# Study on the Formation of Japanese Kaniarare Textiles

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# Abstract

Kaniarare pattern (窠に霰文), a typical and representative design among the Japanese Yusoku patterns (有職文 樣), becomes stylized at least during the 11th to 12th centuries in the late Heian period. The design of kaniarare pattern became stylized at least during the 11th to 12th centuries in the late Heian period, while the earliest known stylized kaniarare-mon silk fabric could be dated from late 13th century during the Kamakura period. Although the study of the trade and cultural exchanges between Song and Liao Dynasties and late Heian to early Kamakura Japan became more distinctive in the past decades, the transmission of silk art and relative impact on Japanese silk design have not been fully studied. By comparing with a few groups of extant and unearthed silk relics and connecting their relevancy, this article attempts to analyze the possible influence of silk design from the Liao to Song dynasties on Japanese silk design then and later.

Keywords: silk, pattern, Yusoku, Sino-Japanese cultural exchange

# 1. Introduction

Kaniarare pattern, consisting of curve roundel medallions as upper pattern and checkered background, is a typical and representative design among Japanese Yusoku patterns. Early-typed kaniarare silks emerged from the 8th century, which could be witnessed on two pieces of brocade silks in the Tōdai-ji Temple and the Shoso-in Repository according to Ota Eizo (1962) and Matsumoto Kaneo (1984, Figure 1). The design of kaniarare-mon became stylized at least during the 11th to 12th centuries referring to painted sutra scrolls and other images handed down from the late Heian period, while the earliest known stylized kaniarare-mon silk could be dated from late 13th century, the Kamakura period.

# 1.1 The Emergence of Early Kaniarare Patterns

When discussing the kaniarare patterns in the Heian period, even if there may not be a direct inheritance, attention should be paid to these more ancient textile patterns, or at least acknowledge their existence. Surviving artifacts of Heian period textiles are extremely limited, but some paintings depict clear textile patterns in areas like human figure's clothing, including ka-mon (窠文) and kaniarare patterns. In a screen from the 11th century later Heian period a male aristocrat is depicted wearing white ka-mon trousers, with ka-mon filled with seven dots, and the ground is plain white (Figure 2). In a set of six painted and colored deity images housed in the Nara Yakushi-ji Temple, there is an example of a male deity wearing white kaniarare patterned trousers, with a four-petal roundel, each petal having an additional arc, forming a four-curve roundel medallion, and the ground pattern is checkered (Figure 3). This group of deity images were painted around Kanji era (寬治, 1086–1094), and were repaired and inscribed in the later Kamakura period, in the third year of the Einin era (永仁,1296), due to damage. Despite the repairs, the paintings on the backscreen depicting trees, flowers, landscapes, and the attire of the female deity and male deity's sash and garments, still somewhat reflect the landscape paintings and attire images of the later Heian period, but there is also a possibility of incorporating details of Kamakura period attire.

In the lecture hall of Nara Horyu-ji Temple, a portion of the trousers of the Jikoku-ten image produced from the late 10th century to the first half of the 11th century has a black-and-white checkered ground pattern with a colorful nested flower pattern as the main pattern. The MOA Art Museum hold a copy of the "Sutra of Taira no

Motochika" during the late Heian period in the second year of the Jisho era (治承, 1178). The beginning part includes illustrations of dance and music performers, where the patterns on the robes and trousers of dancers including "butterfly" and "Kalavinka" (迦陵頻) are kaniarare patterns, with four-petal flowers nested inside the nested patterns. The arrangement of the four-curve ka-mon roundel medallions on the checkered ground pattern are staggered in a square configuration (Figure 4). In some of these images, the colors of the left and right patterns in the same line are different, intentionally depicting the changes of colored pattern wefts on brocade textiles.

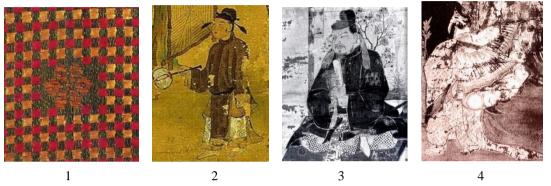


Figure 1. Brocade with floral pattern on checkered ground, Kyoto National Museum Figure 2. The male aristocrat depicted on the landscape screen, Kyoto National Museum Figure 3. Painted and Colored Deity Image, Yakushiji Temple, Nara Figure 4. "Sutra of Taira no Motochika", MOA Art Museum, Shizuoka

The textile decorative patterns from the late Heian period depicted in the "Heike Nokyo" also include instances related to the kaniarare patterns. These sutra manuscripts were created by the Heike clan, led by Taira no Kiyomori (平清盛, 1118-1181), in the second year of Chokan (1164) and offered to the Itsukushima Shrine in the second year of Ninan (仁安, 1167). Regarding three sections (*願文, 化城喻品* and *囑累品*), these were modified and repainted by the skillful artist Tawaraya Sotatsu (俵屋宗達) in the second year of Keicho (慶長, 1602) to restore damaged parts, while the rest, although occasionally prone to transcription errors, has generally retained the appearance of the late Heian period (Kyoto National Museum, 1972).

In the "Heike Nokyo", a portion corresponding to the beginning of the scrolls, the inside front, and the end of the scrolls depict scenes from "*The Tale of Genji*", including animals, landscapes, Buddhist stories, and images of courtiers wearing sashes or courtly attire. Others, resembling Heian and Song Dynasty mica-bound paper, feature decorative patterns similar to textile patterns, including kaniarare patterns and plain chekered grounds without any upper motifs (Figure 5).



Figure 5. Details of the "Heike Nokyo", Itsukushima Shrine

# 1.2 Characteristics of Early Kaniarare Patterns

Although lack of exact surviving textile artifacts, from the above and other images in this era, it can be observed that in the late 11th to 12th centuries, during the middle to later stages of the Heian period, the kaniarare patterns had already formed the following fixed characteristics in design: (a) Checkers are used as ground patterns. (b) Ka-mon patterns are used as upper patterns, with the outer line of ka-mon mostly being four-curve roundel.

Sometimes, there are breaks between the joint of outer curves, and on the inner side of the curve, arcs are sometimes added to create a layered effect. (c) Other small patterns, mostly four-petal flowers, are filled inside the ka-mon roundel medallions. (d) The arrangement of the four-curve ka-mon roundel medallions on the checkered ground pattern are staggered in a square configuration.

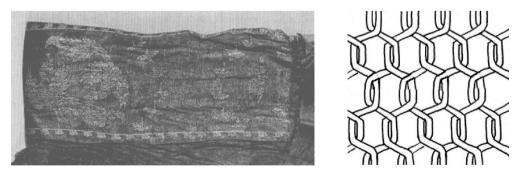
# 2. Formation of the "Upper-Ground" Composition of Textile Design in China and Japan

According to above descriptions and analysis, it is evident that during the Heian period, there coexisted checker patterns without upper patterns, as well as kaniarare patterns that combine checker patterns serving as the ground pattern with curve roundel medallion ka-mon patterns serving as upper patterns. It also indicates that the kaniarare patterns of the late Heian period belong to a stylish "upper-ground" composition of textile design. This type of composition, in Japan after the Heian period, is referred to as "futae (二倍)" or "futae-orimono" and is among classic Japanese aristocratic yusoku textile designs.

The question lies in whether this "futae" style of textile composition design originated independently in Japan or was influenced to some extent by textiles and other art forms from other regions. This question has not received sufficient attention before but is a crucial shift in textile design in China and Japan since the medieval period, thus requiring careful analysis. In general, this paper suggests that the "futae" style of textile composition design in Japan was to some extent influenced by silk and other artistic items from the Tang, Song, and Liao dynasties. It could be through this influence that the design became solidified since the Heian period.

## 2.1 The Formation Stage: Late Tang Dynasty Period

The earliest examples of "upper-ground" style Tang Dynasty silk fabrics are likely preserved in the Todai-ji Temple and Shosoin Repository, consisting of three types of 8th-century silks, including brocade and weft-faced compound samite. Kyoto's To-ji Lecture Hall depicts tortoise-shell and lozenge-patterned floral motifs on the statue of Maitreya dating from the 9th century. Among the late Tang silks unearthed at the Famen Temple in Shaanxi Province, there is at least one type of samite woven with metallic threads, which is a skirt waistband fragment from pack T68, an example of Liao-style weft-faced compound samite. The composition of this woven fabric is in the form of horizontal bands, with a narrow band and leaf motifs woven at the top and bottom edges (similar to the common edge decorations seen on Tang dynasty gilded silverware). There are two incomplete medallions surviving in the warp direction, likely arranged in a continuous pattern. The outer medallion (but not in a symmetrical composition) and auspicious clouds, while the right medallion likely depicts four butterflies (or bees) surrounding a jewel-like flower. In the space between the flying geese outer medallion and the main decorative motif, ground patterns are also woven, consisting of intersecting wave patterns similar to tortoise-shell motifs, with possibly other small motifs filled inside the wave intersections, although they are difficult to discern clearly (see Figure 6).



a. Samite waistband with medallic threads b. Ground pattern

Figure 6. Samite Fragment with "Upper-ground" Patterns from Late Tang Dynasty

#### 2.2 Development in Liao, Song, Jin and Tangut Xia Dynastiess

During this period, the "upper-ground" style composition became common in both northern and southern regions. Numerous examples of such compositions can be found in Liao Dynasty gilded silverwares, tomb paintings, and excavated silks, especially in the tomb of Yelü Yuzhi (耶律羽之). In the stone railings of royal tombs from the Jin Dynasty, scroll motifs are positioned above geometric patterns. On the murals of the Tangut Xia period in the Yulin Caves, paired phoenixes are depicted within medallions, placed above overlapping patterns. Although

fewer silks from the Song Dynasty have been excavated, on the brocade edge of a sutra cover discovered in the Yunyan Temple Pagoda in Suzhou, an "agate pattern", rarely found among silk patterns but recorded in "*Treatise on Architectural Methods or State Building Standards*" (*Yingzao Fashi*), can be found beneath medallions of pairs of phoenix and confronted butterflies.



Figure 7. Silverwares, Mural Paintings and Silks with "Upper-ground" Patterns

## 3. Transmission of Curve Roundel Medallion Patterns from China to Japan Since Song Dynasty

The inherited and excavated curve roundel medallion patterns and "upper-ground" curve roundel medallion patterns textiles and related images from the mid to late Heian period to the early Muromachi period in Japan can be mainly categorized into three groups: (a) Textile patterns influenced by Liao and Song Dynasty silk styles seen in Buddhist paintings and sculptures from the Heian to Kamakura periods. (b) Heian period inherited and archaeologically excavated textiles, primarily including the inherited silk from To-ji Temple and the figured and brocaded textiles unearthed from the golden hall's lower part in Chuson-ji Temple. Besides, curve roundel medallion patterned silk textiles from the Yuan and early Ming periods found in Japan's inherited textile fragments known as Meibutsu-gire.

#### 3.1 Images of Textile Patterns from the Heian to Kamakura Periods

Firstly, there are related textile images in Buddhist paintings and sculptures from the Heian to Kamakura periods. Many of these feature the craft of "kirikane (截金)", where gold foils are cut and applied to create "upper-ground" patterns. Sometimes, colors are also applied to sculptures. These patterns included a large diversity of geometric ground patterns as well as curve roundel medallion upper patterns, indicating that this type of design was already very popular at the time.

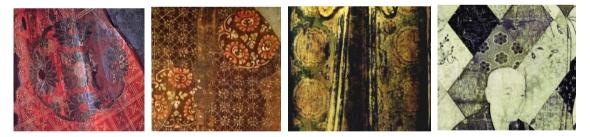


Figure 8. Painted Textile Patterns from the Heian to Kamakura Periods

# 3.2 Excavated Silk Textiles in Late Heian Period

Archaeological discoveries of surviving silk artifacts confirm that the "curve-roundel medallions on ground pattern" style of silk existed in Japan during the late Heian period. In 1950, textiles dating back to the late 12th century Heian period were unearthed as burial items at the golden hall of Chuson-ji Temple in Iwate Prefecture, Japan. Among them were two types of silks: (a) a red ground samite with a pattern of paired birds on tortoise-shell ground, woven in the Liao style. This silk featured a pattern of paired long-tailed birds arranged in an interlocking composition within roundel medallions(喜相逢) on the tortoise-shell ground, with small floral motifs filling the tortoise-shell sections. (b) A twill damask with a pattern of eight-petaled roundels on coin-patterned ground, with pairs of back-to-back peonies arranged within the roundels. Regarding the origin of these silks, scholars including Tomoyuki Yamabe and Shizuo Takada generally define the Liao style samite as a type of "Heian-style samite" woven in Japan during the Heian period. They particularly noted the compositions of these two kind of silk fragments presented the design characteristics of "futae-orimono", suggesting that these silks represent the design style of the Heian aristocracy.

However, as research on late Tang dynasty silks discovered in Dunhuang, China, and the continuous exploration of Liao and Song dynasty silks on the Chinese mainland have deepened, the Japanese academic community's understanding of samites from Heian period has changed. According to Mihoko Doumyou (1990), Shigeki Kawakami (2009) and Yuzuko Kuwabara (2016), the Japanese textile history researchers now tends to believe that the "Heian-style samite", which means the Liao-style weft-faced compound samite from the Heian period were imported goods from mainland China.

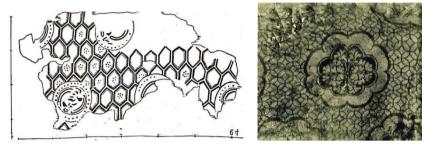


Figure 9. Silk Fabrics Excavated from Chuson-ji Temple

Through the analysis above, it can be observed that during the Heian period, Japanese textile designers were very familiar with the "upper-ground" style of textile design composition. With the formation of Japan's "kokufu culture" in the later Heian period and its subsequent influence, Japanese textile design began to reflect more elegant patterns, gentle color combinations, and a trend towards naturalistic design. Therefore, the textile patterns imported from China during the Nara and early Heian periods, including motifs such as lions, dragons, and phoenixes, gradually gave way to images closer to nature, such as flowers, bees, and butterflies. Additionally, the decline and eventual extinction of textile technology immigrants from East Asia (primarily China and the Korean Peninsula) led to a decline in textile production techniques in Japan from the later Heian period to the Kamakura period. Compound weft twill samite weaving decreased, and the predominant form shifted towards supplementary weft techniques.

These changes led to a simplification of the Chinese-style "upper-ground" textile design, replacing complex geometric ground patterns with checkered ground patterns and substituting relatively simple curve roundel medallions for complex ones. This constitutes the most important design elements of the Japanese-style "kaniarare" pattern.

#### 4. A Conjecture on the Formation of the Kaniarare Pattern

#### 4.1 Transmission of Brocade Textiles and Weaving Techniques

From extant artifacts, it is likely that the technique of figured weaving in Japan underwent two to three stages of development after being introduced from the mainland China. The earliest known examples of figured silk fabrics in Japan are two types of brocade from Horyuji Temple, dating back to the Asuka period of the 7th century (白地 and 赤地山菱文錦). Both brocades feature multi-colored weft threads woven in a plain weave ground to create geometric patterns. The method to present patterns is likely achieved through either a repeating pattern or a floating pattern technique, and the loom used may have been similar to the horizontal loom depicted in the copper model found at the Munakata-taisha Shrine (宗像大社). These two types of brocades, characterized by their simple yet colorful woven patterns, and their more rustic style and technique compared to other clearly imported silk fabrics found at Horyuji Temple, are considered to be typical examples of domestically produced woven textiles in 7th century Japan. The source of their technology may have been the weaving techniques from the "Imakinoaya-nishigoribe" (新漢錦部) skilled weavers, which arrived in Japan sometime after the reign of Yuryaku Tenno (雄略天皇).

Afterwards, there are also a few twill silk fabrics with supplementary wefts in the Shosoin repository, which could be defined as brocades. The presence of brocades in the Shosoin repository not only indicates that Tang Dynasty brocades had been imported into Japan but also suggests that their weaving techniques had begun to influence local production. However, the brocade weaving techniques during the Heian period may not have directly descended from those of the Nara period. It is possible that there was a new wave of brocade technology transfer from the Song Dynasty to Japan. After the peak of Tang Dynasty-Japan cultural exchanges waned during the Heian period, Japanese dyeing and weaving techniques underwent a long period of decline. The evidence of Song Dynasty brocade spreading to Japan is mainly associated with Buddhist exchanges, as indicated by extant artifacts, including the kasaya in Ninna-ji (仁和寺) in Kyoto, and the sutra covers from Jingo-ji (神護寺) in Kyoto. Additionally, there is archaeological evidence found in the seated statue of Amida Buddha at the Phoenix

Hall of Byodoin Temple in Uji, which dates back to 1053, where brocade fragments with gold supplementary wefts were discovered. According to "Ruijuuzouyoushou" (類聚雜要抄) compiled in the mid-12th century, it is known that by the late Heian period, karaori textiles had local Japanese designs known as "futae-orimono", which were combinations of ground and upper patterns woven on a twill ground and weft floating technique. These Japanese designs, possibly including karaori, were likely influenced by the brocade weaving techniques from the Song Dynasty and shared a similar technological origin with the weaving of kaniarare silk fabrics.

## 4.2 A Speculative Process of the Formation of the Kaniarare Pattern and Its Influences

The Kaniarare pattern, in terms of its compositional form, belongs to the "upper-ground" designs. Such styles appeared in ancient China no later than the late Tang Dynasty, while becoming a popular pattern during the Liao and Song periods. Early forms of silk textiles with "upper-ground" designs are found among the silk textiles preserved in the Shoso-in Repository. In terms of design elements, the checkered ground of the kaniarare pattern may have drawn inspiration from the checkered patterns of the Kofun to Nara periods or to simplify the designs of late Tang to Song-Yuan periods silk textiles. The curve roundel elements first appeared in Tang Dynasty silk textiles, matured into a "decorative metal mirrors" with pointed corners (實照) during the Liao and Song periods, aligning with the curve roundels of the kaniarare pattern. The elements filled in the curve roundel medallions of kaniarare patterns are mostly centrally symmetrical, highly consistent with the composition of combined floral patterns in Liao Dynasty textiles (which also appeared extensively on the clothing patterns in Heian Buddhist paintings). The elements filling the curve roundel medallions of kaniarare patterns mostly consist of floral and plant motifs, with insects represented mostly by butterflies. The four-petal small flowers and butterfly motifs are common in Liao and Song Dynasty silk textiles. The emergence and solidification of the kaniarare pattern's compositional form and design elements synchronously correspond with the introduction of "upper-ground" style curve roundel medallions in Liao, Song, and Yuan silk textiles. Even in the rare instances of existing Heian period inherited and excavated silk textiles, the trajectory of its transmission can still be faintly outlined.

As recorded in the diary "Sanemi-kyo Ki" (実躬卿記) by Sanjo Sanemi, a court noble of the Kamakura period, on the twentieth day of the tenth month of 1285, the costumes included a kind of hakama (紺返袴), the fabrics of which featured a checkered pattern, with a "ka" pattern (文霰地,以銀泥書窠文) painted in silver paste on top.



Figure 10. Karaori and Ukimonaya Silks with Kaniarare Patterns

From the courtly diaries and manuscript documents of the Kamakura period, it can be observed that lower-ranked hakama worn by courtiers and ministers could be made directly with silks featuring checkered patterns or patterned wilks with ka-mon roundel medallions. Courtiers' regular upper hakama (常表袴) could be crafted from ground-binding kaniarare patterned silks. In terms of cultural significance, there was a significant shift in textile design from the Nara period to the Heian period dominated by Kokufu Culture. Large animals and prominent floral patterns gradually gave way to smaller, daily-life-inspired depictions of plants, animals, and insects. There was a greater emphasis on subtle and hazy beauty, akin to clouds and mist, departing from the grandiose designs of the Heian period.

On this basis, the complex ground patterns of Liao, Song, and Yuan Dynasty "Upper-ground" style silks with curved roundel medallion patterns were simplified into grid patterns that were simple yet evoked a hazy atmosphere. The intricate motifs such as buildings, figures, birds, dragons, phoenixes, and flowers found within the curved roundel medallion patterns of the Liao, Song, and Yuan Dynasties were also absorbed and simplified into composite floral motifs. This simplification of patterns reduced the difficulty of producing pattern lashes and raising warps. By using thicker pattern wefts, it reduced the number of times raising warps were needed to reproduce the recorded pattern and insert wefts. Many silks using floating ground wefts and floating pattern wefts simultaneously repeat the kaniarare patterns, indicating that the creation and weaving procedures of pattern

lashes and depression shafts were minimized in these manufacturing processes, leading to a significant number of upper patterns being unbound. The widespread use of 3-end twill ground also indicates that the number of ground weave heddles was also kept to a minimum.

These circumstances indicate significant changes in the level of weaving technology during this period compared to the Nara era. The simplification of patterns and the degradation of weaving technology are synchronized, giving rise to a subtle atmosphere in Japanese courtly yusoku fabrics from the Heian to Muromachi periods. On one hand, cultural accumulation and rich connotation follow the ancient virtues. On the other hand, there is a refreshing beauty in the unique and already theoretical color and pattern combinations. Another aspect is the rustic sense that is hard to conceal when compared to contemporary imports from China. This contrast and juxtaposition constitute the foundation of yusoku fabrics in Japan from the late Heian period to the medieval era.

Additionally, the Tokyo National Museum collects a pair of embroidered Bijakṣara banners (I-3160, Figure 15), speculated to have been created in the 14th to 15th centuries during the Muromachi period due to the use of brocaded satin borders known as "shuchin (儒珍)" in Japan (Nara National Museum, 2018). The border textiles include pieces of checkered floral brocade satin. On a ground woven with alternating blue and red ground wefts, various colors of pattern wefts are applied to create checkered patterns and floral motifs, with four-petal ka-mon curve roundels alternating with small floral motifs in the weft direction. The double-layered four-petal ka-mon curve roundels are filled with four-petal small flowers. This type of checkered pattern combined with a band-like composition of ka-mon curve floral roundels on the weft direction can be considered as a new design in the style of Japanese courtly yusoku silk influenced by the Muromachi-period kaniarare patterns.



Figure 11. Embroidered Bijaksara Banner and Brocaded Borders in Detail, Tokyo National Museum

#### 5. Conclusion

Through the above analysis and comparison, this article speculates that kaniarare patterns, under the influence of imported upper-ground curve roundel medallion patterns silk from the Liao, Song, and Yuan dynasties, combined with local aesthetics and adapted weaving techniques, were simplified and transformed to create a new pattern. Upper-ground pattern silk did not carry ceremonial significance in ancient China, and there was no necessity to use garments made from upper-ground pattern silk. However, kaniarare pattern silks hold a special place in the costumes of Japanese courtiers.

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