

Analysis of Humanistic Factors in the Design of Chinese Style Furnishings under the Background of National Culture

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Abstract: *The process of cultural globalization promotes the rapid change and development of regional culture. With the increasing homogeneity of various ethnic and regional cultures around the world, it is becoming more and more urgent to explore the essence of regional culture and national traditional arts, especially furnishings. The integration of Chinese national culture in product design promotes the progress and richness of modern design in the world. These cultural heritage, traditional arts and the human factors contained in them have become the inexhaustible and inexhaustible source and treasure house of modern space furnishings and furnishings design.*

Keywords: *national culture, Chinese style, furnishing design*

In the five thousand years of culture of the Chinese nation, countless tangible cultural heritage and intangible cultural heritage have been inherited. By studying these rich cultural heritages, we can fully understand the wisdom of the ancestors of the Chinese nation. These wisdoms spread through the ages, and they still bloom dazzlingly on the world's design stage today. Dougong, which has been handed down for thousands of years, and Ming and Qing furniture which has been handed down for a century, these material cultural heritages, as well as the plastic arts, craftsmanship, and cultural heritage contained in these heritages, all prove to the world the past glory of the Chinese nation. This national splendor, in the form of cultural inheritance, demonstrates a strong humanistic sentiment in the field of interior space furnishings and furnishing design.

1. The beauty of national cultural heritage

1.1 The origin and development of Chinese style

The Chinese style originated in France and developed well at the end of the 17th century. The French school of decorative design played an important role in the popularity of this style; then the Chinese style was introduced from France to the United Kingdom and developed in the United Kingdom in the 1860s. To its peak. The British newspaper that commented on the epidemic at the time stated that "everything is Chinese or has a Chinese style." Chippendale's "Guide to Gentlemen and Furniture Carpenters" listed Chinese style as one of the three most important design styles at the time.

Behind the popularity of Chinese style in all countries is the beauty of modeling in Chinese national culture. This beauty of modeling is not simply expressed in the beauty of exterior decoration, but also in the perfect combination of modeling and structure, and the ultimate exquisiteness of modeling and function. For people who understand the national culture, it is not difficult to see the wisdom of the national culture through the shape of the furnishings. This wisdom comes from the combination of "Tao" and "Technology", and from the fusion of "Art" and "Environment". European designers in the 17th century and the 18th world appreciate the Chinese style of "naturalism", "simplicity", and "authentic sincerity". It is the "art" and "environment" they see in plain Chinese furniture. The science of "technology".

1.2 The wisdom of modeling contained in Chinese style

Take the chair in the furnishing design as an example. The development of chairs in China has evolved from sitting on the floor to now being designed to meet the needs of various sitting postures. In

the process of this evolution, there is nothing left of the shape from the function to the style. The shape is a kind of exterior. In visual expression, there is a scientific scale, a scientific curvature, and a scientific angle in the modeling. The most typical shape part of the Chinese chair is the long backrest in the middle of the chair back. According to research findings, the graceful "S" and "C"-shaped curves of the backrest of the chair in the Ming Dynasty match the physiological curvature of the human spine. It is completely consistent. This kind of shape can be attributed to ergonomic design in contemporary times. The relevant data is clearly recorded in the ergonomic textbook. We can easily complete this part based on the data combined with computer software modeling. Design, but how did the hardwood bend and conform to the human body data in the Ming Dynasty? This is where the wisdom of the craftsman lies. In addition to the graceful curve, there is also an inclination angle of about 100 degrees. The design of the inclination angle is very in line with the visual aesthetic requirements in the analysis of the aesthetic angle of the shape. The slanted backrest and the front chair armrest form a balanced visual effect, making the chair beautiful. The dynamic line of the shape presents the beauty of agility; the design of this angle is not only for the visual experience, but the deeper expression is that it can make the back of the seater sit on the chair slightly back, so that the seater's back and the back rest on the board. Create contact, increase the contact area between the human body and the chair, and completely relax the ligaments and muscles of the human body's lower back. After the lower back is relaxed, put your hands on the armrest of the chair in a relaxed state. The design of the armrest is just right to meet the needs of the seated person; the height of the armrest is designed according to the height of the backrest of the chair. For example, the armrest of the armchair is connected with the backrest, and the top surface of the armrest has a certain inclination angle with the backrest. The inclination angle and the height of the armrest are just right to satisfy the seater sitting on the chair with the back attached to the backrest. , The shoulders are sunk, and the hands are naturally drooping to support the needs, so as to achieve a sitting posture in which the ligaments and muscles of the whole body are completely relaxed while maintaining a beautiful sitting posture.

1.3 The beauty of Chinese style modeling is reflected in contemporary furnishing design

Chinese chairs were introduced into Europe together with Chinese styles. During the period when Chinese styles were popular in the European continent, Chinese style chairs can be seen in a large number of furnishings and designs. For example, the shape of the two Queen Anne chairs seen in the picture published in the "Journal of the Chinese Classical Furniture Association" (USA) can clearly see traces of Chinese style; in Nritsugu Oda's "Danish Chair" records that in 1950 Jacob Schell designed a series of beautiful and comfortable dining chairs with "S"-shaped backrests covered with leather materials for the Copenhagen Furniture Fair in 1950; in "Furniture" It records that in 1968, Xiangning Sorensen designed a backrest chair similar to a Chinese chair by a Danish export furniture company.

The most famous Chinese chair design is undoubtedly the Chinese chair series designed by Hans Wagner; in Wagner's design career, Chineseism plays an important and decisive significance. In this regard, other modern designers cannot match. Yes, just like other designers are also eager to find design inspiration from Chinese chairs, Wagner also seeks inspiration from Chinese chairs, but it is only Wagner who truly understands the design philosophy contained in Chinese chairs, that is, "not to turn the process into It's more complicated, but it shows the ability of our hands: to give vitality to materials and soul to furniture, so that our works are natural enough that people can think of them only from this shape and not from others." [quoted from modern furniture design "Chineseism" in Chinese]

So why did Wagner design a Chinese chair? At that time, Fries Hansen Furniture Manufacturing Co., Ltd. was facing a shortage of imported wood. Facing this difficulty, it entrusted Wagner to design a beautiful armchair with a flowing curve effect in line with the trend. However, the minimum materials were used, and some of the raw materials could be used. Obtained from Denmark. Wagner readily accepted this commission and began this very challenging design task. Designed the Chinese chair No.1 in 1943, designed the Chinese chair No.3 made of ash in 1944, designed the Chinese chair No.4 made of ash in 1945, and designed the ash V(Y) chair in 1950. There are excellent Chinese style chairs such as the horn chair from 1952 without backrest, the bull chair from 1961, the PP201 armchair from 1969, the PP63 armchair from 1975, and the PP68 metal armchair from 1987.

Whether in China or in European countries, the elements of the beauty of the shape that have the Chinese style and the inheritance of the Chinese national culture are still influencing the progress and development of contemporary design in the world in his smartest way. The progress and development of this design lies in the beauty of the shape. The deeper level of visual performance lies in structural beauty and wisdom.

2. The beauty of the structure of national cultural inheritance

2.1 *The development and inheritance of the tenon and tenon structure*

The beauty of structure is the inner beauty of the furnishing design. It is the beauty of science hidden under the shape. At the same time, the outer shape will be affected by the structure and become more charming. If you talk about the structure in the furnishing design, you have to mention the "mortise and tenon" structure.

Mr. Wang Shixiang mentioned in the book "Research on Ming Style Furniture": "The traditional furniture structure of our country has become more and more mature in the Song Dynasty. Since the Song Dynasty and the Ming Dynasty, through continuous improvement and development, the organic combination of various parts is simple and clear. Principle, and attach great importance to vision and beauty." This "structure" refers to "mortise and tenon." The tenon-and-mortise structure has a long history in China. As early as at the Hemudu site, archaeological experts discovered the Neolithic architectural wooden components dating back about 7,000 years ago. This wooden component was widely used in the dry-lane buildings of the Hemudu period. These wooden components have the early prototypes of the tenon and tenon structure such as double-layer tenon, convex square tenon, round tenon, dovetail tenon, and tongue-and-groove tenon. By studying the cultural relics unearthed in the Spring and Autumn Period and Warring States Period, we can see that there are more than ten methods of mortise and tenon jointing in the Warring States period. These tenon and joint joint methods are very similar to the common mortise and tenon joint methods we use today. A large number of burial objects can be found in the tombs, whether it is the edge tenon and dovetail tenon used for lap joints on the wooden coffin, or the exquisite lacquerware in the burial objects, the silver ingot tenon and the lattice tenon in the lacquered wood furniture are all exquisite. It can be seen that the technical level of wood processing and design in our country has been very superb, and it also proves that the tenon and tenon structure originally used for building components in the Spring and Autumn and Warring States period has also been widely used in the production of furniture, so the funerary in this period A large number of exquisite lacquered wood furniture with a mortise and tenon structure was unearthed, as well as pictures that record the structure of tenon and mortise, which provide sufficient research materials for studying the techniques of mortise and tenon in the Spring and Autumn and Warring States period. The real development of the mortise and tenon structure to its peak is the application of wooden architecture in the Song Dynasty. In the construction of a large palace, it is not necessary to use a nail to connect tens of thousands of building components, and it can ensure the stability of the building, even after After many earthquakes, it is still as stable as before. This is the result of the construction of the tenon and mortise. The ingenuity of the mortise and tenon construction design is that when it is subjected to external pressure, each structural component can be more closely interlocked; but in an earthquake or external vibration, the wooden mortise and tenon structure can follow the vibration The frequency and direction are slightly loosened, and the slight loosening is in line with the method of buffering and dispersing the local force in the principle of mechanics to prevent excessive local force, so as to avoid structural damage caused by excessive local force. This is why we can still see the architecture of the Tang Dynasty today. In 1937, Professor Liang Sicheng, a Chinese ancient architectural research expert, discovered a simple and primitive Buddhist temple built in the eleventh year of the Tang Dynasty Dazhong (857) in Wutai Mountain, Shanxi. After more than 1,000 years of wind and rain, the building The internal beam and column structure is still intact and tightly preserved.

The ingenious design of the mortise and tenon structure is that it not only satisfies the above-mentioned structural stability, compression and earthquake resistance, but is also very good in terms of easy disassembly and assembly; whether it is a building component or an interior furnishing, as long as it is composed of a tenon and mortise structure All items can be disassembled and assembled many times under the guidance of professional craftsmen, and they are as stable as ever after assembly.

2.2 *Application of Tenon and Tenon Structure in Furnishing Design*

This article takes the armchair as an example to analyze the ingenuity of the tenon and tenon structure in the furniture design. Through the exploded view of the armchair [Figure 1], we can clearly see the beauty of the delicate structure contained in this beautiful chair. Let's start with the jointing of the wooden boards on the seat surface. The common structures for the jointing of the wooden boards in the tenon-and-mortise structure include dragon and phoenix tenon, belt tenon, silver ingot tenon, etc. The choice of tenon-and-mortise joint should be determined according to the specific situation of the wooden board. Thin plate splicing is more practical for dragon and phoenix tenons. It is the tongue and

tongue splicing used in modern woodworking. The opening of the tongue and groove is large and small. The cross section of the tongue is made into a half-silver tenon style (the silver ingot tenon is similar to the shape of the silver ingot as the name implies. The big and the small are similar to the inverted trapezoid). This production method can increase the contact area of the tenon and tenon joints, prevent the joints from being staggered up and down, and at the same time prevent the joints from breaking due to lateral force. To prevent warping and deformation of the spliced wood board, you can use a piercing tenon. [Figure 2] Add a "piercing" in the horizontal direction of the wood board and use a long tenon (a trapezoidal wooden strip in cross section). (The slotting of the inlaid wooden strip) and the inlaid long tenon are different in width at both ends. This design is to combine the wooden board with the threaded belt more closely. The outer edge of the seat surface is surrounded by a mortar and tenon [Figure 3]. When two slats are joined at an angle and a tenon is inserted into each other, it is called a mortar and tenon. similar. If you need to connect with the upper front leg and the upper back leg (the four vertical bars on the seat surface in Figure 2), you need to gouge holes on the horizontal bars and leave a tongue on the vertical bars. This design is fine Make the lap of the horizontal and vertical wooden strips a hit. When encountering curved woods, dovetails are often used for connection [Figure 4]. The dovetails are two-piece lap joints. There is a tongue at each end of the tongue, and the tongue will enter the groove after it enters the groove. It can be closely connected. In order to prevent the overlapping part from moving up and down, a square hole or a round hole is drilled in the middle of the overlapping interface, and then a wedge nail with a square or round section is penetrated. The wedge nail should be made into a thick head and a slightly thin tail. Shape, so as to ensure that the tenon and tenon joints are stronger after penetration. After complicated and thorough mortise and tenon stitching, the complete shape of the back armchair [Figure 5] is shown in front of us.

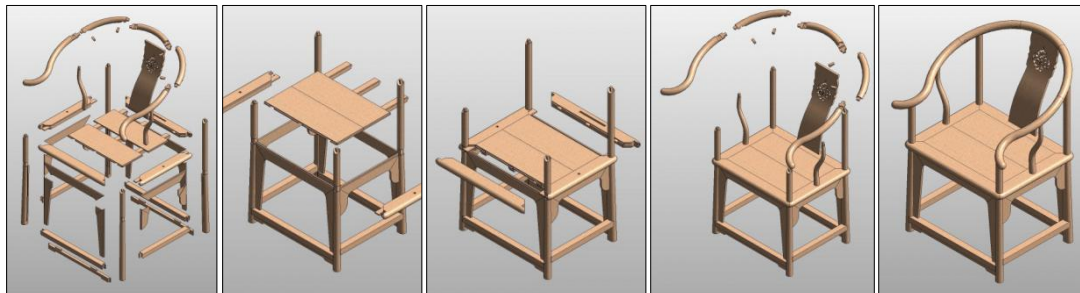


Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

[The pictures used in the article are from the Internet]

The tenon-and-mortise structure is still used in modern furniture design and production. Among the Chinese chairs designed by Wagner, in order to improve production efficiency and reduce production costs, the curves of the chair and armrests are formed by steam hot bending and pre-pressing cold bending technology. The backrest curve is integrally formed, smooth and beautiful, and more modern, but the position where the armrest meets the front leg is still overlapped with a tenon and tenon structure, and even a simplified tenon and tenon will appear in the furniture design of some composite panels. The main purpose of this design is to make the board easier to assemble and stronger after assembly, but this kind of simplified tenon-and-mortise structure is no longer suitable for repeated disassembly and assembly due to the choice of materials and the shape. However, such a design can increase the replacement rate of modern furniture and is more suitable for people's needs.

In addition to the exquisite structure and beautiful shape, there are various images that have been given special meanings by people. This image has different meanings due to different nationalities, different regions, and different beliefs. There is a common feature behind different meanings. , Is the beauty of symbols.

3. The beauty of national cultural heritage symbols

The most common decorative element in national culture is the symbol element. It can be the unique shape of the furnishings itself, or the decorative patterns in the design of the furnishings. No matter the shape or the pattern, the beauty of the symbol conveys its uniqueness to people. The beautiful meaning.

When talking about the beauty of symbols in Chinese national culture, one has to mention the well-known symbol "dragon". The dragon has a very important position in Chinese national culture, and

even the Chinese people are called the descendants of the dragon. "Position in national culture. Therefore, the dragon appears in various forms as an auspicious symbol in the display design.

Such as the Qilin, as known as Chinese Unicorn, a kind of beast with a dragon head, horse body, and dragon scales; in the design of furnishings, it often appears in the form of round sculptures and reliefs. There are many different sayings about unicorns in national culture, such as unicorns. Auspicious, unicorns must have talents, and one of the most widely said is that unicorns give off their children. Another auspicious beast whose appearance is similar to that of a unicorn has a weird appearance, such as rhino horns, lion body, dragon back, bear claws, dragon scales, and oxtail. It is said to be able to travel 18,000 miles a day and speak four languages, embracing people's good wishes and hopes, looking forward to the prosperity of the people, the prosperity of the life, the prosperous life, and the prosperous life.

Qilin and Luduan are image symbols that symbolize auspicious beasts. The symbolic elements of dragons can be seen in their shapes. However, in the high-ranking ancient times, only the true dragon emperor was the only one, so strict The hierarchical system is to highlight the dignity of the emperor. These dragon symbols are directly used to decorate the furnishings in the emperor's residence, including furniture, tableware, and the four treasures of the study. Family members of higher emperors can use a symbol "jiao" that is very similar to dragons. Especially in the Qing Dynasty, it is difficult to distinguish the shape of the dragon from the shape of the dragon. The simplest distinguishing technique is to grasp. Location, the dragon's grasp has five toes, while the Jiao has only four.

In addition to the symbolic images of these auspicious beasts, there are also element symbols that appear along with these auspicious beasts, such as auspicious cloud pattern, phoenix pattern, Wanzi pattern, and longevity pattern. These patterns are widely used in the design of modern furnishings in the form of an element symbol.

4. Conclusion

This paper analyzes the design of Chinese style furnishings under the background of national culture from the three aspects of the beauty of national cultural inheritance modeling, the beauty of national cultural inheritance structure, and the beauty of national cultural inheritance symbols. It involves the wisdom and modern Chinese ancient furnishing design. Foreign countries' obsession with Chinese style, the use of Chinese style in the design of furnishings, and the integration of national culture and humanistic feelings in the design of Chinese local contemporary furnishings. It is hoped that the analysis of the human factors in the design of Chinese style furnishings under the background of national culture can provide meager theoretical references for the later furnishing design.

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