



Figure 2.1 *Katagami stencil*: Japanese hand-cut stencil for printing on to kimono fabric.
Collection of Pip Dickens, © Pip Dickens

The katagami stencil: handmade machine

Pip Dickens

We have trained our hands in repetition; we are alert rather than bored because we have developed the skill of anticipation. But equally, the person able to perform a duty again and again has acquired a technical skill, the rhythmic skill of a craftsman, whatever the god or gods to which he or she subscribes.

(Richard Sennett, *The Craftsman*)

The Craftsman is the first of Richard Sennett's three volumes on material culture, with particular scrutiny of 'the skill of making things well'.¹ He refers to many areas of craftsmanship, including that of arts and crafts, as well as music, architecture, social use of buildings, psychology and interaction within the workplace. Frequent reference is made in his thorough and enlightening investigations of oriental methods of working: in the industrial context of companies such as Nokia, or in his discussion of 'the lesson of minimum force' – understanding and controlling muscles in order to master the skill of using knives well.

Rhythm, ritual and respect for the sharp knife are key to becoming expert at controlling the tool. Most important of all is time. In what Sennett calls the 'rhythm of concentration', the commitment of practice to become expert at anything (to gain tacit knowledge) requires the investment of 10,000 hours. Sennett converts these hours into practising 3 hours a day for 10 years. This is a rule of thumb, but he points out that compressed apprenticeships – for example that of a goldsmith, or the intensive training undergone in a doctor's internship – while taking fewer years, equates to roughly the same amount of time. His reference is to

psychologist Daniel Levitin's *This is Your Brain on Music*, where this magic number keeps cropping up in the context of how long it takes composers, athletes and authors to become expert.²

It comes as no surprise to have found this same period of time – 10 years – quoted in research into how long it takes a cutter of *katagami* stencils to become expert. Moreover, the Japanese fully understand, and celebrate, the 'rhythm of concentration'³, their artists and artisans have dedicated their lives to in order to become expert – many being honoured as Living National Treasures. The way in which these individuals are of significant cultural importance reveals just how significant physical skills are to the Japanese in general.

Japan has an international reputation for its technological sophistication, for embracing machine production and for pioneering innovation. But there is something else, too – a qualitative approach that harks back to the fundamental elements of craft: of making things well and investing time in learning (research). Research results in innovation and this, in turn, also throws up failed attempts along the way. Failures, therefore, are as useful as the successes if they are appreciated within the context of learning. Some failures result in new innovations and inventions. Failures offer three choices: exploit them in the current work, acknowledge them and use them as a positive approach in future works, or acknowledge they are redundant – aesthetically and practicably never going to work. Thus a 'no go' area is as useful as a 'green light' when investing time and materials into an artist's practice.

Ise katagami is a Japanese method of making stencils with fine and elaborate patterns, which can be used to print on to a variety of substrates (this is called *katazome*). The *katagami* stencil is a sophisticated paper stencil created with a variety of sharp knives or specially shaped punches (see Figure 2.1).

The history of the *katagami* stencil can be traced back to stencilling patterns on samurai warriors' armour (leather helmets and stirrups, for example) in the Nara period (710–794).⁴ Some sources state that *katagami* already existed by the late Muromachi period (around 570).⁵ *The Book of Delightful and Strange Designs, Being One Hundred Facsimile Illustrations of the Art of the Japanese Stencil-Cutter*, published in 1893 by Andrew White Tuer, suggests that the use of the *katagami* stencil flourished in the seventeenth century (Edo period 1603–1868). Miyazaki Yuzen (referred to as Someya Yuzen by Tuer)⁶ is identified as an artist of great significance in popularising the development of *yuzen-zome* – hand-painted designs on silk using resist-paste techniques and, most importantly, dye-fast techniques. Miyazaki Yuzen was originally a painter of Japanese fans. His artworks were very popular and he was persuaded to produce works on kimono fabric, which, in turn, resulted in a unique style of hand-painting becoming highly popular in the Meiji period (from 1868). His new innovations proliferated across the textiles industry during this time, and so began a boom in designing, printing and painting on fabric – examples being the kimono and polychromatic suspended pictures called *kakemonos*. It is interesting to note how an artist working in a specialised area can bring new innovations to another quite distinct practice.

Subsequently, Kyoto-born artisan Jisuke Hirose⁷ further developed techniques in *yuzen-zome* (or *katazome*): printing pattern using paper stencils and chemical dye, which further popularised these associated techniques on a range of textile substrates. *Yuzen* technique employs two methods of approach: *tegaki* (hand-dyeing/painting) using brushes (painting); and *kata* (stencil-dyeing), a technique to dye silk using a cut-out paper template (printing).

Tuer introduces the reader to the subject of *katagami* stencils with immense curiosity and excitement, having discovered a collection of them, which he then secured for the South Kensington Museum (which opened in 1857 and was renamed the Victoria and Albert Museum in 1899).⁸ Tuer was 'one of the most active and innovative printers and publishers of the late nineteenth century'.⁹ He set up the Leadenhall Press with his partner, Abraham Field, and they printed many books about many curious things – from *Luxurious Bathing: A Sketch* (a review of the latest bathing apparatus and accessories such as sponges) to *Old London Street Cries* (a record of street vendor's calls). Tuer was evidently a publisher keen to introduce his readers to new innovations, yet he was also concerned to record and preserve, as with the London cries, behaviours and sounds under threat from the rapid changes of industrial growth in the capital. He also believed in upholding quality in printing and publishing, so it is not hard to see why he was captivated by the stencils. He states 'It is surmised that the collection was sent to this country by some European who was struck by the marvellous beauty of the designs and the wonderful skill displayed in the cutting out'.¹⁰



Figure 2.2 Detail of a *katagami* stencil showing *itoire* work (silk meshing) for structural support and resilience. This image represents about 2.5 × 2.5 cm of the cut stencil. Collection of Pip Dickens, © Pip Dickens

Katagami paper is hand made from the bark of the mulberry tree (*Broussonetia papyrifera*). The paper is infused with *kakishibu* (dye made of persimmon juice), which has preservative and adhesive qualities, and is waterproofed with a hard-drying oil, promoting durability. A skilled pattern craftsman then cuts a design into the paper. Where a large proportion of the paper has to be cut away, strength is given to the stencil by cutting two stencils simultaneously and sandwiching a mesh of silk threads between them (originally human hair was used). This specialised process is called *itoire* (meaning thread insertion).¹¹ The stencils are dampened, the mesh inserted and the papers fixed and dried (see Figure 2.2). The registration of the two stencils must be absolutely perfect.

A sticky paste mixture made from rice flour and rice bran is then forced through a *katagami* paper stencil on to a piece of fabric; the stencil is then removed and the paste on the fabric is allowed to dry. Next, the fabric is coated by brushing on a sizing solution of soybean liquid. When the fabric is completely dry, the dye colour is applied by brush. The sticky paste is washed away and what remains is the stencil pattern in the fabric's original colour, with the surrounding area absorbing the dye colour. Japan is credited with developing this dyeing technique to a level of unparalleled sophistication.

Katazome pattern can be extremely fine – a samurai's *kamishimo* had extremely small, fine patterns.¹² The overall appearance (on a monochromatic ground) is subtle and understated, so that the intricate pattern can only be discerned at very close quarters. *Katagami* artisans competed to produce the finest designs; today, this type of design is better known as *kyo-komon*.

The stencils are cut using a variety of sharp knives and punches. Some of these tools are passed down from master to apprentice, others are fashioned by the artisans themselves to obtain the exact shape of cut. There are four carving techniques, and artisans tend to specialise in one of these. The four techniques are (*bori* means to carve):

hima-bori (or *hiki-bori*) – producing a stripe pattern;
kiri-bori (drill) – producing circles;
dogu-bori – using various blades to make various patterns (great skill is needed in making the right tool for the pattern required);
tsuki-bori (prod or thrust) – using a small straight blade to create a wide variety of complex patterns through a pushing technique.

A *katagami* stencil cutter must sometimes complete their stencil in that one sitting, due to the rigour of the design (see Figures 2.3 and 2.4). Once the cutter has achieved concentration and rhythm in the cutting process, breaking off mid-way and restarting would result in a change in the flow of pattern or, worse, an error in the pattern cut. This imperative to protect performance time is equally vital for elements of other forms of art and craft, especially where continuity of a handmade mark, or continuity of a musician's performance with an instrument, for example, is of paramount importance. Therefore, the idea of rhythm and repetition is important both in practice and in performance.

Katagami stencils were designated by the Japanese Agency of Cultural Affairs as an Intangible Cultural Treasure in 1952 and in 1955 six *katagami* artists were designated Living National Treasures. In 1983 *katagami* stencils were designated as Traditional Handicraft Equipment by the Ministry of International Trade and Industry, and *ise katagami* was acknowledged as an Important Intangible Cultural Property.

Few artists remain today, so we remain indebted to the care and dedication Tuer took in presenting these facsimile stencils in published form. He published his book in English, German and French, and editions were printed in London, Paris and Yokohama by Liberty & Co, in New York by Charles Scribner's Sons, and also in Leipzig. Moreover, each book contains an original *katagami* stencil fragment pasted into the frontispiece.

In my first-edition copy of this book I found the name of the original owner: 'Chas. Oppenheimer 1897'. Research has revealed



Figure 2.3 *Katagami* stencil illustrating the many fine details achievable, together with impressive optical effects.
Collection of Pip Dickens, © Pip Dickens



Figure 2.4 *Katagami* stencil evidencing the rigour and discipline of the cutter.
These astonishing effects pre-date Western notions of Op Art. Collection of Pip Dickens, © Pip Dickens

that he was probably the Manchester-born painter Charles Oppenheimer (b. 1875). He studied design at the Manchester School of Art under the famous Walter Crane (1845–1915), a leading artist, teacher, art theorist and member of the Arts and Crafts movement, which revived medieval and Gothic styles, especially that of the medieval craftspeople. Ruskin, Pugin and Morris were key figures of this movement, which rejected industrialised processes and embraced equity of status to artists and craftspeople, emphasising honesty in craftsmanship and truth in materials. Japanese woodcuts strongly influenced Crane's work (as indeed they influenced many artists in the West). Crane studied engraving under William James Linton and he was also a pupil of Ruskin. Ruskin, in turn, knew the publisher Tuer, the former supporting the latter's campaign to maintain standards in book-making materials and processes.

It is useful to consider the access to books such as those by Tuer. The Public Libraries Act became law in 1850 and Manchester was one of the first locations to establish a public library, appointing one of the main campaigners for this reform, Edward Edwards, as its first Chief Librarian. By 1900 there were 295 public libraries in Britain. Within the context of the Arts and Crafts movement, Tuer must have seen the value (and market for) publishing books relating to the arts – either for purchase, or lending through libraries – and broadcasting this newly discovered collection to artists and craftspeople across Europe.

Tuer's Japanese stencil book, then, is totemic in that he published this newly discovered collection at the height of Britain's Arts and Crafts movement – a period in which the skills of making were enjoying a renaissance. The Arts and Craft movement was never going to quash the rapidly developing machine age, but there was, and still is, a place for the skill of the artisan and of making things well.

The importance of the stencils (and recent research in Kyoto) lies not only in their aesthetic value – although there is no doubt about their beauty and seductive optical effects (see Figure 2.5) – but what these qualities

reveal about how they are made and the skills required to produce them. The stencil as a single utilitarian object belies a whole community of skilled people: the paper makers, the *itoire* artisan, the *katagami* artists who cut the designs and the artisans who print with them. As Sennett states, there are three criteria required to become an expert at one's craft (whatever that craft is): skill, commitment and judgement.

Every good craftsman conducts a dialogue between concrete practices and thinking; this dialogue evolves into sustaining habits, and these habits establish a rhythm between problem solving and problem finding ... Western civilization has had a deep-rooted trouble in making connections between head and hand, in recognizing and encouraging the impulse of craftsmanship.¹³

In the following chapters I examine skills of making within the context of rehearsal and repetition, and also introduce other qualities that *katagami* stencil technology has produced within kimono design that share parallels within music and fine art: pattern, rhythm, vibration, colour and other optical effects.

Finally, in Chapter 7, I introduce contemporary Japanese artisans who are now facing significant changes (and challenges) in their industry – seeking how to protect, or adapt, Japan's kimono making and associated skill base. The imminent demise of the last generation of traditional kimono makers and associated skilled artisans is reflected in a dwindling kimono economy. What is the fate of the kimono and that of the younger generation of artisans?

Notes

- 1 R. Sennett, *The Craftsman* (London: Penguin, 2009), 172.
- 2 D. Levitin, *This is Your Brain on Music: Understanding a Human Obsession* (London: Atlantic Books, 2006).
- 3 R. Sennett, *The Craftsman*, (London: Penguin, 2009), 171
- 4 *Kateigaho International Edition*, <http://int.kateigaho.com/spr05/katagami.html>



Figure 2.5 *Katagami* stencil with a delicate floral design, demonstrating a variety of cutting techniques. Collection of Pip Dickens, © Pip Dickens

- 5 Nippon-Kichi, http://nippon-kichi.jp/article_list.do?kwd=218&ml_lang=en
- 6 The name Someya Yuzen (as opposed to Miyazaki Yuzen) is also referenced in C. Hopf, *Papercutting: Tips, Tools, and Techniques for Learning the Craft* (Mechansicburg, PA: Stackpole Books, 2007), 11.
- 7 www.pref.kyoto.jp/en/01-02-01.html and Yuzen Museum, Kyoto.
- 8 A. Tuer, *The Book of Delightful and Strange Designs, Being One Hundred Facsimile Illustrations of the Art of the Japanese Stencil-Cutter* (London: Leadenhall, 1893), 8.
- 9 M. Young, *Field & Tuer, the Leadenhall Press: A Checklist* (London: Oaknoll Press and British Library, 2010), 1.
- 10 Tuer, *Book of Delightful and Strange Designs*, 9.
- 11 Itoire craftsman Mie Jonokuchi was designated as a Living National Treasure, together with five other Ise-katagami craftspeople in 1955; regrettably all have now passed away (http://nippon-kichi.jp/article_list.do?kwd=218&ml_lang=en).
- 12 A *kamishimo* is a two-piece samurai costume. The upper piece (*kataginu*) is a sleeveless jacket or vest with exaggerated shoulders. The lower piece (*hakama*) consists of dramatic, wide, flowing trousers. Both items would normally be of the same material, and the quality and design of the fabric reflected the status of its wearer. The *kamishimo* was normally worn outside the house, or when expecting visitors. The more senior or aged the samurai, the more restrained the colour – greys and browns were common colours.
- 13 Sennett, *The Craftsman*, 9.