty bandoliers, he empirically proved that the "New Book of the Tang Dynasty" (New Tang Dynasty)<sup>[4]</sup> had a hierarchical system of grades; he analyzed the relationship between the combination of the gilt double-bees and flowers patterned silver scented bag and the knit-gold embroidered surplice of the Fahmen Temple's underground palace, and restored the "Golden Robe" rituals of the Tantric initiation ceremonies; and his theory of the four-functionality of the costumes added the dynamic and interactive dimensions. Interaction dimension: such as Dunhuang Mogao Grottoes, Cave 159, Tubo Zangpu statue of left-overlapping gold brocade robes and Tang-style scrolling cloud pattern mincing belt coexistence, reflecting the power game in the cultural adaptation. Contemporary science and technology have enabled the deepening of research: hyperspectral imaging technology analyzes the pigments of the costumes of the figurines of the Tang Dynasty in Astana, and detects foreign substances such as Afghan lapis lazuli (ultramarine blue) and Mediterranean bone snail purple (imperial purple), thus quantifying the scale of the dye trade on the Silk Road; three-dimensional modeling recovers yellow-grounded lion brocade of Turfan's Tomb in Dulan, Qinghai Province, and reveals that Central Asian brocade wefting technology has reconfigured the weaving system of the Tang Dynasty. These studies demonstrate that the "multidisciplinary integration" approach summarized in Table 1 continues to make new discoveries in clothing archaeology through the combination of fabrics, utensils, functions and technology.

The archaeology of clothing has gone beyond the restoration of form to become one of the core paths for interpreting the power structures, technological networks, and identity politics of ancient societies. Just as in Cave 156 of Dunhuang Mogao Grottoes, where the Han-style turban coexists with the long, mincing belt of the Tubo style, a single piece of clothing is a compressed history of civilizational exchanges.

## 2. Research Methodology of Tang Dynasty Costume Archaeology

The archaeological study of Tang Dynasty costumes has formed a core set of multi-dimensional methodology. Under the two-dimensional framework of typology and regional comparison, scholars have devoted themselves to reconstructing the process of costume change. Sukito Harada classified the terracotta figurines of hu clothes unearthed in Xi'an through the elements of collar type, sleeve length, and decorations, and compared them with the Turkic mural paintings, which revealed the path of the spread of the Central Asian collar and narrow-sleeved robes to the east. At the same time, based on the terracotta figurines of the tomb of the Princess of Yongtai and other chronological tombs, Sun Ji has established a three-phase evolution of the Tang women's costumes<sup>[6]</sup>. From the narrow-sleeved jacket of the early Tang, to the bare collar and half-arm of the Sheng Tang, to the wide-sleeved cape of the late Tang, this evolution maps out the profound change in social openness. Duan Wenjie's Dunhuang research further shows that the inter-colored skirts and cape-wrap style popular among the aristocracy in the Sheng Tang period converged with that of the Chang'an court, while the typical attire of long obeisance robes with selvedge bead ornaments appeared under the

rule of Turfan in the Middle Tang Dynasty, which confirms the spatial remodeling of the dress system by the political power.

In addition to typological and comparative studies, interdisciplinary technological tools play a key role in the interpretation of the physical materials: electron microscopic analysis reveals that the half-arm of the Fahmen Temple's knit-gold embroidery is made of twisted gold thread, and its density of 65 stitches per centimeter bears witness to the pinnacle of the court's embroidery skills<sup>[7]</sup>; chromatographic testing confirms that the dyestuffs used for the silk garments unearthed in Turpan are: cycads, sudangs dyed reddish-red, and yellowish-red. Su Fang dyed reddish-red, Phellodendron Bark produced bright yellow, and Comfrey over-dyed indigo to present precious purple, confirming the dyeing and weaving records of the Six Tang Dynasty Canons<sup>[8]</sup>; High-precision 3D scanning combined with virtual stitching technology successfully digitally reconstructed the "Flower Hairpin Crown" and "Brocade Pasted Cloths" in the Dudu Lady's Feeding Statue of the Mogao Caves in Dunhuang, solving the problem of the Tang Dynasty, which was the first time in the Tang Dynasty, and cracked the Tang Dynasty brocade cutting code. In the logic of mutual evidence between documents and objects, the "twofold evidence method" proposed by Harada Shuren has a central position<sup>[9]</sup>. Take the Tang Dynasty's color uniform system as an example: "The Old Book of the Tang Dynasty: The Book of Public Apparel" records that "the third rank and above wore purple, the fourth rank deep scarlet, and the fifth rank light scarlet"<sup>[10]</sup>. The crimson round-necked robes worn by officials of the fourth rank in the mural paintings of Han Xiu's tomb in Xi'an are in complete agreement with the documentary records; however, the yellow diamond-patterned brocade robes unearthed in Tomb 206 in Astana, Turfan, whose owner was an official of the fifth rank of the Western Prefecture Governor's Office, clearly exceed the centralized regulations, which is an enlightening piece of physical evidence vividly reflecting the flexibility of the border areas in implementing the centralized dress system. In general, this multi-dimensional methodological system, which integrates typology, regional comparison, scientific and technological analysis, and mutual evidence between documents and objects, has laid a solid foundation for the archaeological study of Tang Dynasty clothing, as shown in Table 2.

Table 2: Evolution of the main dress forms in the Tang Dynasty and their socio-cultural associations.

Period	Typical Costume	Archaeological Evidence	Cultural Connotation
Early Tang (618-712)	Narrow-sleeved jacket and coverlet	Mural paintings on Wei Guifei's tomb in Zhaoling	Inheriting the style of Hu-Han fusion from the Northern Dynasty
Sheng Tang (713-765)	Bare collar and half-arm, Hu hat	Terracotta figurines from the tomb of Princess Yongtai, mural paintings from the tomb of Prince Zhanghuai	Influence of Western culture, female body liberation
Middle Tang	Wide-sleeved	Three-color female figurines	Return to Han-style

(766-835)	jacket, high bun	from Anpo's tomb <sup>[11]</sup>	aesthetics and the rise of extravagance
Late Tang (836-907)	Palazzo jacket, migratory bird's clothing	Cave 156 of Dunhuang Mogao Caves, Mrs. Zhang Gichao traveling <sup>[12]</sup>	Deepening of ethnic interaction and integration of religious elements

### 3. The three-dimensional archaeological analysis of Tang Dynasty costumes

The archaeology of Tang Dynasty costumes reveals its core forms and techniques through the analysis of physical remains. The women's clothing took "shirt, skirt, cape" as the basic structure, and the baoxiang flower brocade half-arm unearthed in the Astana Tomb adopted the Persian weft brocade technology<sup>[13]</sup>, which proved that the jacquard ability of the Tang Dynasty loom had jumped up; the skirt of the same tomb with red ground jointed beads and duck pattern was a combination of the Suit jointed-bead circle pattern and the Central Plains' theme of the pair of ducks, which embodied the integration of Silk Road patterns. It is worth noting that Sun Ji pointed out that such half-arms were prevalent in the early Tang Dynasty and declined with the broadening of women's clothing after the Middle Tang Dynasty, reflecting the functional adaptation to aesthetic changes; at the same time, the popularity of the Sheng Tang Dynasty's bare-necked fashion, although influenced by the Greek aesthetic of a "high girdle" and spread to the aristocracy by the court, but subject to the constraints of etiquette, the low-necked dress is mostly confined to informal occasions. The textile technology of open expression also made breakthroughs: the density of Tang Dynasty "light yarn" contained in "Tian Gong Kai Wu" was about 20 grams per square meter, far lower than the 49 grams of Mawangdui's garment, which made it possible to "hide the body in a thin veil"; Shen Congwen compared the linen shirts of the soldiers of Dunhuang with the sarongs of the nobles, revealing the difference between them and the sarongs of the nobles. Shen Congwen's comparison of Dunhuang soldiers' hemp shirts and nobleman's sarongs reveals the class distinction implied by the difference in fabrics. On the cultural level, clothing became a carrier for the localization of foreign elements.

The folded lapel robe and mincing belt of the Hu taming terracotta warriors in the tomb of An Bodhi directly imitate the warrior costume of Cornu. However, the women's Hu costumes in the Tang Dynasty have been improved. The width of the sleeves has been narrowed, and the belt has been adorned, such as the lapel robe with butterfly mincing buttons of the female figurines in the tomb of Xian Xinyu Tingzhi. Sukujin Harada further pointed out that the mincing belt has been removed from the practical "seven things" and changed to a symbol of women's fashion, and the symbol function has been changed to an aesthetic one. Symbols mark the shift from functionality to aesthetics. After the introduction of Persian brocade technology, Shu Dou Shilun created "Lingshiyang Gong sample" (symmetrical areal pattern), Dunhuang Cave 130, the Lady of the Governor's image of brocade pasted together as a typical; at the same time, the Western region to promote the popularity of color painting technology, Turpan hunting pattern of interleaved valerian

silk with red, yellow and blue overprinting to break through the monochrome limitations.

Religious symbols also experienced Chinese translation, Hejiacun cellar collection of gold and jade armlet capricorn pattern originated from India "Makara" head to retain the elephant trunk fish body and the tail into the convolvulus pattern; Famen temple double moth flower pattern silver hairpin "moths on the fire" metaphor for buddhist martyrdom concept, but the moths The silver hairpin with double moths in the Famen Temple is a metaphor for Buddhist martyrdom, but the wings of the moths are decorated with Tang-style scrolling clouds, reflecting the local adaptation of the symbols of faith. Clothing is not only a carrier of beliefs, but also a visual representation of social hierarchy. The deep scarlet robe and silver belt of a fourth-rank official in the tomb of Prince Zhanghuai<sup>[14]</sup> and the purple robe and gold belt of a third-rank official in the tomb of Prince Yide are evidence of the Tang Huiyao (The Essentials of the Tang Dynasty)<sup>[15]</sup>; the "law of diminishing material of belts" put forward by Sun Ji has been confirmed by the mincing belts made of jade beams and gold baskets with real beads of the imperial grade in the Xi'an Douwang Tomb. There is a significant differentiation in the hierarchy of women's clothing. The comparison between the "nine diaper flower hairpin" of the Crown Princess in Wei's tomb and the plain jacket and hemp skirt of the peasant woman in Dunhuang's "Marriage Picture" reveals the "diaper counting" system of the consort and the "banning of brocade and embroidery" system of the commoners; the wall of Princess Yongtai's tomb reveals the "law of decreasing materials". The system; Princess Yongtai tomb murals show that the noblewoman prevailed in multi-layer gold comb, while the commoners only use bamboo comb.

Beyond the hierarchy, the question of the attribution of dress patterns as cultural symbols triggered deeper academic discussions. In the 1930s, Harada, based on the pattern of "Tang Pipa Bag" in the collection of the Shosoin Temple, proposed that the Tang Dynasty pattern was dominated by the "symmetrical standing bird pattern" of Sassanid Persia. Shen Congwen, in his Study of Ancient Chinese Costume, pointed out that the mainstream of the Tang Dynasty was the localized patterns such as the "Cao Cao Guan Hua" and the "Ling Yang Gong Zi", and the Persian elements only existed as a marginal supplement on the basis of the Algae Well Patterns of Dunhuang and the excavated fabrics in Astana<sup>[16]</sup>. This debate prompted the scholarly community to re-examine the subjective innovation of Tang dynasty costumes, and after the 1980s, Chinese scholars pushed forward the paradigm shift through the use of new archaeological materials. One example is Sun Ji's study of Tang women's crowns<sup>[17]</sup>: combining Duan Wenjie's classification of Dunhuang feeder images<sup>[18]</sup> with objects excavated from the Fahmen Temple's underground palace, he proposes that the "Flower Tree Crown" is not a "variant of the Bukuang Crown" as Harada puts it, but rather the Tang's own system of ceremonial crowns, whose number of hairpins directly corresponds to the rank of a woman. The number of hairpins directly corresponds to the grade of the woman. This conclusion not only corrects Harada's point of view, but also reveals the ritual connotations of the Tang dress system.

It is worth noting the penetration of cross-class hu Feng, Duan Wenjie research found that in the Tang Dynasty, Dunhuang aristocratic women "cape around the arm" and Chang'an convergence, but in the Middle Tang Dynasty, the Tubo period, Dunhuang commoners took the lead in the adoption

of the left obeisance gowns<sup>[19]</sup>, and aristocrats later to follow for the sake of political compromises, reflecting the impact of the power transition on the dress. Shen Congwen emphasized that the "openness" of women's clothing in the Tang Dynasty was exaggerated by later generations, and that bared necklines were only popular among specific groups in the Sheng Tang Dynasty; Wang Renbo argued that the sharp decrease in the elements of hu clothing in the mural paintings after the Anshi Rebellion stemmed from the Central Plains' rethinking of hu-ization<sup>[20]</sup>. Zhao Feng points out that the "Ling Yang Gong Style" of the bead and ball structure is a hybridization of the Persian Sassanid style and the Chinese brocade technology<sup>[21]</sup>. To sum up, Tang Dynasty costumes are the material crystallization of the interweaving of institutional norms, technology dissemination and faith integration, and their archaeological remains not only verify the documentary records, but also profoundly reveal the class mobility and other issues.

#### **4. Significance and Impact of the Development of Costume Archaeology**

The development of costume archaeology reveals that mural paintings, terracotta figurines and other image data due to the programmed performance of the existence of interpretation limits, which may cause misinterpretation of the phenomenon, such as the Tang Dynasty paintings of women for artistic effect exaggerated clothing transparency, while the physical display of the more important fit. At the same time, technical analysis such as digital restoration has a visual structure, but it is difficult to convey the dynamic wearing and cultural perception, such as Dunhuang feeder dress simulation shows "cape around the arm" of the floating effect of the need for a specific gait to match, to prove that the dress behavior and etiquette associated. In response to these challenges, research has tended to be multidisciplinary, such as the construction of the "Tang Dynasty Dunhuang Costume Database" integrating images, fabrics, and documentary data, and the use of intelligent analysis to build a "cultural genealogy" to provide a path for the contemporary transformation of costume elements. This field integrates typological analysis, regional comparisons, and scientific and technological testing to build a spatial and temporal framework for the evolution of costumes, revealing the open and inclusive cultural nature of Tang society, and has been established as a core position by scholars such as Harada Shukin, Shen Congwen, and Sun Ji not only expanding the study of material culture, but also exploring the key to the operation of the ancient social system, the dissemination of technology, and the construction of identity. It not only expands the study of material culture, but is also a key perspective for exploring the operation of ancient social systems, technology and identity construction. Its far-reaching impact is reflected in the following: in methodology, it establishes a triple system of document-image-object corroboration and promotes research from appreciation to scientific archaeology; in cultural interpretation, it proves that dress is a material carrier of political power and cultural identity through the cases of the eastward evolution of Hu clothing and the color system; and in contemporary application, it provides academic references for the digital revitalization of traditional dress and innovative design.



## 5. Summary

The study of Tang Dynasty costumes under archaeological methods has long been not just a reconstruction style, but the key to understanding the power, technology and identity of the time. The researchers used the classification and comparison method to compare the excavated clothes, images and ancient books to sort out the changes in clothing in the Tang Dynasty. Research proves that Tang Dynasty costumes were the product of rules, technology, and cultural exchanges. The dress hierarchy is strict, officials wear different colors of clothes and belts according to their ranks, and civilians are forbidden to wear brocade; Political changes directly affected clothing, such as the sharp increase in the number of people wearing left shirts after the Tibetan occupation of Dunhuang. This method of combining physical objects, images, and words not only proves that clothes are a tool to show power and identity, but also vividly demonstrates the open, inclusive, innovative and integrated nature of Tang Dynasty society through the analysis of the source of patterns, functional changes, and fashion communication. It can be seen that the importance of archaeological research methods to the study of Tang Dynasty costumes lies in reproducing the prosperous Tang Dynasty atmosphere of "all nations worshipping the crown" from a brocade and a remnant robe, deciphering the eclectic spiritual code of Chinese civilization between warp and weft, and providing a continuous innovative oriental paradigm for global clothing research.

## References

- [1] Shaanxi Institute of Archaeology. *Mural paintings from the tomb of Prince Yi De of Tang* [M]. Beijing: Cultural Relics Press, 2002.
- [2] Du You. *Tongdian* [M]. Beijing: Zhonghua shu bure, 1988.
- [3] Shen Congwen. *The source and flow of embroidery patterns in the letter period* [J]. *Cultural Relics*, 1979(6): 72-78.
- [4] Ouyang Xiu, Song Qi. *The New Tang Book-Car and Clothing* [M]. *Xin Tang shu*. Beijing: Zhonghua shuju, 1975.
- [5] Zhao Feng. *The eastward transmission of the joint pearl pattern and the technical innovation of weft brocade in the Tang Dynasty*[C].*Proceedings of the International Symposium on the Silk Road*. Beijing: Science Press, 2015: 112-125.
- [6] Sun Ji. *Clothing and make-up of women in Tang Dynasty*[J]. *Cultural relics*, 1984(4): 61-67.
- [7] Famen Temple Museum. *The silk fabrics of the Tang Dynasty in the underground palace of the Famen Temple* [M]. Beijing: Cultural Relics Press, 2007.
- [8] Ouyang Xun et al. *The six canons of the Tang dynasty* [M]. Beijing: Zhonghua shu bure, 1992.
- [9] Harada Yoshito. *The Costumes of the Tang Dynasty in China* [M]. Tokyo: Toyobunko, 1920.
- [10] Liu Yizi. *The Old Book of the Tang Dynasty: Public Opinion and Costume* [M]. Beijing: Zhonghua shuju, 1975. Beijing: Zhonghua Shuju, 1975.
- [11] Luoyang city cultural relics task force. *Luoyang city cultural relics task force*. *Archaeology*, 1986(12).
- [12] Dunhuang research institute. *Dunhuang Mogao caves feeder image compilation* [G]. Shanghai: Shanghai People's Publishing House, 2011.
- [13] Xia Nai: *Science and Technology History* [M]. Science Press, 1979 edition.
- [14] Shaanxi Institute of Archaeology. *Mural paintings in the tomb of Prince Zhanghuai of Tang* [M]. Beijing: Cultural Relics Press, 2004.
- [15] Song Minqiu. *Tang Hui Yao* [M]. Shanghai: Shanghai Ancient Books Publishing House, 1991.
- [16] Shen Congwen. *A Study of Ancient Chinese Costume* [M]. Hong Kong: The Commercial Press, 1981.
- [17] Sun Ji. *Chinese Ancient Public Opinion Clothing* [M]. Beijing: Cultural Relics Press, 1993. 06.
- [18] Duan Wenjie, Dunhuang Research Institute. *Dunhuang Cave Art Research* [M]. Lanzhou: Gansu People's



*Publishing House, 2017. 08.*

[19] Duan Wenjie. *Cultural adaptation of Dunhuang costumes in the Tubo period* [J]. *Dunhuang Research*, 1990(3): 45-52.

[20] Wang Renbo. *The Huization of Tang Dynasty Costumes after the Anshi Rebellion* [J]. *Journal of Archaeology*, 2002(1): 89-101.

[21] Zhao Feng. *Introduction to the Archaeology of Silk Road Art* [M]. Beijing: Cultural Relics Press, 2004.