

Analysis of Modellings, Techniques and Functions of the Chinese Skullcap

DOI: 10.5604/01.3001.0014.9310

¹ Jiangnan University,
School of Design,
Wuxi, China, 214122,
e-mail: cuty-niu@163.com

² Wuxi Institute of Technology,
School of Foreign Languages and Tourism,
Wuxi, China, 214121

Abstract

The Chinese skullcap is a kind of headgear for men specific to China, which prevailed in the dynasties of Ming, Qing and the Republic of China. Its modellings fall into two types: flat-topped and peaked, and its lining is divided into hard and soft to fit the different needs of each season. Through analysis of the physical objects that have remained to this day, it reveals that four types of Chinese skullcap can fit well with the human head, covering half of the forehead. By means of analysing and carding of the crafting techniques of the peaked Chinese skullcap with a hard inner lining, it could be found that it is precise in material selection and fine in making, which is the embodiment of the increasingly approaching perfection of traditional headgear techniques. The modelling and production techniques of the Chinese skullcap also reflect its unique practical, aesthetic and social functions, displaying the philosophy of “the integration of beauty and practicality” in Chinese headgear art.

Key words: Chinese skullcap, modelling and structure, production technique, fashion function.

Introduction

The Chinese skullcap is a kind of headgear resembling the rind of half a watermelon for men specific to China. Owing to the influence of movie and television plays, it is commonly known as a kind of clothing worn by Manchus in the Qing Dynasty. But historically, the real Chinese skullcap was headgear for the Han nation which came into being during the Ming Dynasty, and due to some political reasons and its properties of convenience and practicality, it prevailed during the dynasties of Ming, Qing and the Republic of China, becoming important headgear for adult men of the time; however, there are few researches related to this category. Based on the material object and literature analysis, this paper analyses and restores four physical Chinese skullcap objects preserved in the Museum of Folk Dress at Jiangnan University to examine some characteristics of the Chinese skullcap in modelling, technique and function.

Modelling characteristics and developmental changes of Chinese skullcap

The Chinese skullcap gained its name because it was made by stitching six pieces of black satin or velvet, with a brim of more than one cun (cun, a traditional Chinese measurement unit of length, equal to 1/3 decimeter) in width around the bottom, thus resembling the rind of half a watermelon. Initially being promoted nationwide by Yuanzhang Zhu, the Emperor Taizu of the Ming Dynasty, for its political implication of the unity


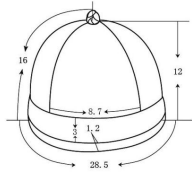

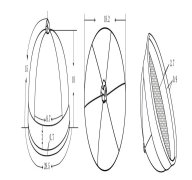

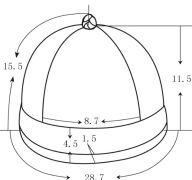

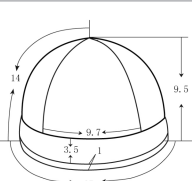
of six directions (east, south, west, north, heaven and earth, namely, all China), the Chinese skullcap was also called Liuheytong Mao (united-six-direction hat), Liuhe Mao (six-direction hat) and Liuhe Jin (six-direction scarf) in the Ming Dynasty. In the Qing Dynasty, when the Chinese skullcap became more beautiful and fitting, it gained another more auspicious name: Ruyi Mao (going well hat). According to its shape, the Chinese skullcap gained some other appellations such as Xiao Mao (small hat), Maotou'r (hat head), Xigua Mao (watermelon-like skullcap) and Guala Guan (watermelon crown), and so on.

The Chinese skullcap was in vogue throughout the Ming Dynasty, and it was mainly popular among civilians. In the Qing Dynasty, its use reached a wider range, gaining popularity among supreme emperors and common people. But due to the absence of a hair bun on the heads of men in the Qing Dynasty, the Chinese skullcap decreased in height, which is also attested in *Research in Ancient Chinese Costume and its Adornment*, “In the Ming Dynasty, the Liuhe Jin had a tall hat body and obvious sags between segments, while in the Qing Dynasty, the Xiao M, at Jiangnan University Museum of Folk Dress, also had a lower hat body, and the six segments presented a semi-circular structure displaying no sags between them, such being the only difference of Chinese skullcaps in the two dynasties” [1]. During the period of the Republic of China, some old adherents of the Qing Dynasty clung to the old dressing customs. As a result, the basic modelling of the Chinese skullcap re-

mained until the early age of the People's Republic of China.

Generally speaking, the Chinese skullcap only had two modellings during the dynasties of Ming, Qing and the Republic of China: flat-topped and peaked, both of which have two types of lining: hard or soft. The hard lining is not collapsible and is lined with a mesh woven from bamboo strips, being cool and breathable; while the soft lining is collapsible and lined inside with gauze, silk or cotton, and so on, to better fit the head. As for the material of the Chinese skullcap, in summer or autumn, it is mostly black gauze, knitted braid and painted gauze (sizing is required during the making), and in spring or winter it is bluish black silk and satin, velvet or felt [2]. The hat body is mostly black and the inner lining mostly red. It is decorated with a bobble woven with red and black velvet threads (also called a hat lump or hat top), or a blue bobble for funeral rites. Among officials and rich squires, the skullcap top is sometimes adorned with coral beads, crystal beads or precious stones, which are called hat beads, and the exact middle of the skullcap brim is jewelled with a square precious stone to serve as a Maozhun (or Maozheng, which means reference object on the hat) distinguishing the front and back, as well as an adornment. After the reigns of Kangxi and Qianlong, the Chinese skullcap experienced a gradual diversification in decorative style. As a result, embroidery, coloured brocade and other ornaments could be added to the hat brim or hat body, and some hat tops are decorated with a bunch of red braid falling behind.

Table 1. Physical analysis of Chinese skullcaps of each type.

Category	Feature	Material	Picture of physical objects (Photographed by the author)	Dimension figure (Drawn by the author) Unit: centimetres
Peaked Chinese skullcap with hard inner lining	Not collapsible, decorated with a red bobble, round and full in hat body, and conoid at top	Black gauze used as main material, silk satin used to decorate the border, bamboo strips woven to compose the meshy inner lining		
Flat-topped Chinese skullcap with hard inner lining	Not collapsible, decorated with a black bobble, full in hat body, and slightly flat-topped	Black gauze used as main material, silk satin used to decorate the border, bamboo strips woven to compose the meshy inner lining		
Peaked Chinese skullcap with soft inner lining	Collapsible, decorated with a black bobble, stitch bulge of six segments of hat body, and conoid at top	Black silk satin used as plus material, red cotton fabric used as inner lining		
Flat-topped with soft inner lining	Collapsible, bobble missing, full in hat body, and slightly flat-topped	Black silk satin used as plus material, red cotton fabric used as inner lining		

As recorded by Zhao Lian (1776-1833) in Volume II, *Continuation of Xiaoting Adversaria*: “when I was young, I saw whenever scholar-bureaucrats stayed at home idly, they all wore informal hats, which resembled winter hats in shape but with narrower brims. The upper part was made of red or stone blue brocade, bordered with blossoming clouds to form a shape of a sunflower, the top was decorated with a red velvet bobble, and from the top a bunch of red braid of more than one chi (chi, a traditional Chinese measurement unit of length, equal to 1/3 meter.) in length fell behind. All people, old or young, noble or humble, wore it.”

During the late Qing Dynasty and Republic of China, due to the huge number of skullcap wearers and enormous demand, there were shops nationwide specialised in making and selling Chinese skullcaps. Shijia Han registered in *Chinese skullcap shop in Hankou Banbian Street*, “There were ten Chinese skullcap shops in Banbian Street, mostly located on the north side, where the buildings were mostly of a two-storey wooden structure with high and narrow fronts. The counters were around four chi in height, and most of the

racks or cabinets leaned closely against the wall on the left, usually with one or two sewing machines being placed against the right of the shop gate” [3] evidencing the large demand for Chinese skullcaps, as well as its commercialisation at that time.

After the foundation of the People’s Republic of China, due to the changes to fashion and hair styles, the Chinese skullcap has gradually faded out of people’s view. As a result, almost no adult wears the Chinese skullcap in daily life, and it just appears in movies and television plays or is reduced to a prop used to take photos at some tourist attractions, or even regarded as costume of a certain national minority.

Physical analysis and technical characteristics of the Chinese skullcap

In order to better examine the modelling and technical characteristics of the Chinese skullcap, in this paper, physical objects preserved in the Museum of Folk Dress at Jiangnan University were chosen for analysis and technical restoration.

Physical analysis of the Chinese skullcap

There are four types of Chinese skullcaps preserved in the Museum of Folk Dress at Jiangnan University, which were popular in the late Qing Dynasty and early Republic of China: a peaked one with hard inner lining, a flat-topped one with hard inner lining, a peaked one with soft inner lining, and a flat-topped one with soft inner lining, covering all the types of Chinese skullcap. They all have a brim and no Maozheng, being typical civilian garment accessories. Their basic information is shown in **Table 1**.

Based on **Table 1** and combined with the adult human head size (National male head circumference: 56.1 cm, from Chinese standards) [4], it can be learned that the four skullcaps can fit the human head well, covering half of the forehead and with modelling characteristics in compliance with the above-mentioned description. Among them, two skullcaps with hard inner lining are similar in the production method, with the same hat band and head circumference. The four Chinese skullcaps have an approximate head circumference of 54-57.4 cm, which is

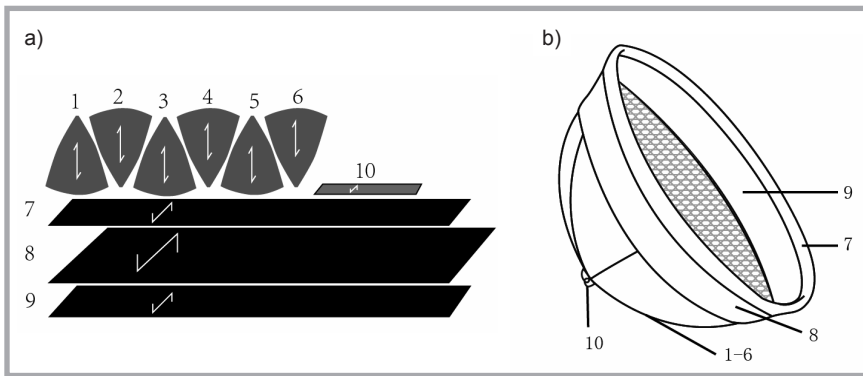


Figure 1. Sketch of cut pieces for peaked Chinese skullcaps with hard inner lining: a) diagram of cutting pieces, b) corresponding parts (drawn by the author).

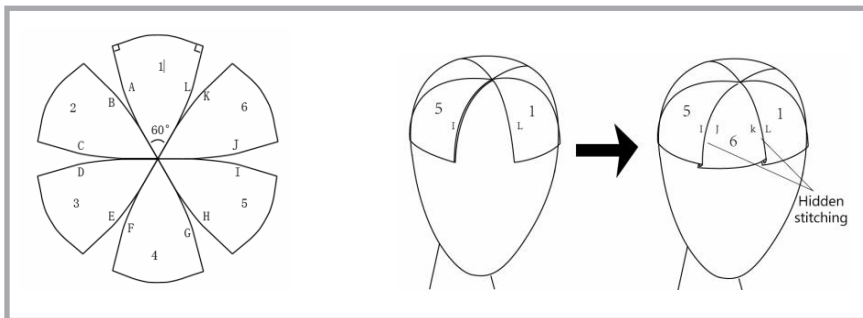


Figure 2. Steps of piecing together the segments into a melon-rind shaped hat top (drawn by the author).

in compliance with an adult males head circumference, and seamed with six segments of black plus material with a similar bottom length; the only difference lies in the peaked ones being slightly higher than the flat-topped ones. Since the hard inner lining is used in summer, the hat body is mainly made of gauze material; while the soft inner lining is made of silk satin and lined with cotton cloth to keep the head warm during autumn and winter. The four Chinese skullcaps have hat bodies cut straight along the yarn direction, and both the hat brims and binding cloth are cut along the oblique yarn direction at an angle of 45° . The hat bobbles of the three exhibited hats are all made of velvet

and cut along the oblique yarn direction at an angle of 45° ; and have stitches of quality compound yarn, supplemented inside with padding cloth and side hoops, and so on.

Production process of the Chinese skullcap

A detailed record of the production process of the Chinese skullcap is not found in current literature. But Lianshang Zhao stated in *A brief History of Costumes in China*, “modelling of the Chinese skullcap comes into being by stitching the six already cut pieces of cloth, with a one-cun hat brim made additionally below” [5]. And *Research in Ancient Chinese Costume and its Adornment* also states, “(The cloth) is first divided into six segments, and then the six segments are integrated by stitching and supplemented with a wide brim” [6]. Such introductions are too simple to illustrate the complete production process of the Chinese skullcap. This paper chooses peaked Chinese skullcaps with hard inner lining preserved in the Museum of Folk Dress at Jiangnan University as the objects of research and restoration, which are kept in good conditions, are of fine workmanship, and pasted with a brand on the inner side of the hat brim, reading *Junxing Hat*

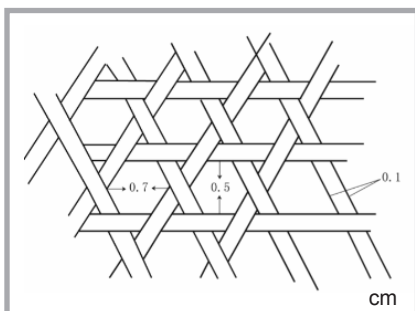


Figure 3. Structural diagram of bamboo strips interweaving inside the Chinese skullcap (drawn by the author).

Shop of Beijing Moulding Factory” to indicate its origin and maker. In combination with the existing historical materials, research and interview results, its production process is analysed as follows.

Material preparation and cutting of pieces

The materials and tools for making a Chinese skullcap are as follows: black crape fabric for the hat body comprising six segments, black silk satin for the hat brim and binding, black meshy inner lining, bamboo strips, Kuitou, a dress-maker’s tape measure, flatirons, and so on. These materials are easy to obtain, among which Kuitou is a kind human bare head model. According to the relevant records, Kuitou is generally divided into five types, namely five sizes: Five Big, Six Big, Seven Big, Eight Big and Nine Big. Five Big is suitable for children of 11-12 years old [7], and the rest in rising order serve increasingly older wearers.

The fabric, including plus material and lining, has around ten cut pieces, as shown in **Figure 1**. The numbering of cut pieces of the skullcap and sizes of each part (including the seam allowance) are approximately as follows: No. 1-6, Chinese skullcap segment cloth $110.7 \text{ cm} \times 15 \text{ cm}$; No. 7, binding strip $59 \text{ cm} \times 3.8 \text{ cm}$; No. 8, outer hat brim cloth $59 \text{ cm} \times 8 \text{ cm}$; No. 9, inner hat brim cloth $59 \text{ cm} \times 4.5 \text{ cm}$, and No. 10, hat bobble binding strip $15 \text{ cm} \times 1.5 \text{ cm}$.

Stitching steps of Chinese skullcap

(1) Piecing together the segments of the Chinese skullcap. Referring to **Figure 2**, match skullcap segments No.1 and No.2 front to front, sew Line A of No.1 and Line B of No.2 using semi-back stitches, then match No.2 and No.3 front to front, match and sew Line C and Line D, and so forth, to seam the melon-rind shaped segments from No.1 to No.5 into a Chinese skullcap (the numbers of melon-rind segments are shown in **Figure 2**), flatten each seam allowance by pressing it clockwise and ironing it in the same direction; fold Line I of No.5 while ironing it; and fold Line K of No.6 while ironing. When the five melon-rind shaped segments are seamed into a hat top, first place it around the Kuitou, then cover the gaps on the hat top with No.6, the ironed melon-rind shaped segments, adjusting the positions of the cut



Figure 4. Flat-topped Chinese skullcap of Majuyuan that remains to this day (Collected by Brand Store J Y Ma).



Figure 5. Stone blue-grounded satin Chinese skullcap with pony beads and lantern patterns, made during the Guangxu Reign, Qing Dynasty (Collected by the Palace Museum).

pieces and stitching them using hidden stitches, as shown in *Figure 2*.

- (2) Weaving bamboo strips into the hat lining. Select a number of bamboo strips of even thickness and smooth surface, each of which around 0.1 cm in width. According to the size of Kuitou, weave the bamboo strips into hive-shaped frameworks of equal size, as shown in *Figure 3*; bamboo strips interweaving in three directions are then woven into a hemispheric lining fitting the crown, and then the hat lining is tailed to match the framework silhouette.
- (3) Connecting the outer hat brim. Place the meshy lining between the bamboo-strip woven hat lining and the hat top, and make the three layers of materials fit smoothly. Size the hat brim and align the center joint of the outer hat brim with the front of the hat top hemline seam allowance, stitch both around the circle using semi-back stitches and penetrating the bamboo strip-woven hat lining, connect the two ends of the outer hat brim and iron them by pressing the seams, then place the hoop between the outer hat brims, overturn the outer hat brim and flatten it by ironing.
- (4) Fixing the inner hat brim. Size the cloth strip of the inner hat brim, match its back with the inner lining bottom, stitch both around the circle using semi-back stitches, penetrating the bamboo strip-woven hat lining and keeping a distance of 0.5 cm to the bottom, connect the two ends of

the outer hat brim and iron them by pressing the seams, and finally fix the seams.

- (5) Binding. Paste the reverse of the binding strip to the lining, match the outer hat brim with the front of the binding strip aligning the hemline, stitch both around the circle using semi-back stitches and penetrating the bamboo strip-woven hat lining, connect the two ends of the binding strip and iron them by pressing seams. Turn the binding strip inside out and flatten it by ironing. Turn the binding strip towards inside the hat to cover the seams that fix the inner hat brim, seam them using blind stitches or angle stitches, and flatten them by ironing.
- (6) Attaching the hat bobble. Fold the two sides of the velvet strip inwards and fold it in half lengthwise. Stitch the product using blind stitches to make a slim ribbon, which after being coiled, forms a grape-like twisted bobble. Stitch the twisted bobble to the centre of the hat top, finally fix the hat top and hat bobble together using a flat-head rivet sticking out from inside the hat top.

As evidenced by the analysis, the Chinese skullcap looks small and exquisite, but its material selection and design must fit changes of seasons and climate. It is fine and precise in making, thus being the product of a combination of “season, geography, aesthetic material and fine workmanship”, as well as a model of the increasingly approaching perfection of traditional Chinese headgear techniques.

Functional analysis of the Chinese skullcap

The modelling and production techniques of the Chinese skullcap are inseparable from its functions, being the concentrated embodiment of the traditional philosophy of “the integration of beauty and practicality”, and displaying the unity of practical, identifying and aesthetic functions.

Practical functions of warmth in winter and coolness in summer

The aforementioned analysis evidences that the Chinese skullcap is made according to Kuitou so that it can fit the human head well, being convenient, practical and avoiding affecting human movements owing to the large size of the headgear. Meanwhile, as evidenced in *Legacy of Qing Dynasty*, “The Chinese skullcap for wearing in spring or winter is made of satin; for wearing in summer or autumn it is made of gauze with catgut-woven patterns on a plain-woven bottom” [8], its material selection must fit seasons and climate. In addition, the skullcap can be interlaid with cotton for the winter and bamboo strips for the summer, achieving the effects of conserving warmth in autumn and winter and creating coolness in spring and summer, embodying treatment in accordance with seasonal conditions applied to costume. The *Health Essay* records, “When barely cool, Xiao Mao is indispensable, which must be equipped with interlaid lining and a brim. The brim must be so soft as to be adjustable to any height, upward or downward, thus comforting the wearer” [9], further displaying that the skullcap with soft inner lining is

characterised by portability and is easy to mould. Owing to its good practical function, the Chinese skullcap is also named as “the hat used among civilian people.”

Identifying functions of fashion and status

In the Qing Dynasty, styles of the Chinese skullcap were closely related to the trendy fashion of the time, while serving as a status symbol. An adage among the old Beijingers that “Majuyuan on the head, Neiliansheng under the feet, Badaxiang on the body and Sidaheng around the waist.” (Majuyuan, Neiliansheng, Badaxiang and Sidaheng are store brands.) describes the dressing standard configuration among the affluent people. Majuyuan, founded in the Jiaqing reign of the Qing Dynasty, was the most prestigious hat shop in Beijing in olden times, and one of its products, a flat-topped Chinese skullcap, shown in Figure 4, is precise in material selection and fine in workmanship. It can be learned from the enclosed advertisement that it was the representative hat worn by the wealthy class in the late Qing Dynasty, but it belonged to an old pattern at that time. As for decoration, in the olden days, “wealthy families with good taste of some sort in Beijing will border the Chinese skullcap with brocade fabric of red-flake gold or stone blue” [10], in order to reveal their social status. In the stone blue-grounded satin Chinese skullcap with pony beads and lantern patterns, shown in Figure 5, the hat body, bordered with swastika patterns and pony beads of coral colour adorning six lanterns [8], is matched with a red bobble and a bunch of red braid. As an accessory used to match the informal dress worn by the Emperor Guangxu, it reveals the nobility of the wearer. In Xu-antong’s reign, a remark by the Lanling Worried Man recorded the fashion of that time, “When the fashion-pursuers wear the Xiao Mao, it must present six folds so that the hat top looks as peaked as a cone. The hat bobble is as small as a bean for

fear of being insupportable when growing in size. The hat is worn extremely forward to cover half of the forehead. I dare not know whether it is so beautiful” [11], which evidences the role of the Chinese skullcap in revealing costume fashion and social status.

Aesthetic function of beautification and match

There were so diversified headgears in the Ming Dynasty that nearly a hundred types appeared in various history records alone, which resulted in the Chinese skullcap’s failure to outperform the homogeneous variety in spite of its wide prevalence. However, when entering the Qing Dynasty, threatened by the order of “head or hair”, enforced by harsh measures, men of the Han nationality were obliged to follow the Manchu customs, having their hair on the forehead shaved; thus wearing the Chinese skullcap did not only adorn and embellish the head, but also alleviate the discomfort caused by the sudden change in haircut. Meanwhile, when matched with the main body costume, the Chinese skullcap also served as an adornment, which was manifested in “plain clothes and a small hat” when it was matched with a piece of Zhiduo (a loose robe worn by a Buddhist monk or Taoist) in the Ming Dynasty, or the matching of long robes, jackets and the Chinese skullcap in the Qing dynasty and Republic of China [10]. The Chinese skullcap could well blend with the costume of each period, moulding an overall image.

Conclusions

The compact modelling and exquisite production techniques of the Chinese skullcap embody not only its comfort and convenient practical functions but also its identifying function to reflect the social fashion and status features, as well as its decorative function of combining the human body and costume, displaying the

Chinese traditional philosophy of material production. As the embodiment of the constant development and improvement of Chinese traditional headgear technique, the Chinese skullcap does not only provide important technical and cultural guidance for the reproduction in the contemporary era of apparel and accessories made in ancient China, but also offers important inspiration and reference to international hat fashion design.

References

1. Gao CM. *Research in Ancient Chinese Costume*. Shanghai, Shanghai Culture Press, 2001.
2. Zhou XB. *History Of Ancient Chinese Costumes*. Beijing, China Theatre Press, 2002.
3. Han SJ. Skullcap Shop in Hankou Bianbian Street. *J Wuhan Literature and History Data* 2004; 03: 42.
4. Standard China. Head-Face Dimensions of Adults [Standard Online]. c1998 [cited 1999 Apr 01]; GB/T 2428-1998. Available from: Standards China Online.
5. Zhao LS. *A Brief History of Costumes in China*. Beijing, China Encyclopedia Press, 2000.
6. Xu K. *Legacy of Qing Dynasty*. Beijing, Business Press, 1928.
7. Cao TD. *Health Essay*. Shanghai, Shanghai Bookstore Publishing House, 1981.
8. Zhang HY. *Anecdote of Old Beijing*. Beijing, The Chinese Overseas Publishing House, 2013.
9. Jia XZ, Cui C. Lantern Pattern of Textile Clothing in Ming and Qing Dynasties. *J Journal of Clothing Research* 2020; 5 (01): 66-76.
10. Yang MR. Thirteen kinds of Beijing Zhu Zhi Ci in Qing Dynasty. Beijing, Beijing Ancient Books Publishing House, 1982.
11. Niu L, Cui RR. Viewing Social Changes from the Popular Evolution of Melon Hats. *J Jiangxi Social Sciences* 2017; 38 (8): 133-137.

Received 01.02.2021 Reviewed 30.03.2021

