

工芸 Kōgei

soulsmithing

vol 0 no 0 august 2005



日本刀

The purpose of this paper is to give the reader a general overview of the Japanese Sword. These swords were famous for several reasons. Myths and lack of viable sources of information often prevented amateurs and other craft lovers to fully appreciate their real value. The information gathered here comes from direct sources such as living master swordsmiths, or books written by foremost authorities in this field (listed on the last page). Please refer to these for further study.

Summary

Evolution of japanese sword shapes throughout history	p1
Origins	p2
Influence due to the evolution of fighting techniques	
Other types of blade	
Japanes sword vocabulary	
The making of the blade	p3
The state of things	p5
The three great crisis	
The market	
Appraisal	p6
Maintenance	
Study groups	
Collectors and Martial Artists	
The spirit underlying the craft	p7
The soul mistaken for a sword	



Origins

Throughout world history, some traditional crafts have been elevated to an exceptionally high level of mastery by devoted practitioners. Among these, a great number flourished on the tiny islands of Japan. The Japanese Sword, or *nihontō*, is the heritage of centuries of evolution and refinement often observed in Japan. The craftsmanship of working with steel was originally imported from China, via Korea, but it's the Japanese, with their patience and high quality standards, that allowed the creation of such objects of perfection.

During the *Yamato* period (645-710 A.D.) the Japanese Sword as we know it today was developed. According to the legend, Swordsmith Akamkuni and his son, Amakura, were standing in their forge doorway as warriors were coming back from a battle. They soon noticed that nearly half of the blades were broken or badly damaged. As he passed by, the Emperor did not give his usual rewarding nod to the smiths. Amakuni and Amakura soon shut themselves in their smithy to pray to the *Shintō* gods for seven days and seven nights. Then they worked tirelessly, refining and forging steel. Thirty days later, they emerged, exhausted and excited. They were holding a curved blade, with one cutting edge. The other smiths believed them to be insane, but Amakuni and Amakura grounded and polished the sword. During the following months, they produced many more, always trying to do better. The following spring there was a war. Upon the warriors' return, they noticed the blades were intact. They had succeeded! The Emperor honored Amakuni with the title of Master Swordsmith. (note 1)

日本刀

Other types of blade

Beside the *tachi*, the *katana*, and the *wakizashi*, there also is the *tantō*, or dagger. The *tantō* was mostly worn by the wife of a *samurai* in order to protect herself, as well as to commit suicide if necessary. These four main types of Japanese blades have a similar cultural value. There are many more different types that can't be presented here. Let's only mention the blades of the *yari* and the *naginata*, or other types of older swords, such as the *chokutō* (straight and single-edged), the *ken* (straight and double-edged), or blades called *kissaki-moroha-zukuri*, with a consistent curvature, and only their point being double-edged.

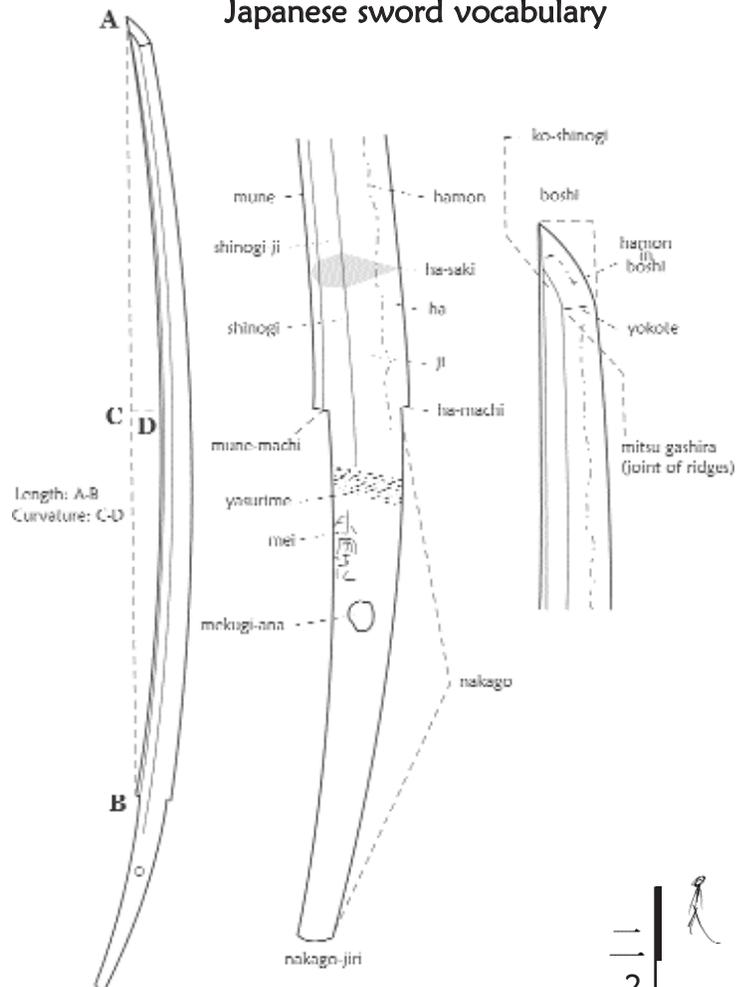
Influence due to the evolution of fighting techniques

Until the *Muromachi* period (1392-1573 A.D.), fighting in Japan was mostly done on horseback. Swords were therefore long, thin, and had a strong curvature, allowing to cut by swinging the blade. These swords, called *tachi*, were worn edge down, hanging from the waist.

Around mid-*Muromachi*, the *uchigatana* appeared, which later became the *katana*, shorter and having a shallower curvature than the *tachi*. The *katana* was directly inserted edge up in the *obi*, a waist sash used as a belt. This allowed the sword to be drawn and thereby cutting in one single movement, making this a lot more effective. The *katana* was first used for one to one combat in narrow spaces where it was difficult to manipulate the longer *tachi*. Some *katana* actually are old *tachi* that have been shortened.

At some point, the *katana* completely replaced the *tachi*, as horseback fighting stopped and new, more efficient weapons such as the *yari* (lance), the *naginata* (halberd), and later on the musket, became predominant on the battlefield. The *katana*, then inevitably accompanied by its companion sword, the shorter *wakizashi*, became the signature of the *samurai*, the Japanese warrior. This set of the longer *katana* and the one-third shorter *wakizashi* is called *daishō* (big-small). From the *Momoyama* period onward (1573-1600 A.D.), the *samurai* couldn't exist without his *daishō*. Only he could wear them, and it was mandatory for him to do so. His sword became the symbol of his soul, and many martial arts as well as aspects of the Japanese culture derived inspiration from this.

Japanese sword vocabulary

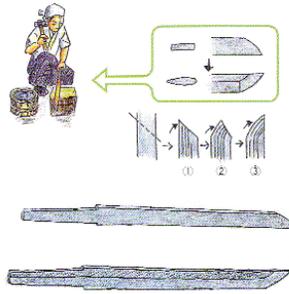


17
十七



Yaki-ire
(hardening)

13
十三



Forging of point

9
九



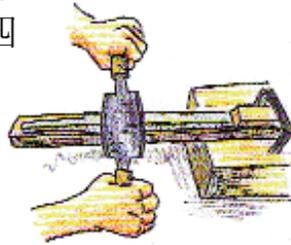
Forging of *shingane*

18
十八



Finishing by the Polisher

14
十四



Adjusting the shape

10
十



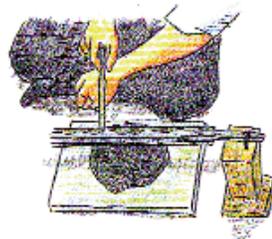
Forging of *kawagane*

19
十九



Nihontô completed with a hamon
and visible steel grain pattern

15
十五



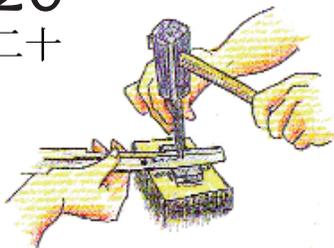
Applying *yakiba-tsuchi*, which
allows selective hardening and
the creation of a hamon

11
十一



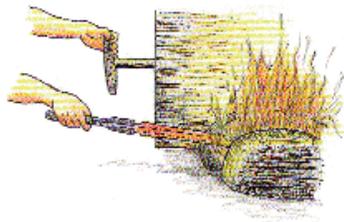
Joining and welding

20
二十



Signature using a punch
by the Swordsmith

16
十六



Heating of heat treatment

12
十二



Forging of blank

5
五

Shingane
Soft steel
(less than 0.5% carbon content)

Kawagane
Hard steel
(0.6%~0.7% carbon content)

1
一

Raw material
Rough steel called *tamahagane*

6
六

The pieces are weld into on solid block

2
二

The *tamahagane* is pounded into flat pieces

7
七

The block is then partially split...

3
三

The flat pieces are broken in order to allow the assessment of their carbon content

8
八

...and folded onto itself many times alternatively on lengthwise and sidewise

4
四

Hard steel

Soft steel

Sorting

The making of the blade

The figures on pages 3 and 4 clearly show the steps required in the making of a Japanese Sword, in regards to the work of the Swordsmith. One should know, though, that no less than five different craftsmen are involved before a single blade can be completed.

The traditional Japanese steel is produced by reducing iron ore, collected in nature in a way that in many aspects looks like prospecting for gold in mountain streams. The iron oxide thus collected is laid alternately with charcoal in an open box made of clay of about three or four meters by two. The charcoal is set on fire, and air is forced in with the help of big wooden bellows. Iron ore and charcoal are added for three days. In the end, the walls are destroyed, allowing access to the *kera*, a slump of heterogenous iron and steel weighting about three tons. This process, called *tatara*, allows the production of *tamahagane*, selected parts of the *kera*, which will then be used for the production of Japanese swords. From a metallurgical perspective, the steel never actually come to its melting point. It rather agglutinates, which creates mechanical and aesthetic properties that are appreciated for the making of Japanese Swords.

The swordsmith uses a few kilos of *tamahagane*, and folds it onto itself in order to get air and impurities out. He then chooses steel with lower carbon content, more maleable but which can't be hardened by heat treatment and keep a hard cutting edge, and makes the heart of the blade. Steel having a higher carbon content (0.6%-0.8%), is used to make the outer jacket of the sword. Once the sword blank is finished, the smith spreads a clay-based mixture on the entire blade, being careful to make it very thin on the edge and thicker on the back. Thus, when quenching the blade into water after having heated it, only the edge will harden, leaving the back softer and more flexible. This technique is unique to the Japanese Swordsmiths, and leaves a mark along the edge, called the *hamon*, which is an important aesthetic element.

continued on following page

...continued from previous page

However, the sword cannot be appreciated prior to the polisher's work. The craftsman will sharpen and polish the blade's surface in order to display its steel grain, the *hamon*, and the fine lines of the sword. His work is painstaking, polishing the sword on a dozen different stones, during many hours of very focused effort. Without the polisher, the smith's work is invisible, but without the smith, the polisher has no work. There is mutual respect and understanding between these two.

Once polished, and signed by the smith, the sword must be protected in a *shirasaya*, a plain wooden scabbard. For the blade to hold tight in the scabbard, it must be equipped with a *habaki*, a collar made of gold, silver, or copper, and that secures the blade in its sheath.

The work of the smith and the polisher take about ten full days each. The making of the *shirasaya* and the *habaki* a bit less. ■

The state of things

At the dawn of the 21st century, the crafts of the Japanese Sword have been at their best for the last hundred years. The efforts by organizations and individuals to protect and promote the Japanese Sword were successful. The reason for the survival of the craft is mostly due to the preservation of the tradition. It is therefore no more a matter of innovation, but rather of remembering and even, in some cases, recovering ancient techniques that have been lost. The swords are obviously not made for military purposes, although they must have all the required characteristics of such a weapon (cutting hardened edge, etc). Today's Japanese Sword is the heir of a thousand years of effort and refinement, an objet d'art with no equivalent worldwide, and the bearer of unique spiritual and cultural properties.

As of the beginning of 2005, there are about 225 traditional swordsmiths at work in Japan. A craftsman must possess a licence issued by the government to be allowed to produce, a maximum of two long swords (*tachi* or *katana*) or three short ones (*tantô*), or their combined equivalent, per month. In order to be granted a licence, one must apprentice under a licenced smith for a minimum of five years, after which he can be allowed to enter a yearly examination, held by the authoritative organization. Since the afterwar period, it is the *Nippontô Bijutsu Tôken Hozon Kyôkai* ("Organization for the preservation of the Japanese Art Sword") that has such authority, beside promoting the Japanese Swords and its crafts, as well as managing the Sword Museum in Tokyo. ■

The market

During the prohibition of postwar Japan, many GI's brought as souvenirs Japanese Swords to the United States. Many good swords, however, were kept and preserved in Japan, thanks to the efforts and understanding of Victor Cadwell (1892-1972), Colonel in the American MP, in charge of disarming Japan. In consequence, there are still many Japanese Swords in the United States, some having great value, others none, but most in very bad condition because of lack of maintenance or misuse.

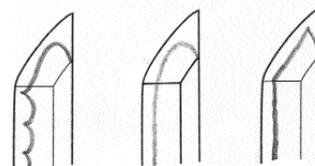
The base value of a newly forged *shinsakutô katana* starts from USD \$10 000. This amount is very relative since it does not take into consideration the smith reputation, accessories, or special request from the client. A sword forged by one of the foremost smith of today can sell above USD \$50 000. In comparison, antiques vary a lot more. Because of their historical value (specific history related to a

particular sword, the reputation of a well known smith, and past transaction done on a specific sword), collectors are more interested in antiques because they represent a safer asset than newly forged blades by unknown craftsmen. Most antique blades sell between a few thousand to a little above USD \$10 000. The best blades will climb into the six figure prices, whereas National Treasures will carry prices of about USD \$300 000. Today, one buys a sword from another collector or from a dealer. The chances of finding an unheard of treasure in a garage sale are getting more and more scarce and, when a blade is actually found, it is often in terrible condition. One cannot become a collector all of a sudden. It requires many years of reading, study, participation in study groups, and conversation with experienced collectors before a first buy, moreover since the investment is important. ■

The three great crisis

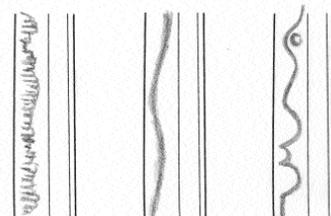
The Japanese Swords and, inevitably, its related crafts, went through three major crisis in its history. In 1588, Toyotomi Hideyoshi, the unifier of Japan, produced a decree forbidding commoners to wear swords, and restricting the rights of the merchant class in wearing a specific type of sword. The demand for swords was greatly affected. Later on, after the *Meiji* Restoration, in 1876, another decree simply put an end to the existence of the *samurai* class, and banned the wearing of a sword in public. Finally, during the American occupation of Japan, the production and the possession of swords were both forbidden, giving a fatal strike to an already fragile market. We almost lost all of the accumulated knowledge, tradition, and experience. Only a few individuals, such as Kurihara Hikosaburo, from the 1930's, allowed the transmission of tradition by setting organizations to this end, and promoting the Japanese Sword as an art as well as the heir of a unique millenium tradition.

A few examples of boshi...



kotetsu-boshi o-maru pointed

and hamon



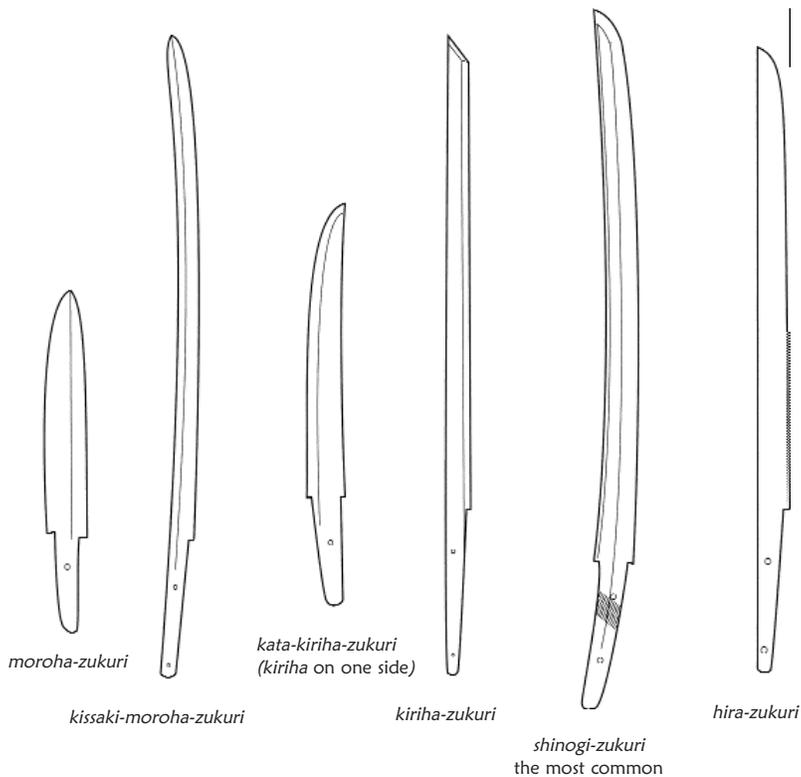
juka-choji nie-dominant toranba notare

Appraisal

Appraisal of Japanese Swords is an art in itself. In Japan, this art has been transmitted in the *Hon'ami* family for generations, since it specialized in this field centuries ago. A competent polisher or appraiser can identify the school, the type of steel, and the smith of any blade after only a brief inspection, as long as the blade is in a good polish. The shape (curvature towards the point, towards the base, or regular throughout the entire length, the measurements), the type of grain (straight, concentrically curved, wood-like pattern), the *hamon*, and the signature are the main elements that allow to identify a sword. ■

日本刀

The main types



Maintenance

Japanese Swords are made of carbon steel (steel made of only iron and carbon, including no other metal such as chromium or nickel), and are therefore very sensible to oxidization. That is why it is very important to protect them with a coat of special mineral oil (a very thin coat is enough). Prior to doing this, the old oil must have been removed with the help of a special tool that spreads *uchiko* powder, the residue of one of the finest polishing stone, which absorbs oil. As soon as oxidization as occurred, it is important to seek the advice of a recognized and competent sword polisher in order to prevent the problem from aggravating. ■

Buyers: Collectors and Martial Artists

Who buys Japanese Swords? The question is often asked. In general, there are two main groups of buyers. *Iaidô* is a Japanese martial art emphasizing on the withdrawal of the sword. It is fightless, practiced alone and, ideally, with a real sword. Many *iaidô* practitioners dream of getting a custom blade made for them, moreover in the West because antique Japanese Swords are often too short.

The other group of buyers, much more important, are the collectors. Should they be amateurs, fans of weapons in general, or of swords in particular, or yet professional dealers in the field, there are more and more of them, and they make the Japanese Sword economy go round. ■

Study groups

With a rising demand from collectors and other sword enthusiasts to learn more about Japanese Swords, to see good blades, and to meet other people who share common interest, many groups and exhibitions have been organized. The NBTHK can be considered the godfather of all. Anyone can become a member and participate in their meetings, as long as geographical constraints aren't an issue! Otherwise, about any big city has at least one club. It is good to be aware, though, that their seriousness and the nature of their intentions might not always be honourable. It is good advice to double-check in order to avoid mistakes that could have unpleasant consequences. A brief list of known resources is provided at the end of this document. ■

The spirit underlying the craft

It is interesting to try to understand what makes the Japanese Swords so great. In the end, it is only an abstract object, a perfected weapon, a piece of steel with a known shape. Which, among those mentioned, motivates some to spend many thousands of dollars in order to get one specimen.

In a common string of ideas, what defines a great wine, a beautiful painting, a nice building, or a good pottery? A handmade object is indeed nothing but a mirror of its creator. It represents all that the craftsman or the artist invested in it, voluntarily or involuntarily, by loving it and hating it. In the end, it seems that a masterpiece is

always the work of a Master, someone who has made the effort of completely giving oneself to a specific task within the required time.

The Japanese culturally exhibit great patience, rigor, and much inspiration, which allowed the refinement of so many arts and crafts. The Japanese Swords thus teaches that one can't lie to oneself by skipping the steps, and by hoping the results of some effort. Only total devotion, without expectation, and impregnated with great spiritual inspiration can allow the realisation of a masterpiece that is the Japanese Swords. ■

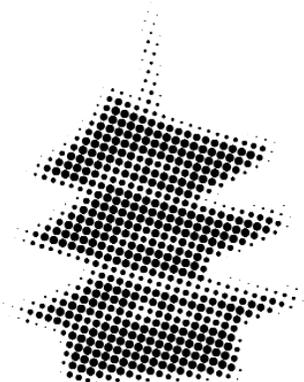
心鍛錬

The soul mistaken for a sword...

This document was prepared by Pierre Nadeau, Swordsmith apprentice to Kiyota Jirokunietsu, in Wakayama prefecture, Japan.

It is also the first of a series called Kogei, to be published four times every year, covering the author's apprenticeship in Japan in realtime, as well as other articles on craftsmen, their work and their lifestyle.

Japanese Swords are no more than a vehicle to the path of realisation. It is rather *kokoro tanren* - the forging of the hearth - that matters. One must learn to use the act of creation and the creations of others to elevate oneself instead of clinging to these as if they were the goal itself. ■



Notes and resources:

Note 1 - From John M. Yumoto, in **The Samurai Sword, a handbook**: Ed. Charles E. Tuttle; 1958

Illustrations - All inspired from the followings:

Yoshihara Yoshindo and Leon and Hiroko Kapp, in **The craft of the Japanese sword and Modern Japanese swords and swordsmiths**: Ed. Kodansha International; 1987 and 2002, respectively

Nagayama Kokan, in **The Connoisseur's book of the Japanese sword**: Ed. Kodansha International; 1997

Sources - please see...

Nippon Bijutsu Token Hozon Kyokai (NBTHK) - Organization of national authority in Japan, responsible for the preservation and the regulation of the Japanese Sword and its related crafts; Excellent Museum in Tokyo - Original Japanese Web site: www.touken.or.jp; Access site in English: www.nbthk.com

Toronto Token Kai - Study group founded in Toronto in September 2004: Founding members very competent; the closest from Montreal - Please contact the Toronto JCCC (www.jccc.on.ca)

Boston Museum of Fine Arts (Boston MFA) - The greatest collection of Japanese Swords and sword fittings outside Japan - www.mfa.org

To register for free and receive Kogei four times every year: pierre.nadeau@hec.ca

