Kata-gami: Japanese Stencils
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The Smithsonian Institution's National Museum of Design
Foreword

The collecting of Japanese stencils used in the process of dyeing fabrics is one of those rare exceptions in which the means to the end is treasured as much as the final product. In most cases also, the stencils are the only surviving documents; the fabrics have disappeared with everyday use.

The Cooper-Hewitt Museum is fortunate in having an extensive collection of over 400 kata-gami (stencils) ranging from purely geometric forms to graceful compositions based on nature. They show the Japanese genius for pattern, and are exciting to contemporary eyes because of their craftsmanship and elegance, and the strength and timelessness of the designs.

It is a pleasure for the Museum to publish this catalogue to coincide with a nation-wide festival honoring the extraordinary cultural contributions of Japan. Its publication was made possible through the interest and kindness of Karen Johnson Keland to whom we are deeply thankful.

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Kata-gami is the Japanese term for the paper stencils that are used to transfer patterns to fabric for dyeing. The technique, one of the oldest in Japan, is practiced today on a limited scale. Precise dating of the stencils is difficult because traditional patterns and methods were repeated through the centuries, but it appears that most of those preserved in the Cooper-Hewitt collections date from the nineteenth or early twentieth century. Although only a few Japanese craftsmen remain who have the skill to cut stencils as elegant and refined as the historical examples, there is currently a movement to train artisans to keep the craft alive at a highly sophisticated level.

The center of stencil cutting in Japan has always been the city of Suzuka, in Mie Prefecture near the Bay of Ise. The stencil dealers' commercial interests were protected by the Tokugawa shoguns, who had risen to power in this area in 1615 and who held the reins of government in Japan until 1867. The dealers were permitted by the Tokugawa rulers to sell stencils freely throughout the country, an important consideration as there was no dyeing industry in Suzuka (Kyoto and Tokyo were the centers for dyeworks). In order to maintain their monopoly, Suzuka dealers encouraged the cutters to be secretive about methods and designs, which were handed down from generation to generation.

The remarkably varied designs include free interpretations of nature, patterns derived from objects in daily life, and motifs based on centuries-old formulas. Some motifs have undergone so radical a transformation from reality that the abstracted and simplified form bears little relation to actual appearance. For example, the tortoise, symbol of longevity, is reduced to a hexagonal outline for a fabric pattern. The symbolism is understood in Japan and enters into the wearer's choice of fabric design.

The traditional motifs of the stencils relate closely to the hereditary crests (mon) of Japanese families. The similarity undoubtedly arises from the coincidence of their common source in the Japanese vocabulary of symbolic forms. Crests became an almost essential part of the costumes of all classes in the nineteenth century; by extension, it was appropriate that patterns used on clothing fabric referred to these meaningful and basic design motifs.

The paper used for making kata-gami is made of fibers from the bark of the mulberry tree. The intended design determines the choice of the weight of paper—a very fine pattern calls for a thin sheet, but for a bold stripe or large design a heavy sheet is preferred. The paper must be strong enough to resist expansion or contraction during use. Stencil papers are normally about 9 by 16 inches (19 by 35 centimeters), a size dictated by the standard width of the fabric. As patterns tended to be larger in the late nineteenth and early twentieth centuries, the stencil papers became proportionately larger. Examples of several sizes are illustrated here.
The paper sheets are treated with the juice of just-ripened persimmons that has been aged sufficiently to make it viscous. The use of the astringent persimmon juice is an ingenious method for making the paper stronger and water resistant. The sheets are then layered in groups of two or three, with the layers placed at right angles to each other as in plywood, and held together by the sticky persimmon juice. Next they are hung from the ceiling of a closed room for several days and smoked with burning sawdust to harden the persimmon coating. The paper emerges from this process slightly stiff but still pliable.

Ordinarily at least seven or eight sheets of paper, placed on a board, are cut at one time, each sheet being oiled slightly to facilitate the movement of the knife blade. The cutting begins at the upper left corner. Obviously, particular attention must be given to the perimeter because the perfect matching of the repeat depends upon precise cutting of these areas. Frequently the pattern repeats in both directions.

The stencils are cut with knives of various sizes and shapes that have different functions. One of the oldest and most refined techniques is *kiri-bori*, by which minute holes are patiently cut with a rotating motion. The tool, a type of awl with a very small, sharp, semi-circular blade, is held upright and turned with the left hand. The thumb and fingers of the right hand direct the position of the blade. It is possible with this technique to create a design so subtle that only by holding the stencil up to the light can it be seen fully.

The blade used for *tsuki-bori* is narrow, thin, and flat with an angled edge. The cutter pushes it forward, the cutting edge directed away from him. This cutting is done on a board with a small hole near the center, the cutter manipulates the sheets over the hole to facilitate the piercing of all layers of paper in one movement.

In *hiki-bori*, a similar blade is used, but the knife is drawn toward the cutter. It is the method employed for making striped patterns.

The tool used for *ichimai-zuki* consists of a small, thin, rectangular steel plate with a sharpened edge, set vertically into a handle. The cutting is done by pushing the blade down into the stack of paper. The blades vary in shape — straight, curved, or fluted. Where the motif is doubled, a twin-bladed tool is sometimes used.

*Dogo-bori* employs a blade forged in the shape of a pattern, for instance, a triangle, a square, a flower petal, or a leaf. The cut is made by thrusting (punching) the knife. While the tool is very efficient, it curtails variations in the pattern.

When the design is such that large areas must be cut away, the stencil is strengthened by peeling apart two of the layers that have been almost completely cut and inserting a mesh of thin silk threads between them (the use of human hair is legendary). The two layers are then stuck together again and the remainder of the cutting carefully finished without disturbing the net. Thus, even the most fragile and delicate design is sustained by the net, which is so fine that it leaves no mark on the dyed fabric. The net is effective in keeping stripes in alignment and in securing minute parts of the design during the stenciling process.
Complex designs often call for two stencils, for if the perforations are too close together, the intermediate spaces cannot sustain the cut areas. In this case there is a main stencil and a secondary one for the remainder of the pattern. Usually the design is transmitted to only one side of the fabric, except for unlined cotton kimono for summer wear where the pattern will be seen on both sides. The care demanded in registering the stencils on top of as well as next to each other is extremely great. To aid in achieving registration, a pigment (not a dye) is brushed through the stencil onto the fabric to act as a guideline for the second stencil.

Dyeing with stencils is by and large a resist process. The stencil is placed on the fabric, which has been laid out, smoothed, and straightened on long boards. A dye-resistant rice paste is spread with a bamboo or wooden spatula over the stencil. The paste penetrates through the openings to the fabric and blocks out the areas that are not to be dyed. The stencil is then lifted and moved to the adjacent portion of the fabric, and the process repeated over and over. When the resist is washed away after the fabric has been dipped into the dye, the pattern emerges in white against a colored background. The dark areas of the stencil are dark in the finished fabric.

Other methods are used to add more colors or to amplify the basic design after the initial pattern has been stenciled onto the fabric with the resist paste. For large areas, thickened dyes are brushed through additional stencils. Smaller elements of the design are hand-painted with the thinned dye directly onto the fabric in selected places not previously covered. (This is a variation of the yuzen method of applying the design to the fabric. Yuzen is a completely free-hand process in which even the resist paste is applied by hand rather than through a stencil.) Once the design has been completed on the fabric, the cloth is steamed to set the color, and after that, the resist is washed away as usual. With this method, several colors can be applied and set with one steaming.

Whatever the method used, the ingenuity of the designer in contriving the pattern in such a way that the components fit together precisely edge to edge without detracting from the beautiful, over-all effect, combines with the skill of the dyer who manipulates the stencil so that the design flows without interruption throughout the length of the fabric.

Stencil-dyed fabrics have most frequently been used for kimono, and there are many considerations besides taste that dictate the pattern and color of kimono fabric. For instance, as people age, it is expected that the number and brightness of colors and the size of the pattern in their kimono should decrease. The time of day and the season determine the selection of a design; one would not, for instance, wear a kimono with a dragonfly motif in the winter. The narrow width of the fabric and the unchanging style and cut of the kimono also impose limitations on the designer.

Stencil dyeing came into prominence because it could be adapted to large-scale production of an enormous variety of patterns on cotton fabrics for clothing and household items used by ordinary people. With the increasing popularity of Western clothing in Japan, the demand for these fabrics has declined. The survival of stencils in public collections like that of the Cooper-Hewitt Museum helps to stimulate interest in preserving this fine tradition of craftsmanship.

Elaine Evans Dee
Sparrows

20.8 x 35 cm.
Gift of Helen Snyder, 1976-103-14

None of the sparrows in the stencil is exactly like another, nor do any relate to each other in precisely the same attitude. As explained in a Japanese folk tale, *The Sparrow with the Cut Tongue*, this modest bird exemplifies the virtue of repaying one's obligations, a quality highly respected in Japan.

Dragonflies

19.1 x 35 cm.
Gift of Helen Snyder, 1976-103-11

As two of the dragonfly's several Japanese names mean "victory insect," warriors often adopted it as a crest motif. Now, however, this design might be considered appropriate for a child's kimono because chasing dragonflies is a favorite childhood amusement.
Heron, Lotus, Marsh Grasses, and Water

31.2 x 19.7 cm.
Gift of Helen Snyder, 1976-103-13

The lotus is the foremost Buddhist symbol for enlightenment, supreme truth, and purity emerging from impurity, but this stencil is so painterly in its approach and so naturalistic in its composition that any thought of symbolism seems very remote. Since there is no provision for a repeat here, this stencil seems to have been made as a picture complete in itself.

Rabbit Medallions and Vines

19 x 34.7 cm.
Gift of Helen Snyder, 1976-103-15

The white rabbit is an auspicious symbol embodying the spirit of the moon, and is associated with the tortoise and the crane as a symbol of longevity.
Dragons in Clouds

35.7 x 77 cm.
Gift of Helen Snyder, 1976-103-277

The dragon is a Chinese-inspired design particularly associated with Zen Buddhism. It is one of the four auspicious symbols together with the unicorn, phoenix, and tortoise. Dragons were thought to leap through the heavens, controlling the thunder and summoning the rain.
Leafy Vine

18 x 35.4 cm.
Gift of Helen Snyder, 1976-103-65

The variations of the scrolling vine pattern are endless. It is similar to the western arabesque, and is most often used in combination with other forms.

Bracken and Hemlock Twigs

18.7 x 35 cm.

The pairing of bracken and hemlock indicates early spring. Not unexpectedly, the evergreen, along with the chrysanthemum, tortoise, and crane, was a symbol of longevity. Resistant to the wind and resilient beneath the snow, the evergreen was one of the “three companions of the deep cold,” a traditional Chinese nomenclature adopted by the Japanese. The new shoot of bracken that pushes through the ground in spring is compared to the form of a fist, and hints of this configuration are seen in the threadlike tracery of this stencil.
Autumn Grasses, Bush Clover, and Butterflies

36.4 x 34.8 cm.
Gift of Helen Snyder, 1976-103-263

The butterfly motif was often used for heraldic crests. Warriors seemed to favor its elegant shape and design and its carefree connotation, perhaps in reaction to their daily lives.
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At first glance this design seems simple and straightforward, but when one becomes aware of the subtle balance and the extraordinary refinement of the cutting, the ingenuity and skill of the craftsman are apparent.
Reed Brushes and Bamboo Leaves

19.3 x 34.9 cm.
Gift of Helen Snyder, 1976-103-101

These brushes, that are probably made of bamboo, are bound with bands ornamented with family crests, one with the interlocking comma (tomoe) motif, and the others with the melon (mokko) motif.

Bamboo Leaves

19 x 36.3 cm.
Gift of Helen Snyder, 1976-103-62

Versatile, graceful, and auspicious, the bamboo has played an important role in Japan. It is used in innumerable ways in daily life—from fences to writing brushes. Because it keeps its leaves through the winter it is one of the “three companions of the deep cold” along with the pine and the plum blossom, which appears in the earliest days of spring. Because of its endurance, it is associated with the virtues of constancy, integrity, and honor. Because the royal phoenix was said to perch only on the branches of the paulownia tree and eat only the seed of the bamboo, it is also a symbol of purity and nobility.
Pine Needle Clusters

19.5 x 36.3 cm.
Gift of Helen Snyder, 1976-103-56

The designer's viewpoint of the cluster has almost transformed it into a flower. The all-over pattern is remarkably delicate. Because pine needles stay in pairs even after they have dropped from the tree, they symbolize fidelity.
In contrast to the design of bamboo leaves, in which a natural form was repeated and overlapped to make an abstract pattern, this stencil represents growing bamboo in an almost realistic fashion.

Pine Trees and Wisteria

37.8 x 76.5 cm.
Gift of Helen Snyder, 1976-103-276

The long fronds of wisteria blossoms lend themselves naturally to graceful and intricate designs. The great vogue for wisteria occurred during the tenth to twelfth centuries when the Fujiwara clan was at the height of its power in Japan. Fujiwara literally means "field of wisteria."
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Bamboo
21.4 x 35.3 cm.
Gift of Helen Snyder, 1976-103-153

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Peonies

37.7 x 77.5 cm.
Gift of Helen Snyder,
1976-103-287

The peony is a native Asian plant. In China it was known as king of the flowers and symbolized wealth and honor. In Japanese lore it ranks almost as high as the chrysanthemum, paulownia, and hollyhock.
Iris

38.2 x 75.5 cm.
Gift of Helen Snyder,
1976-103-290

In Japan the iris has been celebrated in poetry and painting from early times, and even now is honored in the iris festival which takes place on May 5. It was believed that the spring fragrance of iris and mugwort would help to drive away evil spirits.
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With so many desirable associations, it is not surprising that the pine tree was used as a motif for family crests and also inspired countless patterns for the ornamentation of objects. The silhouette of an old pine tree has been stylized to nearly unrecognizable form in this stencil.

Bush clover is one of the seven autumn plants. The abstracted cloud shapes indicate that the vertical lines of the background represent rain, a familiar climatic condition of the autumnal season.
Grapes are not associated with wine in Japan, but the plant is much admired for its beauty.
Waves, Fishing Nets, and Pine

49.8 x 33.7 cm.
Purchase, Norvin Hewitt Green Gift, 1946-104-6

The dramatic impact of this stencil is intensified by the energetic motion of the waves and by the large areas of dark color (undoubtedly blue indigo) that would predominate in the final product.
Bridges and Bats on a Lattice

20.3 x 34.8 cm.
Gift of Helen Snyder,
1976-103-12

Bats are considered an auspicious omen, in part because elements of the name can be written with the ideograph which means good fortune. Bats also symbolize longevity.

Bracken Fronds and Water

19.5 x 35.7 cm.
Gift of Helen Snyder,
1976-103-61

The reference to cooling water and shade-loving plants in this graceful pattern suggests that it was intended for summer wear.
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Bridges and Bars on a Lattice
20.3 x 34.8 cm.
Gift of Helen Snyder, 1976-103-12

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Bracken Fronds and Water
19.5 x 35.7 cm.
Gift of Helen Snyder, 1976-103-61

The reference to cooling water and shade-loving plants in this graceful pattern suggests that it was intended for summer wear.
The eight-plank bridge crossing an iris pond is one of the most poetic of traditional garden motifs. The planks allow one to stroll silently through nature, observing the world above and the world below the surface of the water.

Excursions made for the purpose of viewing natural objects of beauty are a tradition that approaches a cult among the Japanese. The autumn foliage-viewing ceremony is one of these perennial observances. The ideograph for maple is made up of the elements for tree and wind, conjuring a delightful auditory sensation of rustling leaves. The delicate outlining of the leaves against water in this stencil conveys the idea of the inevitability of nature; eventually the leaves will fall and float downstream.
Waves and Skates on a Lattice

50.5 x 35.5 cm.
Gift of Helen Snyder, 1976-103-270

The stylized froth of the waves' curling edges recalls the same convention seen in prints by Hokusai and Hiroshige. Warriors favored the wave motif for their crests because it symbolized power and resilience. The liveliness of this design and the unusual choice of skates frolicking in the swirling waves, with the lattice background holding it all together, speak of an inventive and daring designer. The open areas suggest that a secondary stencil was used to embellish the design.
Arrow Feathers

46.7 x 34 cm.
Gift of Helen Snyder, 1976-103-289

The literary phrase for military life in Japan was “the way of the bow and arrow.” The arrow’s notch and its feathers worked well for heraldic crests and they appear frequently in stencils.
Umbrellas (Cart Wheels?), Water, and Pine Needle Clusters

19.5 x 35 cm.
Gift of Helen Snyder, 1976-103-103

While it would not be inconsistent with the nature of umbrellas to be associated with water, the motif of wooden cart wheels in a stream is not uncommon in Japanese design. The wheels were soaked periodically in order to prevent their drying out. In either case, whether wheels or umbrellas, the pattern shows how a mundane, utilitarian object can be transformed into a beautifully rhythmic design.

Umbrellas on a Lattice

19.5 x 35.2 cm.
Gift of Helen Snyder, 1976-103-58

In this stencil the use of everyday objects for a design motif is carried to its limit, but the lighthearted way in which the circular forms are tumbled onto the grid creates an undeniably pleasing pattern.
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Water Pattern

19 x 34.2 cm.
Gift of Helen Snyder,
1976-103-111

The illusory effect of three dimensions and movement in this water pattern seems absolutely current.
The imitation of flame stitch is only one imaginative aspect of this exceedingly lively, undulating, broken-stripe design. The illusion of surface activity is accomplished by varying the width of the irregularly curving stripes.

Hemp was one of the five basic crops of ancient China. In Japan it provided thread, rope, and cloth, and was used to make the pendants displayed at Shinto shrines. Here the six-pointed hemp leaves form a geometric pattern. The crossed double bars resemble the wooden reinforcements of a well-cover.
Water Pattern
19 x 34.2 cm.
Gift of Helen Snyder, 1976-103-1

The illusory effect of three dimensions and movement in this water pattern seems absolutely current.

Geometric Pattern Imitating Flame Stitch
19.4 x 35 cm.
Gift of Helen Snyder, 1976-103-10

The imitation of flame stitch is only one imaginative aspect of this exceedingly lively, undulating, broken-stripe design. The illusion of surface activity is accomplished by varying the width of the irregularly curving stripes.

Hemp Leaf and Well-cover Motifs
14 x 34.7 cm.
Gift of Helen Snyder, 1976-103-105

Hemp was one of the five basic crops of ancient China. In Japan it provided thread, rope, and cloth, and was used to make the pendants displayed at Shinto shrines. Here the six-pointed hemp leaves form a geometric pattern. The crossed double bars resemble the wooden reinforcements of a well-cover.
Dimensions given are for the design area, that is, the full repeat. Stencils that repeat in only one direction are oriented in that direction in the reproduction.

Bibliography


Catalogue by Elaine Evans Dee and Thomas S. Michie

Design Lazin & Katalan


