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## FIVE COLORS ON SILKS OF ANCIENT CHINA

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In ancient Chinese culture, there was the yin-yang theory and five-color system that included red, blue, yellow, black and white. Each color refers either to one of the five directions or positions, east, west, north, south and middle, or to one of the five planets, Venus, Jupiter, Mercury, Mars and Saturn, or to one of the five materials, metal, wood, water, fire and earth. ( Fig. 1a and 1b) This theory was recorded in the Zhou Li (*Rites of the Zhou*) showing that it started at least from the Zhou dynasty (7<sup>th</sup> to 3<sup>rd</sup> centuries BC), and lasted until today. In this presentation I will focus on the five-color system used in silk textiles of ancient China, based on three cases I will use as examples, including the polychrome woven textiles in Han to Jin dynasty (1<sup>st</sup> - 4<sup>th</sup> centuries), clamp-resist dyed textiles in the Tang dynasty (8 - 9<sup>th</sup> century), and the luxurious silk brocades from the Ming to Qing dynasty (15-19<sup>th</sup> centuries).

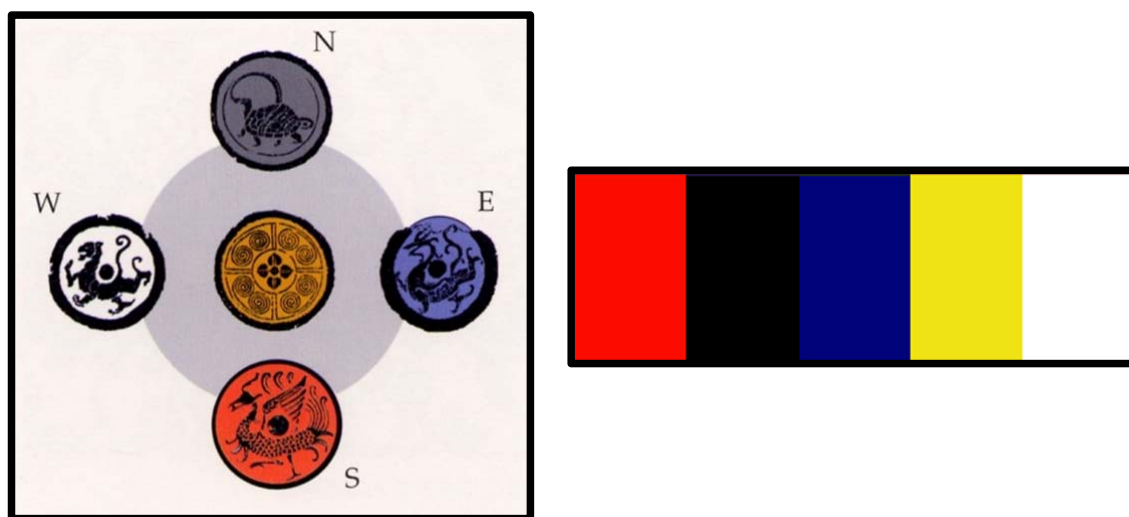


Figure 1a, top. Illustration of the five directions and five colors (drawn by Zhao Feng)

Figure 1b, bottom. Standard five colors following the historical document

### The site of Niya and the five-star silk

The ancient site of Niya, located in the south of the Taklamakan desert in Xinjiang, used to be an oasis on the lower reaches of River Niya. In the early twentieth century, Sir Aurel Stein made his first trip to this region in January 27, 1901. He found many sites of settlement, large quantities of art works, and written tablets with Kharosthi and Chinese inscriptions from which scholars identified this site to be the Jinjue Kingdom in Han dynasty<sup>1</sup>. In 1959, the Xinjiang Uyghur Autonomous Region Museum sent an expedition headed by Li Yuchen to carry out field work in Niya. The most rewarding find was the discovery of a tomb with a double burial containing some complete costumes and many objects of daily life<sup>2</sup>.

<sup>1</sup> A. Stein, *Serindia*, chapter X, From Dandan Uiliq to Niya River, p.314

<sup>2</sup> Xinjiang Museum, Xinjiang Mingfeng Xianbei Dashamuzhong Gu Yizhi Muzhangqu Donghan Hezhangmu Qingli Baogao [Excavation report of double burial tomb of Eastern Han from the desert site of northern Mingfeng, Xinjiang], Wenwu, issue 6, 1960.

During 1988-1999, sponsored by Yatutaka Kojima, a team of Japanese and Chinese scholars made a number of joint expeditions to the site of Niya, where a group of tombs of the Eastern Han to the Jin dynasties (1<sup>st</sup> -3<sup>rd</sup> centuries AD) were excavated from Graveyard no.1. The most famous silk arm protector with the inscription "wu xin chu dong fang li zhong guo" was found in the Tomb no.8, which was in a very good condition, and all the objects have very fresh and bright colors. ( Fig.2)



**Figure 2.** The silk arm protector during the excavation from Yu Zhiyong.

The fabric for the arm protector cover is a so-called *jin* silk, warp faced compound tabby, with a proportion of patterning to ground warps of 1:4, blue is used for the ground, and yellow, white, green and red used for the pattern. It has a very large warp count, 220 warps/cm, but fewer wefts, 12 main and 12 binding wefts/cm. The pattern repeat in the warp direction is short, 7.4cm, i.e. 84 main wefts, but wide in the weft, i.e. the whole loom width, around 50cm.<sup>3</sup> ( Fig.3)



**Figure 3.** The silk arm protector with the inscription "wu xin chu dong fang li zhong guo," 2nd-3rd centuries, Niya site, Xinjiang, now collected at the Xinjiang Institute of Archaeology.

This piece caught the attention of scholars with its bright colors, unprecedented pattern and unique inscription. The basic grid is formed by cloud scrolls, which extend horizontally in the weft direction. Progressing from right to left are one white bird with a crown, probably a phoenix, one yellow bird bowing her back, one beast with a single horn, probably *qilin*, and one tiger, interspersed with the characters *wu xing chu dong fang li zhong guo* ("the Five Planets all appear in the east"—which is

<sup>3</sup> Zhao Feng and Yu Zhiyong (ed.), *Legacy of the desert king: textiles and treasures excavated on the Silk Road*, ISAT/Costume Squad, Hong Kong, 2000, pp.62-63.

considered to be very auspicious in China). Next to the inscription, there are two circular dots, the first in white and the second in red, that represent two of the Five Planets. From the same tomb comes another fragment of the same textile, with clouds, winged figure, one yellow planet, and three characters *zu nan qiang* ("defeating the southern Qiang barbarian") (Fig.4). The biography of Zhao Chongguo in *Han Shu* (*History of the Han Dynasty*) records that the Han emperor Xuandi commanded Zhao Chongguo to lead troops to the Qiang area, and the emperor gave him his blessing in writing, "The Five Planets all appear in the east. This is very auspicious to China, and the barbarians will be defeated."<sup>4</sup> This textile may be the evidence to this military expedition.



**Figure 4.** The silk fragment with the inscription *zu nan qiang*, "2nd-3rd centuries, Niya site, Xinjiang, The Xinjiang Institute of Archaeology.

The whole pattern could be reconstructed based on these two fragments. It should be symmetrical to the U-shaped cloud in the center and the yellow planet in between two characters, *nan* and *qiang*, as the central axis. All the motifs, including two birds, one unihorn (unicorn), one tiger, and a winged or flying figure, are all repeated on the left side in the same shape and same colors, but the two other plants, should be in different colors, blue and green. (Fig.5) Unfortunately, the characters are not the same, and the sentence cannot be reconstructed, but the meaning should be always auspicious<sup>5</sup>.



**Figure 5.** Pattern reconstruction of the silk with the inscription "*wu xin chu dong fang li zhong guo zhu nan qiang*"

<sup>4</sup> Ban Gu, *Han Shu* [History of Han dynasty], vol.69, *Zhao Chongguo Zhuan* [the biography of Zhao Chongguo].

<sup>5</sup> Zhao Feng, *Treasures in silk: an illustrated history of Chinese textiles*, ISAT/Costume Squad, Hong Kong, 1999, pp.78-79.





**Figure 6, left.** The silk with the inscription "chang le da ming guang," 2nd-3rd centuries, Niya site, Xinjiang.

Xinjiang Institute of Archaeology

**Figure 7, right.** The silk border with the inscription "yan nian yi shou chang bao zhi sun," 2nd-3rd centuries,

Niya site, Xinjiang, The Xinjiang Institute of Archaeology.

Based on the other analysis of all available samples of polychrome woven silks, *jin*, with cloud pattern from the 1st to the 4th centuries, we found that all those pieces were composed of the same five colors, with very few exceptions, such as the piece with *chang le da ming guang* characters from the same tomb. ( Fig.6) Even on those *jin* silks with 1:2 and 1:3 warp-faced compound structure, there are also five colors in total but in different warp bands where some ground warp color changed, such as in the pieces with *yan nian yi shou chang bao zi sun* ( Fig.7) and a *le xiu wen yi zi sun wu ji*. ( Fig.8) However, the standard five colors, white, black, blue, red and yellow as described in the Chinese documents are changed a little on our *jin* silk textiles, for instance, black is replaced by blue, and blue by green, so that the resulting palette is blue, red, yellow, green and white. ( Fig.9) This may reflect the preference of the weavers for bright colors, or that the black color was not easy to be dyed during that period.



**Figure 8, left.** The silk border with the inscription *an le xiu wen yi zhi sun wu ji*,"2nd-3rd centuries, Niya site,

Xinjiang, The Xinjiang Institute of Archaeology.

**Figure 9, right.** The five colors used for the Han patterned woven silk

### Three color ceramics and five color silks in Tang

During the Tang dynasty, the Chinese medieval period from the 7<sup>th</sup> – 8<sup>th</sup> centuries, people preferred to have more colorful objects to decorate themselves. One example was the three color ceramics (*sancai*) in many different shapes. It is a type of lead-glazed pottery and the polychrome effect was obtained by

using as coloring agents copper (which turns green), iron (which turns brownish yellow), and less often manganese and cobalt (which turns blue) on the white body. There were many three color ceramics found in early Tang dynasty tombs, mainly animals and figures from the Silk Road, but with some other decorative objects, such as three color bottle with dragon holders in brown, yellow and green colors, Tokyo National Museum collection<sup>6</sup> ( Fig.10), three color camel and riders in brown, blue and green colors, excavated from the tomb of Xianyu Tinghai, Xi'an<sup>7</sup> ( Fig.11) and even building miniatures.



**Figure 10, left.** Tang three color bottle with dragon holders in brown, yellow and green colors, Tokyo National Museum collection

**Figure 11, right.** Tang three color ceramics camel and riders in brown, blue and green colors, excavated from the tomb of Xianyu Tinghai, Xi'an

But more colorful decorative art was from the textiles. A new technique to produce colorful textiles was invented during the high Tang (early 8<sup>th</sup> century). The story was recorded in a book, Tang Royal Achieves, that the clamp-resist dyeing was invented allegedly by the sister of an imperial concubine during the reign of Xuanzong (712-756)<sup>8</sup>. A piece was presented to the empress, whereupon Xuanzong ordered more to be made within the palace. The technique was kept secret at first, but gradually spread all over the country and became very common, so that the clamp-resist dyed textiles have been found in various places dated during and after the 8<sup>th</sup> century. For example, the gauze with a grape motif on a white ground (64TAM38) ( Fig.12) and the plain weave with a floral pattern on a dark blue ground (72TAM216) were both excavated in tombs at Turfan dating around 751AD<sup>9</sup>. Other clamp-resist dyed textiles have been discovered at Dulan (Qinghai)<sup>10</sup>, and in the tomb at Mochevaya Balka, Russia<sup>11</sup>. However, the majority of clamp-resist dyed textiles have come from Cave 17 at the Mogao Grottoes (in Dunhuang)<sup>12</sup>. These may also be compared with those in the collection at the

<sup>6</sup> Tokyo National Museum, 100 Masterpieces of Asian Art from the Tokyo National Museum Collection, no.36, Tokyo: Tokyo National Museum, p.47

<sup>7</sup> Shu Bai (ed.), *zhonghua renmin gongheguo zhongda kaogu faxian* [Great archaeological discoveries of the People's Republic of China], Beijing: Cultural Relics Publishing House, 1999, p.390

<sup>8</sup> Wang Dang (Northern Song): *Xian yuan* [Nice ladies] in *Tang yu lin* [Royal Archives] vol. 4, Shanghai: Shanghai gu ji chu ban she, 1978, p. 149.

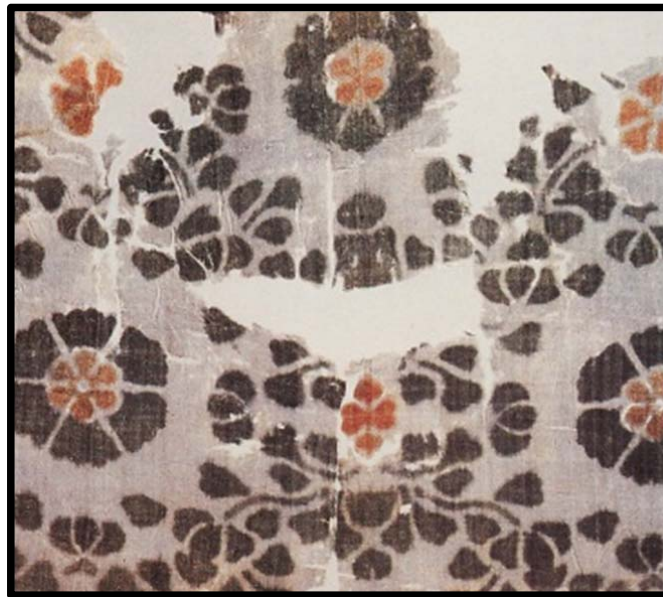
<sup>9</sup> Wu Min, *Zhi Xiu* [Weaving and embroidery], Youshi Cultural Corporation Ltd, Taiwan, 1992, p.145.

<sup>10</sup> Zhao Feng (ed.), *Recent Excavations of Textiles in China*, Hong Kong: ISAT/Costume Squad Ltd, pp. 108-109.

<sup>11</sup> Anna A. Ierusalimskaja and Birgitt Borkopp, *Von China nach Byzanz*, Munchen: Bayerisches National Museum, 1996, p.97.

<sup>12</sup> Zhao Feng (chief ed.), *Textiles from Dunhuang in UK collections*, Donghua University Press, Shanghai, 2007,

Shōsō-in at Nara, some of which are of the Tang dynasty, and some of which may have been Japanese imitations<sup>13</sup>.



**Figure 12.** The gauze clamp resist dyed with grape motif on a white ground, excavated from the tomb TAM38, Astana, Turfan, Xinjiang, early Tang dynasty, The Xinjiang Museum.

Regarding the technique of the clamp-resist dyeing, we believe that the textiles were folded in half lengthways before they were clamped, which would suggest that the carved blocks should measure about half the loom width. The loom width was about 50 cm, which would make the blocks about 25 cm wide. However, the length of the blocks varied according to the patterns.

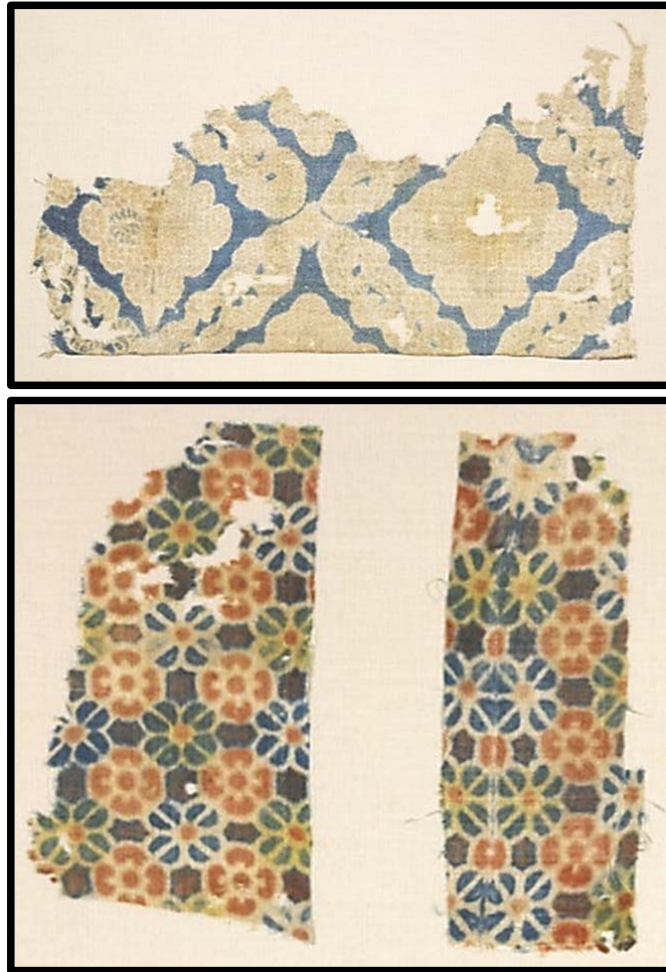
The key to produce multi-color clamp-resist dyed textiles was to carve different areas for dyeing on to the blocks, so that the multi-color dyeing could take place concurrently. In this case, the carved blocks would need to have borders. Some clamp-resist dyed textiles have undyed areas on their selvages or in between those areas with different colors, because these areas were clamped tight by the convex borders of the blocks. Some multi-color pieces from Dunhuang were clamp-resist dyed first, then further colored by hand painting. For example, some pieces were clamp-resist dyed in blue and red (sometimes reddish-brown, probably faded red) first, then have the other two colors (green and orange) created by adding yellow dye to specific areas with brush by hand. The green areas were thus dyed twice, once in blue and then in yellow. The orange areas were also dyed twice, once in red and then in yellow. For examples, see the clamp-resist dyed plain weave with a pattern of lozenge grids (MAS.880, L:S.556), ( Fig.13) each enclosing a rosette, and the clamp-resist dyed plain weave with floral roundels. But for the pattern of interlocked rosette (MAS.878, L:S.591), two sets of blocks were used for dyeing first to create blue, orange, and brown via the overlapping of blue and orange, then yellow was painted on blue and orange, to create green and light orange, thus giving five colors in total. ( Fig.14)

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pp.192-208; Zhao Feng (chief ed.), *Textiles de Dunhuang dans le collections Francaises*, Donghua University Press, Shanghai, 2010, pp.196-200.

<sup>13</sup> Kaneo Matsumoto, *Jodai-gire: 7<sup>th</sup> and 8<sup>th</sup> century textiles in Japan from the Shoso-in and Horyu-ji*, Shikosha Publishing Co., Ltd, Kyoto, 1984.





*Figure 13, top. The clamp-resist dyed plain silk with lozenge pattern, Tang dynasty, from the Dunhuang Library Cave, now collected at the British Museum (MAS.880) and the V&A Museum (L:S.556)*

*Figure 14, bottom. The clamp-resist dyed plain silk with interlocked rosettes, Tang dynasty, from the Dunhuang Library Cave, the British Museum (MAS.878)*



*Figure 15. The five colors used for the Tang clamp resist dyed silk*

These are some examples of multi-colored clamp-resist dyed textiles, from which we could understand that the five colors were still preferred in the Tang dynasty. But those colors are normally red, blue, yellow, green and orange, which are different from the Han dynasty five colors on textiles, red, blue, green, yellow and white, because of the technique is different. ( Fig.15)



1	Clamp-resist dyed plain weave with confronting geese in roundel	MAS.876/877	Dyed in blue and reddish brown; painted in yellow	( Fig.16)
2	Clamp-resist dyed plain weave with griffin in roundel	MAS.944.a-c	Blue, reddish brown and yellow	( Fig.17)
3	Clamp-resist dyed plain weave with floral roundel	L:S.546/558/592/682	Dyed in blue and red; painted in yellow	Fragment
4	Clamp-resist dyed plain weave with quatrefoil	MAS931, L:S.544	Dyed in blue and reddish brown	Panel



**Figure 16, left.** The clamp-resist dyed plain weave with confronting geese in roundel, from Dunhuang Library Cave, The British Museum (MAS.876, 877)

**Figure 17, right.** The clamp-resist dyed silk with griffin in roundel, from Dunhuang Library Cave, The British Museum (MAS.944.a-c).

### Brocade and porcelain with five colors in Ming

Since the Tang dynasty, brocade has come into being. From the Dunhuang library cave, a number of such textiles were found with more than five colors. One example is the fragment with floral medallion (MAS.871) in the collection of the British Museum<sup>14</sup>. ( Fig.18) It has a red twill weave as the foundation weave, and woven with supplementary wefts in yellow, green, white, purple and blue colors for the pattern, so seven colors in total. Those colors are only for decoration, however, and do not have the special meaning.



**Figure 18.** The fragment with woven floral medallion, from Dunhuang Library Cave, The British Museum (MAS.871).

<sup>14</sup> Zhao Feng (ed.), *Textiles from Dunhuang in UK collections*, Donghua University Press, 2007, Shanghai, cat.116, p.149.

Brocade became more popular during the Ming and Qing dynasties. According to the document from the History of Ming dynasty, the five colors used for the silk panel in the back of the Emperor's skirt are red, white, black, green and light blue, and the five colors for the crown are red, white, black, blue and yellow<sup>15</sup>.

But in most of the cases, the brocade in imperial costume used more colors, which were not specific colors. For example, the formal robe with *mang*-dragon pattern on dark blue ground, in the Kong family's collection, was brocaded with more than five colors, but mainly five colors. Dark blue was for the ground color, while the red for the dragon body, including the head and scales, the yellow for the nose, lips, and bow hairs, the white for horns, eyes and eyelash, and the dark green for the waves. ( Fig.19) However, there are more colors, such as light blue, light green and pink colors to make the pattern more three-dimensional and more beautiful. Another robe from the same collection has a yellow ground, but with more colors, using red for the body, white for the horn and teeth, blue and green for the mountain and waves, which are basically five colors. ( Fig.20)



**Figure 19, left .** The formal robe with mang-dragon pattern on dark blue ground.

**Figure 20, right.** The formal robe with mang-dragon pattern on yellow ground.

*Both - Ming dynasty, in the Kong family's collection*

The same case can be also found on the paintings of the imperial costumes from the Ming court. One is Emperor Xiaozong's and Shengzong's yellow ceremony robe<sup>16</sup>. ( Fig.21) All the dragon medallions have clear dark blue, dark green, dark red, and strong white colors, but with some other similar colors to form the shadow. Even in another painting, the brocaded part of a dragon robe for the guards has the same colors, red for the robe ground, blue and green for the dragon body, white for the outline and yellow for the clouds. ( Fig.22a and 22b) In other words, the five colors :white, green, blue, red and yellow. ( Fig.23)

<sup>15</sup> *Ming Shi* [History of Ming dynasty], vol.66, *Yu Fu Zhi* [Costume]

<sup>16</sup> Fong and Watt, *Possessing the Past: Treasures from the National Palace Museum*, Taipei, The Metropolitan Museum of Art, 1996, p.330.



**Figure 21, left.** The painting of Emperor Xiaozong in yellow ceremony robe, The Palace Museum, Taipei.

**Figure 22a and 22b, top right.** The painting with Emperor's guards in brocaded dragon robes, The Palace Museum, Taipei.

**Figure 23, bottom right.** The five colors used for the Ming brocade silk

The Qing dynasty imperial robe adopted the tradition from the Ming, and used the five-color system for the brocade as well. In most cases, yellow was normally used as the ground, and white was for the outline. The other colors are green, blue and white, just like the phoenix pattern on a Qianlong period robe. ( Fig.24)



**Figure 24.** The phoenix pattern on a Qianlong period robe, The Palace Museum, Beijing.

The five color system in the decorative arts was a fashion in late Ming to early Qing dynasty. Especially porcelain with five colors from the period, that was normally white ground, with red, blue, green and yellow patterns. For example, on the pot with crane and auspicious treasures from Jiajing period, 16<sup>th</sup> century, yellow cranes and treasures, red clouds and ribbons, green leaves and some blue cranes are painted on the white ground<sup>17</sup>. ( Fig.25) Another bottle with phoenix pattern from Longqing

<sup>17</sup> Jing Ronghua et Shui Ciping (ed.), *zhongguo mingdai chiqi tulu* [Catalogue of Ming Dynasty Porcelain], China Commercial Publisher, 1999, p.111



period shows the blue and green phoenixes, and red and green ruyi fungus alternately, and few yellow flowers on a white ground<sup>18</sup>. ( Fig.26) One more Ming dynasty jar is decorated with more flowers and mountain and waves in red, yellow, blue and green colors<sup>19</sup>. ( Fig.27)



**Figure 25, left.** Pot with crane and auspicious treasures from Jiajing period, 16<sup>th</sup> century

**Figure 26, center.** Bottle with phoenix pattern from Longqing period, 16<sup>th</sup> century

**Figure 27, right.** Ming dynasty jar decorated with more flowers and mountain and waves, early 17<sup>th</sup> century  
All from private collections

However, sometimes one of the five colors would be replaced by another color, normally the blue color replaced by dark brown or even black. For example, the bowl with dragon pattern from Hongzhi period<sup>20</sup>, ( Fig.28) and the jar with horse and cloud pattern.<sup>21</sup> ( Fig.29) But in any case, they were still five colors.



**Figure 28, left.** Bowl with dragon pattern from Hongzhi period, 16<sup>th</sup> century, private collection

**Figure 29, right.** Jar with horse and cloud pattern from Ming dynasty, private collection

Looking through the whole Chinese history, we found that there was a preferred taste for the decorative colors. One piece with five colors was always the favorite by the people from the Han dynasty until the Qing dynasty. Related to religion or philosophy in the beginning, in later periods, it became only a fashion. This fashion was sometimes shown on the other materials, such as ceramics, but mainly on silk textiles, because the silk was most decorative material in ancient China.

<sup>18</sup> Ibid, p.138

<sup>19</sup> Ibid, p.151

<sup>20</sup> Ibid, p.113

<sup>21</sup> Ibid, p.114