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Guide to the kantei process – tips for improving your knowledge of and accuracy at paper kentei.

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## NEWSLETTER

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# Guide to the *kantei* process – tips for improving your knowledge of and accuracy at paper *kantei*. Francisco. A. B. Coutinho

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*Kantei* is the art and science of attributing a sword to its maker. There are three types of *kantei*; first: paper *kantei* where someone else describes the sword in detail for you. The sword must be "typical" of some smith otherwise nobody can answer the *kantei* correctly. Second, there is the competitive *kantei* with a real sword but with the *nakago* (tang) covered. This is more difficult since you have to see the sword for yourself and have no information on the *nakago*. In the paper *kantei* the *yasurime* (file marks), the *jiri* (tip of the *nakago*), etc. are usually described. This information provides an essential part of the puzzle. Finally there is the real life *kantei*. Here one is presented with a blade and the task is to determine who made it, how old is it, etc. This is the challenge one has at sword shows.

In the real life *kantei* the *nakago* can be seen and the *mei* (signature) examined. Does the *mei* confirm the workmanship or is the blade *gimei* (fake signature)? There are other formats as well. For example in the Rochester sword study group, members are divided into two teams. Each team looks at the blades and then retires to discuss each blade. A consensus is reached and a bid submitted to the judge. After evaluation, if necessary, some more discussion occurs and a second submission is made. This is a great learning tool. Beginners hear the thought process of the seniors and the seniors have to articulate what they see and feel.

The focus of this article is the paper *kantei* as presented every month in the *Token Bijutsu*. It is interesting that no matter the type of *kantei* you are doing, the steps necessary to make an educated guess are always the same. The first thing you look at is the *sugata* (shape) of the blade. This usually allows you to narrow down to sword to *jidai* (period) - *Koto*, *Shinto* or *Shinshinto*. It also allows you to narrow down the period of manufacture inside each of these big classes. For example, you may discover the blade is *Shinto*. Then, by examining the details of the shape you can say if it was made at the beginning of the *Shinto* period (*Momoyama*) or later (*Kanbun Shinto*).

Eight examples will be presented in this article. All examples chosen are either katana or tachi. In this article the focus is on *sugata* leading to the determination of *jidai*.

The NBTHK publishes the translation of the *kantei* contest as soon as they are published. However, rumor has it that this is going to be discontinued, so, learning how to read the hints in Japanese is critical. Our aim is to guide you to minimize the difficulties. Be prepared that occasionally you will miss some parts. It is our hope that this exercise will help you further your knowledge of Japanese. All the *kantei* follow the same order of presentation. The hints are small (vertically placed) sentences separated by (horizontal) commas. In what follows each column will be given a letter and each hint is indicated by the column letter with a subscript number. The sound of each symbol (*Kanji*, *Hiragana* or *Katakana*) and the translation will be provided as will direction on how to navigate the information.

Currently the NBTHK provides an English translation of its *kantei* hints. With practice you will soon be able to read the Japanese. Some terms are repeated very often. These will become easily recognizable quickly. A good place for beginners to start is the numbers used in measurements.

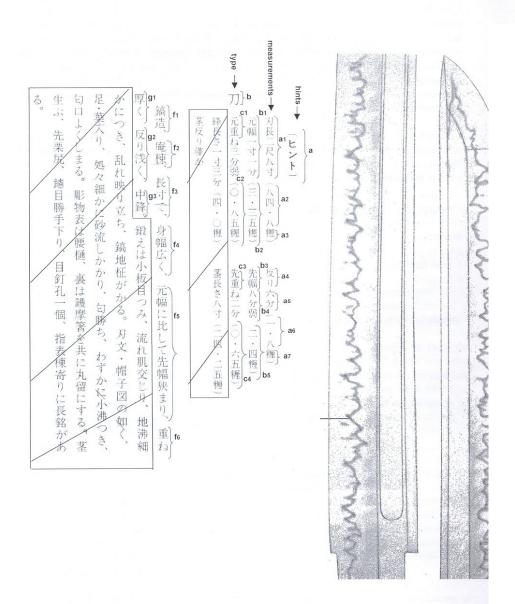


Figure 1 Hints and Oshigata for example #1

Translation exam
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	Translation example #1									
ヒント	a	Hinto	hints	八分弱	b <sub>4</sub>	Hachi bu	8 bu			
IJ	b	Katana	Katana <sup>1</sup>	二、四種	<b>b</b> <sub>5</sub>	ni ten yon senchi	2.4 cm			
<b>刃長二尺ム寸</b>	$a_1$	Nagasa ni shaku hachi bu	Length 2.8 shaku <sup>2</sup>	稿造、	$f_1$	Shinogi zukuri	Blade with a ridge line – standard for a katana			
八四·八極	a <sub>2</sub>	Hachi ju Yon ten hachi senchi	84.8 cm centimeters	庵棟、	$f_2$	Iori mune	The ridge is pointed			
<b>反</b> リ六分	a <sub>4</sub> a <sub>5</sub>	So ri Roku bu	Curvature 6 bu	長すで、	$f_3$	Sho sun de	The sword is long			
八糎	a <sub>6</sub> a <sub>7</sub>	ichi ten hachi senchi	1.8 cm note $(a_3=a_7)$	長すで、身幅広く、	$f_4$	Moto haba hiro ku	The width of the haba of the sword is large			
元幅一寸一分	b <sub>1</sub>	Moto haba ichi sun ichi bu	Width of the blade at the machi near the habaki given in bu and sun	元幅に比し	$f_5$	Moto haba ni hi shi te saki haba sema ri	The saki haba is narrow in comparison to the moto haba			
三二五種	$b_2$	san ten san go senchi	3.35 cm	幅に比して先幅狭ち						
先幅	b <sub>3</sub>	Saki haba	width at yokote line	重ね	$\mathbf{f}_6$	Kasane	Thickness of the blade			



- 1 Each kantei has a title that indicates whether the subject sword is a tachi, katana, wakizashi or tanto. In this case the title is katana.
- 2 Length will only be translated in centimeters in other examples

This sword is a katana rather than a tachi. That should point us to *Shinto* or *Shinshimi* rather than *Koto*. The blade is a long one! The small *sori* of 1.8 cm suggest a *Shinto* of *Shinshinto* blade as well. Swords of the *Kanbun* period (1660s) have a big difference between *moto* haba and saki haba so that this strongly suggests a *Kanbun Shinto* sword. This is the **crucial hint** for this sword. The *jidai* can be narrowed to the period 1640 1687.

The description of the silhouette of the *Kanhun* swords can be found in almost any of the references listed in the end of this paper. **Yuichi Hiro and Kazuo Iida (1984)** have of pages 110 to 114 the silhouettes of the swords divided into nine types. The shape of the above sword is the number eight. (See the translation by Harry Watson.) A list of sword smiths is given on the same pages. This does not necessarily mean that the sword is made by one of them but there is a good chance that the smith belongs to the one of the schools of the smiths listed. **Nagayama (1997)** on pages 61 to 71 has the silhouettes of the swords and the descriptions of the shapes. Here again a list of sword smiths is given. On page 62 the type of *sugata* is described as early Edo period (1644-1687). A list of smiths is given an among them the maker of this sword is included. However it is premature to look at the hamon and try to find which is the correct smith. This is time-consuming and can lead a serious errors. The reader should be patient and wait until the next part of this article when we shall show that the remaining hints will lead to the correct smith.

#### Conclusion

The blade is most probably a Kanbun Shinto sword. You have now narrowed dow (hopefully) your sword to the period between1644-1687. This is a great improvement. Yo should ask yourself what are the best schools that worked on this period and take note of them. The rest of the hints will eliminate them one by one. You may ask yourself how find the school by having only the names of the smiths, from the lists given in the references mentioned above. The answer is that you have the time of production and the name of the smiths and now you can consult the booklet by Hawley (W.M.Hawle (1974)). This will give you the schools. Alternatively you could look at a list of smith

which is what is given in most books, and look for the schools to which they belong. However please wait for the next articles to see how to decide which schools are more likely to have produced this sword.

Example 2 Token Bijutsu December Showa 61 (1986) Kantei 349

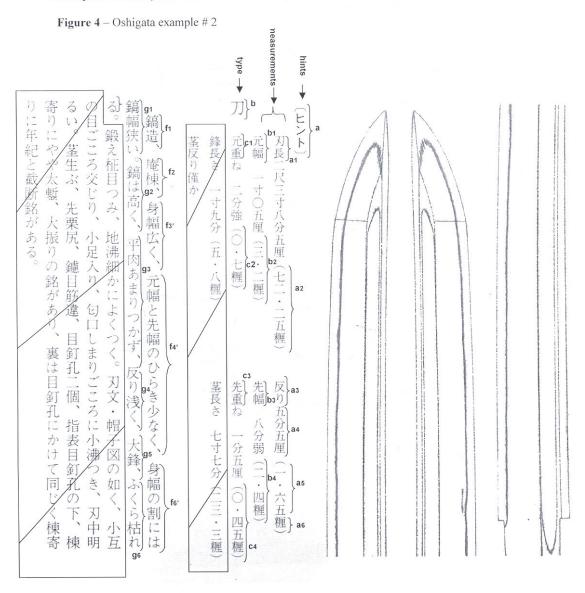


Figure 2 Hints and Oshigata example #2

ヒント刀	a	Hinto	Hints	先幅	b <sub>3</sub>	Saki haba	Width at yokote line
刀	b	Katana	Katana	四糎	b <sub>4</sub>	Ni ten yon senchi	2.4 cm
刃 長	$a_1$	Nagasa	Length	元重	$c_1$	Moto kasane	Thickness at base
刃長、七二・二五糎 反り五分五厘一・六五	a <sub>2</sub>	Shichi ju ni ten ni go senchi	72.25 cm	〇・七種	$c_2$	Rei ten shichi senchi	0.7 cm
反的	<b>a</b> <sub>3</sub>	Sori	curvature	先重	$c_3$	Saki kasane	Thickness at yokote line
五分五厘	a <sub>4</sub>	go bu 5 go rin 5		○ 四五糎	<b>c</b> <sub>4</sub>	Rei ten yon go senchi	0.45 cm
六五	a <sub>5</sub>	Ichi ten roku go	1.65	錦造、	$\mathbf{f_1}$	Shinogi zukuri	Has a ridge line
種	a <sub>6</sub>	senchi	cm	庵棟、	$\mathbf{f}_2$	Iori mune	Pointed back of blade
元幅	$b_1$	Moto haba	With at machi (notches)	身幅広く、	f <sub>3</sub> ,	Mi haba hiro ku	Wide mihaba

三一種	b <sub>2</sub>	san ten ni senchi	3.2 cm 元幅と先幅のひらき少なく、	f <sub>4</sub> ·	Moto ha to saki ł no hi ra suku na	naba ku	The me haba ar saki ha salightly differen	nd the ba are
身幅の	$\mathbf{f}_6$	Fu ku ra re ru	The fukura is not full	反り浅	g <sub>4</sub>	So ri ku	aka	Sori is not deep
幅の割には				<				
鎬幅狭い	gı	Shinogi haba sema	shinogi is thin	大鋒、	<b>g</b> 5	O kis	ssaki	Large point
鍋は声	$\mathbf{g}_2$	Shinogi ha taka ku	Shinogi is high	ふくら枯	$\mathbf{g}_6$	Fu ku re	ı ra ka	Fukura is not full
高く、				ら枯れ				
平肉あまりつか	g <sub>3</sub>	Hi ra ni ku ma ri tsu ka zu	Does not have niku (meat)					

The sword is a Katana. This strongly suggests that the sword is either *Shinto*, or *Shinshinto*. The *sori* is shallow. This supports the above.

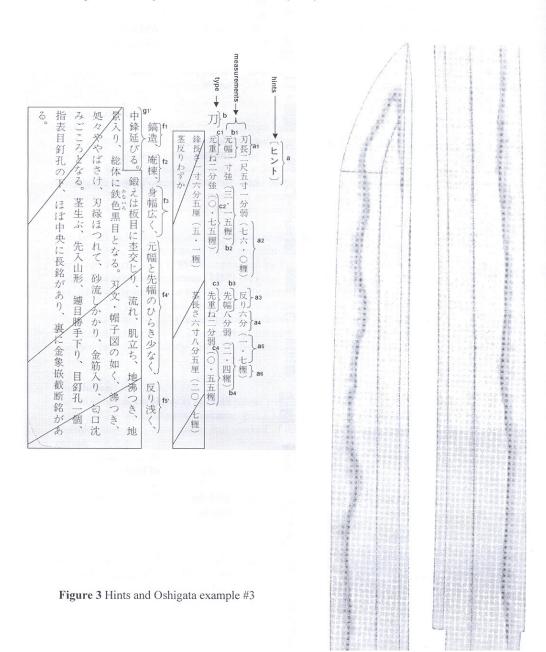
The moto haba to saki haba no hi ra ki se ma I – this means that the width of the base (moto haba) is only a little bigger than the width at the point (saki haba). Swords with this shape are either Nanbokucho swords (hence Koto), Keicho Shinto swords or Shinshinto swords. The sword is wide (mi haba hiro ku) which also confirms to which possible periods the above belongs. The kasane is thick at 0.7 centimeters. This is a very thick blade. Note that Nambokucho blades are thin. Accordingly, one can conclude that it is either a Keicho Shinto sword or a Shinshinto sword. The information that is key to narrowing our choice is that in spite of the haba being thick, the shinogi is not wide (mi haba no wari ni ha shinogi haba sema i). The shinogi is high (shinogi takaku), there is not much meat (hira niku a ma ri tsu ka zu) and finally the fukura is not full (fu ku ra ka re ru).

Shinshinto swords have little meat and/or have a narrow shinogi and /or the fukura is not full. So the **crucial hints** tell us that this is a Shinshinto sword and not a Keicho Shinto sword

**Iida and Hiroi (1984)** on page 114, sword 9 resembles the silhouette of this type of sword. Also listed are smiths from which you can deduce the possible schools. For further clarification see **Nagayama (1997)** on page 63. This type of *sugata* is described by Nagayama as being Late Edo period to Meiji period (1781-1876) and a list of smiths is given. The maker of this sword is not in this list but the leading member of his school is. So you have to wait the next article of this series to see the remaining hints (about *kitae* and *hamon*) to determine the school and sometimes the smith without having to wait for the last article were minutiae are examined (*nakago* tip, yasurime, etc).

#### Conclusion

Most probably the blade is a *Shinshinto* blade. The references mentioned above will have names of the top smiths who worked in this time. **Hawley's (1974)** booklet provides the schools in that period.



1

ヒン	a	Hinto	Hints	先幅	b <sub>3</sub>	Saki haba	Width at yokote line
リント刀	b	Katana	Katana		b <sub>4</sub>	Ni ten yon senchi	2.4 cm
				四棵			
刃長	$a_1$	Nagasa	Length	元宜	$c_1$	Moto kasane	Thickness at base
七六・〇種	$a_2$	shichiju roku ten rei senchi	76.0 cm	元重(〇・七五種	$c_2$	Rei ten shichi go senchi	0.75 cm
反的	a <sub>3</sub>	Sori	curvature	先重	$c_3$	Saki kasane	Thickness at yokote line
六分分	a <sub>4</sub>	Roku bu	6 bu	〇・五五種	c <sub>4</sub>	Rei ten go go senchi	0.55 cm
一七	<b>a</b> <sub>5</sub>	Ichi ten shichi	1.7	鎬造、	$\mathbf{f}_1$	Shinogi zukuri	Has a ridge line
種	<b>a</b> <sub>6</sub>	senchi	cm	庭棟、	$\mathbf{f}_2$	Iori mune	Pointed back of blade
元幅	$\mathbf{b_1}$	Moto haba	With at machi (notches)	身幅広く、	f <sub>3</sub> ,	Mi haba hiro ku	Wide mihaba
(三・一五糎	b <sub>2</sub>	San ten ichi go senchi	3.15 cm	魔棟、身幅広く、元幅と先幅のひらき少	<b>f</b> <sub>4</sub> ,	Moto haba to saki haba no hi ra ki su ku na ku	The moto haba and the saki haba are slightly different

#### Interpretation

Characteristics here include: little difference between the *moto haba* and the *saki haba*, the *mihaba* is wide and the kissaki is a bit larger than a *chu* (medium) *kissaki*. This means that the sword, if *Shinto*, as pointed out by the *sori* which is shallow and from the hint that is a katana it is either *a Keicho Shinto* or a *Shinshinto*. As we have seen above *Shinshinto* swords are usually described in more detail because they have no "meat"; the *shinogi ji* not wide, etc. So we can at least, as a first approximation, assume that this sword is *Keicho Shinto*. The remaining hints will show this assumption to be correct.

The key hints in this case are that the sword is wide, that there is little difference between the *moto haba* and the *kissaki haba* and that the *kissaki* is medium extended. See**Yuichi Hiro and Kazuo Iida** (1984) as translated by **Harry Watson** for sword silhouette 7 with a good description. **Nagayama** (1997) on page 62 discusses swords of this type which he described as belonging to the *Momoyama* period (1573-1643) and where for instance the *kissaki* of the period is described as extended medium or large. A list of leading smiths of this period is given and the smith that produced this sword is in this list. However at this stage, as suggested before, it is better to compile a list of schools using **Hawley** (1974) for instance and then, with the hints of the next article, determine to what school this smith belongs.

#### Conclusion

The blade is most probably a *Momoyama* period sword that is a so-called *Keicho Shinto* blade (1573-1643). Again having a good idea of the manufacture period, one should consider only the sword smiths that worked in this period and find the main schools of the period.

Example 4 Token Bijutsu October Showa 62 (1987) Kantei 367

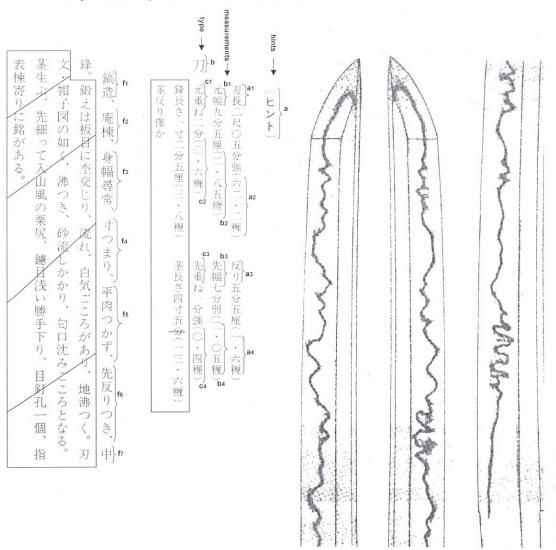


Figure 4 Hints and Oshigata example #4

## Translation hints example #4

	11316661	on mines examp	ne ii i				
ヒント	a	Hinto	hints	つ五種	$b_4$	Ni ten rei go senchi	2.05 cm
刀	b	Katana	Katana	元	$\mathbf{c}_1$	Moto kasane	
对長	$a_1$	Nagasa	length		$\mathbf{c}_2$	Rei ten roku senchi	0.6 cm
<b>六二</b>	$\mathbf{a}_2$	roku ju ri ten ni senchi	62.2 cm	独先重	c <sub>3</sub>	Saki kasane	
反り	a <sub>3</sub>	Sori	Curvature		c <sub>4</sub>	rei ten yon senchi	0.4 cm
ー・六糎	$a_4$	ichi ten roku senchi	1.6 cm	語籍造	$\mathbf{f}_1$	Shinogi zukuri	
元醫	b <sub>1</sub>	Moto haba	Width at machi	施棟、	$\mathbf{f}_2$	Iori mune	
の一、八五種	b <sub>2</sub>	ni ten hachi go senchi	2.85 cm	身個琴常、	$f_3$	Mihaba jin jo	Mihaba usual
先属	b <sub>3</sub>	Saki haba		すつまり、	$f_4$	Sun tsu ma ri	Relatively small

平内つか	$f_5$	Hira niku tsu ka zu	Has no hira niku (meat)	先反りつ	$f_6$	Saki sori tsu ki	It has saki sori
"寸、中鋒	$\mathbf{f}_7$	Chu kissaki	Medium point	ŧ,			

This is a katana. So following the previous examples, one might think that this is a *Shinto* or *Shinshinto* sword. However, it is relatively small (in fact only 62.2 centimeters long), it has a normal *haba*, it has *saki sori* and it has no *hira niku* (meat). Since it has a normal *haba* it can not be *Keicho Shinto* or *Shinshinto* that has a wide *haba*. The **crucial hint** is that it has *saki sori*. Swords with *saki sori* are *Keicho Shinto* (that has wide *haba*) and *Muromachi* period swords. To pin down more precisely what part of the *Muromachi* period this is, one needs the help of some books. **Nagayama** (1997) on page 62 describes similar swords as being made at the end of the *Muromachi* period (somewhere between 1450 – 1540). Since it is a *Koto* sword it may be possible using the other hints to find to which tradition this sword belongs. Our choices are the *gokaden* –Yamato, Yamashiro, Bizen, Soshu or Mino. It is rare to find swords that are not one of the classical traditions. This will have to wait until we translate the rest of the hints but at least one has a range of time and can look for the big names in this range.

The hint katana applies to one of *Shinto*, *Shinshinto* or *Koto Muromachi* swords. The hint means that the sword was made to be used thrust in the belt and not hanging like a tachi. Most of the *Shinto* and *Shinshinto* swords were made to be used as katana. Accordingly most are indeed katana. However one has to remember that *Muromachi uchigatana* were also made to be used like this and therefore are katana as well. In this case, the hint that it has a normal body (it is neither slim nor wide) and that it has *saki sori* points to a *Muromachi* blade. In addition since it is a small sword it must be from the late *Muromachi* period (1467-1572). **Nagayama (1997)** on page 62 has a good description of *uchigatana*. On this page there is of schools and of the swordsmiths in these schools. Among them the maker of this sword is listed.

#### Conclusion

The blade is most probably an *uchigatana* of the late period of the *Muromachi jidai* (1467-1572). The book by Hawley (W.M.Hawley (1973)) has a list of schools. The book by Nagayama Kokan (Kokan Nagayama (1995)) is equally precious. In this book the *sugata* of this sword is described as *Late-Muromachi* period (1467-1572) and the school and the smith that produced is included in the list given on page 62.

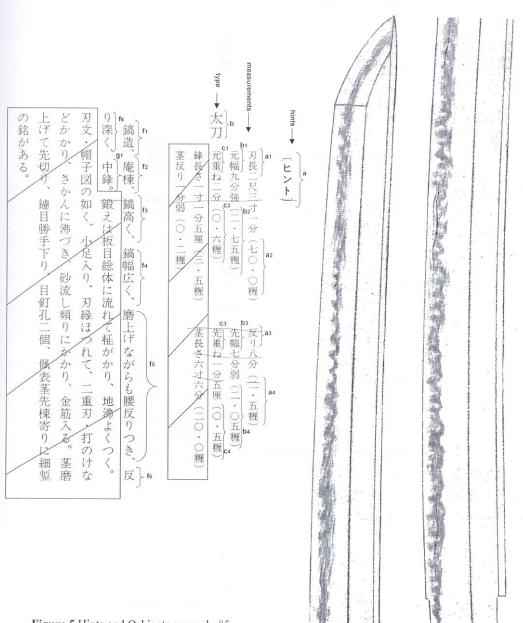
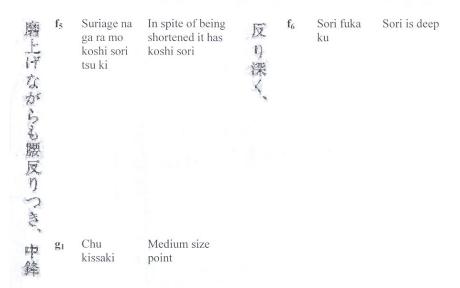


Figure 5 Hints and Oshigata example #5

ヒント	a	Hinto	hints	二・○五種	b <sub>4</sub>	ni ten rei go senchi	2.05 cm
	b	Tachi				Moto	
					$\mathbf{c}_1$	kasane	
	$\mathbf{a}_1$	Nagasa	length		$c_2$	rei ten roku senchi	0.6 cm
太刀	$a_2$	shichi ju ten Rei senchi	70.0 cm	元重	$c_3$	Saki kasane	
		Schem					
刃長	a <sub>3</sub>	Sori	Curvature	へ、大復	c <sub>4</sub>	rei ten go senchi	0.5 cm
七〇	a <sub>4</sub>	ni ten go senchi	2.5 cm		$f_1$	Shinogi zukuri	
七〇・〇糎				先重			
複	$\mathbf{b}_1$	Moto haba	Width at machi		$f_2$	Iori mune	
	b <sub>2</sub>	ni ten sichi go senchi	2.65 cm		f <sub>3</sub>	Shinogi taka ku	Shinogi is high
反 切				-			
	b <sub>3</sub>	Saki haba		・○五糎			
				褲	f <sub>4</sub>	Shinogi haba hiro ku	Wide shinogi haba



This is a tachi. This means that the sword was made to be used hanging with the cutting edged facing the ground on the left side of the body. The swords of this type are all *Koto*. This is confirmed by the deep *sori* (2.5 centimeters). The *moto haba* and the *saki haba* do not differ greatly (the difference is only 0.65 centimeters and big differences are considered to begin with 1 centimeter as can be seen from the example 1). In spite of being *suriage* the *sori* is deep. The *sori* is *naka sori*. This sword has a *chu kissaki*. Most *Nambokucho* blades have an *O kissaki* (large point rather than the medium point of this blade) so we can eliminate *Nambokucho*. The *sori* is *koshi sori* not the *saki sori* of the *Muromachi* so we can eliminate that as well. The overall *haba* is normal even though the *shinogi ji* is wide. This leads to either *Heian* or *Kamakura jidai*.

**Ogawa** (1976) on pages 12 - 24 provides a great article on shape. He discusses *hira niku*, size of *kissaki*, *sori*, *funbari* among other things. He also provides a list of sword smiths of the period by *den*.

In this case, swords with the above characteristics are from the middle times of the *Kamakura Jidai* (1230-1250 C.E.). A list of the smiths working in this era is given on page 18 organized by **den.** In this case the **critical point** is that the *shinogi* is high and the *shinogi* is thick. This information points specifically to **Yamato den**.

#### Conclusion

The blade is most probably a middle *Kamakura* blade and it is from the *Yamato* tradition. (In this case, the hints about the shape, allow us to identify the time of production and the tradition.) It is important to have a period in occidental dates to look for schools in the book by **Hawley (1973)**. In this case the date range is from 1232-1250.

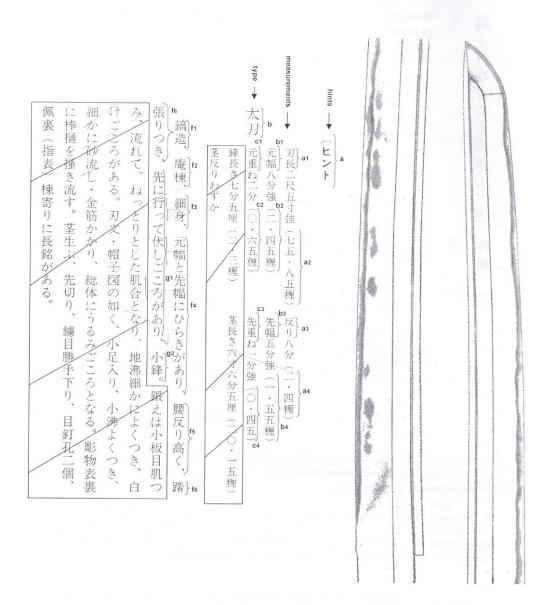


Figure 6 Hints and Oshigata example #6

<u></u>							
ント	a	Hinto	hints	五五程	b <sub>4</sub>	ichi ten go go senchi	1.55 cm
太刀	b	Tachi		兀 重 O		Moto	
刃 長				六	c <sub>1</sub>	kasane	
	$\mathbf{a}_1$	Nagasa	length	福	$\mathbf{c}_2$	rei ten roku go senchi	0.65 cm
七五二八五年。反り	$a_2$	Shichi ju go ten hachi go	75.85 cm	先重	<b>c</b> <sub>3</sub>	Saki kasane	
反可	$a_3$	senchi Sori	Curvature	Ø,		•	0.45
250				五	<b>c</b> <sub>4</sub>	rei ten yon go senchi	0.45 cm
一四種	$a_4$	ni ten yon	2.4 cm	造	$\mathbf{f_1}$	Shinogi zukuri	
T		senchi	Width at machi	庞植	$f_2$	Iori mune	
	$\mathbf{b}_1$	Moto haba			~2		
	$b_2$	ni ten	2.45 cm	費	$f_3$	Hoso mi	narrow
種先		yon go senchi		无幅			
₹\$	b <sub>3</sub>	Saki haba		と先幅にひるき	$f_4$	Moto haba to saki haba nihiraki ga a ri	There is a difference between the moto haba and saki haba

腰反り高く、	<b>f</b> <sub>5</sub>	Koshi so ri taka ku	The koshi sori is deep	踏張りつき、	$\mathbf{f}_6$	Fun bari tsu ki	Blade narrows near the machi
先に行って依しごころが	g <sub>1</sub>	gi saki ni ite fu ku shi go ko ro ga a ri	The curve bends down when we approach the point	亦鋒	<b>g</b> 2	Ko kissaki	Small point
1)							

This is a tachi (A sword that should be used hanging on the left side of the body with the cutting edge down). All those swords are *Koto*. This can be confirmed by the very deep *sori* of 2.4 centimeters: the deepest we encountered until now.

The blade is slim (*hoso mi*). There is a difference between the *moto haba* (2.45 cm) and the *saki haba* (1.55 cm). There is *funbari* (that is the *ha* and the *mune* are not parallel near the *hamachi*) and the curvature diminishes as it approaches the point.

As demonstrated by this case, swords with the above characteristics were made near the beginning of the *Kamakura Jidai* (1220 C.E.). See **Ogawa** (1976) on page 15 for a list of sword smiths. If you do not have the Compton collection book then you can use **Nagayama** (1997) as this type of sword is described in detail on the middle of the second column of page 17; "The tachi of this early part of....". A list of the sword smiths of this period is given on page 18. Later on in this reference on page 59 this shape is described as Early *Kamakura* period (1182-1231). However the description of shapes by **Ogawa** (1976) is generally more complete. Finally **Tokuno** (1987) is great if you know Japanese.

#### Conclusion

The blade is most probably an early *Kamakura* sword (1187-1231).

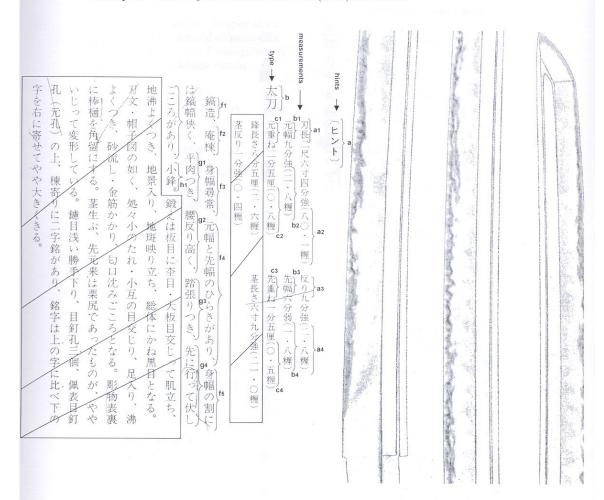


Figure 7 Hints and Oshigata example #7

ヒント太	a	Hinto	hints	二、八種	b <sub>4</sub>	ichi ten hachi senchi	1.8 cm
太刀	b	Tachi		元重	$c_1$	Moto kasane	
对長	$a_1$	Nagasa	length	元重〇十八	$\mathbf{c}_2$	rei ten hachi senchi	0.8 cm
現長 スロ・1種	$\mathbf{a}_2$	hachi ju ten ichi senchi	80.1 cm	先重	$c_3$	Saki kasane	
反可	a <sub>3</sub>	Sori	Curvature	〇・五種	c <sub>4</sub>	rei ten go senchi	0.5 cm
ニ・八糎	a <sub>4</sub>	ni ten hachi senchi	2.8 cm	稿造、	$\mathbf{f_1}$	Shinogi zukuri	
元篇	$\mathbf{b}_1$	Moto haba	Width at machi	庵棟、	$f_2$	Iori mune	
二、八糎	$\mathbf{b}_2$	ni ten hachi senchi	2.8 cm	方帽哥	f <sub>3</sub>	Mihaba jin jo	Mihaba is normal
種先	<b>b</b> <sub>3</sub>	Saki haba		常元	$f_4$	Moto haba to saki	There is a difference
Fig. 1				元幅と先幅のひらきがあ		haba no hi ra ki ka a ri	between the moto haba and saki haba

療幅の割り	$f_5$	Mi haba no wari ni ha shinogi haba sema i	In spite of the wide haba the shinogi haba is narrow	職張りつき	g <sub>3</sub>	Funbari tsuki	It has funbari
学平内つき、	g <sub>1</sub>	Hira niku tsuki	It has hira niku (meat)	い、先に行って伏	g <sub>4</sub>	Saki ni ite fuku shi go ko ro ga a ri	The curvature diminishes as it approaches the point
腰反り高く	<b>g</b> <sub>2</sub>	Koshi sori taka ku	The koshi sori is deep	レ小蜂	$h_1$	Ko kissaki	Small point

This sword is a tachi. Accordingly, it must be *Koto*. **Ogawa** (1995) points out that a sword with normal body, a big difference between the *moto haba* and the *saki haba* and a *ko kissaki* must be late *Heian* to early *Kamakura jidai*. In this case a sword as big as this with those characteristics is probably from the late *Heian* (987-1181 C.E.). This can be confirmed by **Nagayama** (1997)) on page 59 who also lists, in the same page, the leading sword smiths of the time.

#### Conclusion

The blade is most probably a late *Heian* (987-1181) blade. The possibility of being an early *Kamakura* blade (1182-1231 C.E.) may be considered a second option.

Figure 8 Hints and Oshigata example #8

ヒント	a	Hinto	hints	一,九種	b <sub>4</sub>	Ichi ten kyu senchi	1.9 cm
太刀	b	Tachi		T	$\mathbf{c}_1$	Moto kasane	
灵長	a <sub>1</sub>	Nagasa	length	O - 七種	$\mathfrak{c}_2$	Rei ten shichi senchi	0.7 cm
七三、三五糎	$a_2$	Shichi ju san ten san go senchi	73.35 cm	先重	c <sub>3</sub>	Saki kasane	
反可	a <sub>3</sub>	Sori	Curvature	〇・四五糎	c <sub>4</sub>	Rei ten yon go senchi	0.45 cm
一、六種	a <sub>4</sub>	ni ten roku senchi	2.6 cm	籍造、	$f_1$	Shinogi zukuri	
龙翼	$\mathbf{b}_1$	Moto haba	Width at machi	庵棟、	$\mathbf{f}_2$	Iori mune	
二、七五種	$\mathbf{b}_2$	Ni ten shichi go senchi	2.75 cm	为帽尋常。	$f_3$	Mihaba jin jo	Mihaba is normal
先福	b <sub>3</sub>	Saki haba					

磨上げなが	$f_4$	Suri age na ga ra mo tori sori	In spite of being suriage it has tori sori	中鋒つまり	gı	Chu kissaki tsu ma ri go ko ro ni iku bi fu to na ri	The kissaki is a little smaller than chu kissaki and becomes ikubi kissaki
1				SE 33			(boar's
2				1994			neck)
<b>多</b> 全				2			
740							
IX.				E			
7				猪			
中	$f_5$	Naka so ri	Sori is maximum in the middle of	首			
F			the blade	mil			
T			the blade	2004			
9				\$			
43	$\mathbf{f}_6$	Ya ya taka	Quite deep	4			
£2-4		ku		6			
7				.50			
120							

This sword is a *tachi*. Accordingly, it must be a *Koto* sword. Although *suriage* it has a *naka sori* and it has a *chu kissaki* that tends to be *ikubi kissaki*. This is a sure sign that we are in front of a middle *Kamakura jidai* sword (1232-1287 C. E.) Note that **Nagayama (1997)**, on page 59, divides the middle *Kamakura* period into two distinct *sugata* both occurring from 1232 to 1287 C.E. In the first *sugata* type, the *mihaba* is only a bit wider than normal and the *kissaki* only tends to *ikubi kissaki*. The second type, one finds *ikubi kissaki*, wide *mihaba*, and little difference between **moto haba** and *saki haba* and with *hira niku*. So we can surely say that this sword was made from 1232 to 1287 C.E. **Nagayama (1997)** on page 59 lists the leading sword smiths. From the remaining hints we will be able to identify the *den* of this word and then the actual sword smith.

#### Conclusion

The blade is most likely a mid-*Kamakura* period (1232-1287 C.E.) blade. The main school that worked in this period can be found in **Ogawa** (1976) or **W.M.Hawley** (1973).

#### Final considerations and key sentences

We have seen above that the shape of the sword involves many elements

- 1) LENGTH The length of the blade is not a major element. (We have seen an exception in example 4.) The average length of all periods is given in Nagayama (1997). Shibata (1988) also shows average lengths versus time.
- 2) SORI Position of maximum curvature of the sword is the sori.
  - Heian to early Kamakura jidai mostly have a deep koshi sori, funbari and dimishing curvature in the monouchi also point to Heian and Kamakura jidai.
  - Shinto times and Shinshinto times: the curvature is small (less than two centimeters) and more or less naka sori.
  - Keicho Shinto swords have saki sori.
  - Koto saw an evolution of the position of maximum curvature. See Ogawa (1976) for a good discussion of this.
  - Sometimes the sword is presented as having both koshi sori and saki sori. In the
    paper kantei of the NBTHK if the sword is early Kamakura jidai this is an
    indication of Awataguchi School in Yamashiro province.
- HABA The degree of tapering in width in going from the base to the point of the sword is the haba.
  - Kanbun Shinto- presents a strong (about one centimeter) difference between the moto haba and the saki haba.
  - Keicho Shinto and Shinshinto show a much less variation (less than one centimeter)
  - The differences in *Koto* times are very well described by **Ogawa** (1976)
  - Tokuno (1987) presents graphs showing the variation of this feature with time.
- 4) HIRA JI The curvature of the sides of the blade is the hira ji (presence or absence of niku = meat). This is either thin or fat. The reader can find a drawing of this in Nagayama (1997), on page 56. [Note however that there is an error and that the figures are interchanged]
  - Shinshinto swords usually have little niku and so do the Muromachi period swords.
  - Koto sword variation should be checked in reference Ogawa (1976)
- 5) KISSAKI The size of the kissaki or point.
  - Shinto swords have a big or medium extended point
  - Keicho Shinto period and even more in the Shinshinto period also have medium or extended medium points.
  - Kanbun Shinto period has a small point.
  - Koto blades vary and again the reader should consult Ogawa (1976)]. In Tokuno (1986) there are drawings showing the evolution of the size of the kissaki.

#### References and bibliography \* indicates books in Japanese

**Ogawa (1976) Ogawa Morihiro-**"*Nippon-To: Art Swords of Japan*" Japan Society (1976) This book is splendid. The description of the evolution of the shape of the swords, containing not only the evolution of the silhouette but also other fine points is essential.

Nagayama (1997) Kokan Nagayama "The Connoisseurs Book of Japanese Swords" Kodansha Tokyo 1997

This book was originally published in Japanese (see below). The figures describing the silhouette of the swords begin on page 59 and are numbered 1 to 17. In the Japanese edition the swords are not numbered and since Japanese is written vertically the drawings are displayed vertically side by side with the explanation. This makes the text much easier to understand and avoid some mistakes.

In contrast to the Japanese text, where figures for the shape of tanto occur in bullets, the English text numbers items and is confusing. Item number 7 a moroha shape is described in number 6. (Note that we do not consider tanto in this article.)

The item 7 of the silhouette of the swords (page 60 second column) describes the shape of a late *Nambokucho* sword (item 7) as being similar to middle *Nambokucho* (item 6). This is probably in error since the silhouette of sword 7 is similar to that of sword 3 that belongs to the middle *Kamakura* period.

On page 56 the figures below the *fukura* are interchanged. The first two figures on the left should be described as "with rounded *fukura*" and the two figures on the right as "with a not rounded *fukura*".

Nagayama (1995) Kokan Nagayama "To-Ken Kantei Dokuhon" Nagayama Bigots Token Kenma-jo, Tokyo 1995 \*

As mentioned above to own this book is highly desirable.

Hawley (1974) W.M.Hawley "Japanese Sword smiths Groups" Hawley Publications California (1974)

Tokuno (1986) Tokuno Kazuo "Token Mi dokoro Kan dokoro" Ko Gei Shu Pan, Tokyo, Showa 61. \*

The title of this book can be translated as follows: Swords, what to see and the essential points. The book contains very nice graphs illustrating the evolution of some points that are essential in determining the period of a sword by using the shape of the sword.

**Shibata (1987) Shibata Kazuo** "Token Kantei no Kimete" O Zan Kaku Tokyo Showa 62 \* The title of this book can be translated as follows: Fine points on the *kantei* of swords. The book is a collection of paper *kantei* very well explained. In the introduction there are marvelous drawings showing the evolution of the essential points.

 Fukunaga (1992) Fukunaga Suiken "Nipon To Kantei Hikkei" O Zan Kaku , Tokyo, Showa 67 \* The title of this book can be translated as follows: a *kantei* manual of the Japanese sword. It is not very useful as far as shape is concerned. However it studies *hamon* and *hatakiri* in great detail. We shall have occasion to refer to it in the next article in this series.

#### Watson (1991) AFU: H.A. Watson (translator) "Nihon To Koza"

To have this encyclopedia is essential to pin down your final guess. This encyclopedia is essential in helping to pin down the maker of the sword in the final stages of the *kantei*. We shall use it in the other articles of this series.

**Iida and Hiroi (1984) Yuichi Hiroi and Kazuo Iida** "Shin Nihon To Kantei Nyumon" This book is an excellent introduction to kantei with an excellent translation by Harry Watson. It contains a series of paper kantei with answers. Also from page 110 to page 114 it presents silhouettes of the nine main types of sugata and the main smiths that produced them. (The translation by Harry Watson provides the rest of the needed information in addition to the silhouette.)

Kanzan (1986) Kanzan Sato "To Ken Kan Tei Te Cho" NBTHK Tokyo Showa 61\* The title can be translated as Notebook of Kantei of Swords. From page 190 the shapes of swords are described in great detail. In fact not only the silhouette is described but there are descriptions of the thickness of the sword, the size of the *kissaki*, etc. This is done not only for katana and tachi (the subject of this paper) but also for wakizashi, tanto and even some other non standard *tsurikomi* (shapes).

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