

Modal Practice in the Tenth-Century Japanese Flute Source *Hakuga no fue-fu* 博雅笛譜 and Its Implications for Our Understanding of Present-day *tôgaku* 唐樂¹

Allan Marett
University of Sydney

Introduction.

The question of modality in the Japanese court music repertory *tôgaku* is complex. As it is now performed this repertory of music, originally imported to Japan from China between the seventh and ninth centuries, involves the simultaneous presentation of several different modal systems. It is this modal inconsistency that produces many of the piquant dissonances that characterise the melodic texture of *tôgaku* and have made it so attractive to modernist European (and Japanese) sensibilities. Melodies carried by the two instruments, the double-reed pipe *hichiriki* 篳篥 and the transverse flute *ryûteki* 龍笛, exhibit influence from the *in* 陰 scale and other modes associated with relatively recent genres of music that became popular in the Edo period (1600-1868) (Marett 2000). This produces clashes with other instruments that preserve modal forms close to or identical to the original diatonic modes of the Chinese music of the Tang period (618-907) such as the lute, *biwa* 琵琶 and mouthorgan *shô* 笙. Further modal inconsistency may occur between these *biwa* and *shô* as a result of alterations to the Tang Chinese modal system made during the Heian period (794-1185) or earlier (see Ng's paper in this volume). Thus in modern *tôgaku* we may simultaneously encounter Tang Chinese modality, Heian period adaptations of Tang Chinese modality and modal characteristics gleaned from the seventeenth and eighteenth

¹ Chinese characters are given at the first appearance of terms, including the names of historical figures, but not of modern authors.

century popular repertoires. If we are to fully understand the melodic textures of modern *tôgaku*, the history of modal change must be investigated².

It is not my intention in this paper to comment on the most recent modal influences, namely those that crept in from popular Edo period genres in the seventeenth and eighteenth centuries. Rather I will focus on the question of what remained the same and what had been altered by the mid-Heian period, that is, by the tenth century. To this end I will return to work that I undertook in the 1970s on modality in the tenth-century Japanese source *Hakuga no fue-fu*. This source preserves notations for flute collected and edited in 1966 by Minamoto no Hiromasa 源博雅 (see further below). I will demonstrate first that many pieces preserve Tang modal structures and their associated nomenclature, and secondly show some of the ways in which the nomenclature and forms of some modes had already been altered by that time.

The Tang modal system

All of the modal names used in *tôgaku* today may be traced to Chinese sources of the Tang period (618-907) such as the edict *Gongfeng Yuequ Kaiming-biao* 供奉樂曲改名表, dated 754, and recorded in the mid-tenth century compendium *Tanghuiyao* 唐會要 or the late ninth-century source *Yuefa zalu* 樂府樂府. In this explanation of the Tang modal system, I will deal primarily with the eight modal groups that survive in present-day *tôgaku*

² In his article on Sino-Japanese mode in 'Mode' in the *New Grove Dictionary of Music and Musicians*, Harold Powers described the relationship between the *chôshi* 調子 or modes of the modern Japanese *tôgaku* tradition and those of Tang period as follows:

[The] seven *chôshi* [of present-day *tôgaku*] ... are almost certainly surviving descendants of the 28 'popular modes' of T'ang court music. Their names at least, or sufficiently close equivalents, may be found among the northern Sung version of the late T'ang 28-mode system (Courant 1921).

Powers' account, based as it was on work published by Courant in 1921, appears to have neglected more recent research by Kishibe Shigeo (1939), Yang Yinliu (1953), Hayashi Kenzô (1969) and Laurence Picken (1969). Since the 1970s, further work carried out by Rembrandt Wolpert (1977), Ng Kwok Wai (1998), Endô Toru (2001) and Marett (2001) has further clarified the nature of the Tang modal system and its adaptation in Japan.

(*Ichikotsuchô* 越調, *Sadachô* 沙陀調, *Hyôjô* 平調, *Taishikichô* 大食調, *Sôjô* 雙調, *Ôshikichô* 黃鐘調, *Suichô* 水調 and *Banshikichô* 盤涉調), focussing particularly on the four modes for which we have notations in *Hakuga no fue-fu* (*Sôjô*, *Ôshikichô*, *Suichô* and *Banshikichô*). *Hakuga no fue-fu* has an additional modal heading *Kakuchô* 角調 that has not survived to the present as a separate modal group (see further below). Of the eight modes that survive as separate modal headings, six (*Ichikotsuchô*, *Sadachô*, *Hyôjô*, *Taishikichô*, *Ôshikichô* and *Banshikichô*) preserve the modal species and relative key relations that they had during the Tang period. That is, the part played by at least one of the melodic instruments in the present-day ensemble (normally the *shô* and/or the *biwa*) preserves the original form. Two other modes show signs of having been modified very early on in Japanese practice. *Sôjô* appears to have been modified by Japanese musicians during the Heian Period (794-1185) in order to accommodate technical limitations of the *shô*, the only fixed pitch instrument in the Japanese *tôgaku* ensemble. There are some questions about exactly when this change occurred and I will present some evidence about this from the tenth century. The remaining mode, *Suichô* appears to be a tone higher (relative to other modes) in early Japanese practice than it was in Chinese practice.

INSERT

Table 1: The eight *tôgaku* modes that appear in a Tang source *Gongfeng Yuequ Kaiming-biao* 供奉樂曲改名表 (754) (recorded in *Tanghuiyao* 唐會要)

The Tang Chinese modal system was based on a system of 84 theoretical modes³. These were generated by first taking each of

³ Yang Yin-liu (1994:171) has noted the existence of a number of different modal structures during the Tang dynasty. The one described here, known as *zhengshengdiao* was the most important and basic structure (Ng 1998: 22-23)

the seven degrees of a heptatonic Lydian series as the final of one of seven modal species and secondly transposing each of the resultant seven modal species to one of twelve keys. All the modes that we will consider in this paper fall within five keys, namely those shown in Table 1.

The names of the modal degrees from which modal species were generated are as follows: (here I give Chinese readings; Japanese readings and characters are on the Table): *gong*(I), *shang* (II), *jiao* (III), *bianzhi*(iv), *zhi* (V), *yu* (VI) and *biangong*(vii). This heptatonic structure was developed in China from a pentatonic series by filling in the larger (minor 3rd) gaps of an anhemitonic pentatonic series with the interval structure T T m3 T m3 to develop a Lydian series T T T T S T T S. The added degrees (written here in lower case), which occur a semitone below degrees I (*gong*) and V (*zhi*) of the heptatonic series, were conceived of as 'altered' or 'auxiliary' (*bian*) versions of the degrees a semitone above them and were named as such: *bian-gong* (vii) and *bian-zhi* (iv).

By the mid-eighth century, when China was exerting its greatest cultural influence on Japan, modal species were in fact formed on only four of these degrees, namely: a Lydian series on I (*gong*); a Mixolydian series on II (*shang*), an Aeolian series on III (*jiao*), and a Dorian series on VI (*yu*). No modal species were formed on V (*zhi*) or on either of the auxiliary degrees (iv) and (vii). Each of these modal species was transposed to seven keys giving a total of 28 modes. Of these, 13 were particularly popular in practice; it is to eight of these that the present-day *tôgaku* modes may be traced.

Table 1 shows the position that the eight Tang modes that survive as modal headings have in present-day *tôgaku*. Modal-degree names (*gong*, *shang*, *jiao*, *zhi*, *yu*), which are applied both to individual notes and modal species, are listed horizontally at the top of the table. Listed vertically to the left of the table are five of

the seven pitches (D, F, G, A or C) to which modal species were transposed in the mid-Tang period. In giving western equivalents to Chinese pitch names (also given in the table), the fundamental Chinese pitch, *Huangzhong*/*Ôshiki* has been read as C; this strategy brings the ancient Chinese system into line with that of modern *tôgaku* (the other degree names are given on the Table). Within the table, the final of each of the six surviving modes is highlighted in bold and identified in the key below. In order to derive the notes of the mode, pitches should be read off from left to right, returning to the column *gong/kyû* when the extreme right of the table is reached: thus *Pingdiao*/*Hyôjô* comprises the pitches E F# G A B C# D.

From the table it seems that only three of the mid-Tang modal species (the Mixolydian *shang* modes on II, the Dorian *yu* modes on VI and one Lydian mode on degree I) survive in modern Japanese practice. Of these, Mixolydian and Dorian modes are the most common.

INSERT

Table 2: Comparison of Tang period Chinese forms of modes with those of present-day *tôgaku*

As stated earlier, of the eight modes listed in Table 1, six maintain in modern practice the same modal species (Mixolydian or Dorian) and the same final that they had in the Tang sources. A sixth, *Shuangdiao* (*Sôjô* in Japanese) has had its modal species transformed from a Mixolydian *shang* mode to an Ionian (major) mode by sharpening the seventh degree (see Table 2) and the seventh *Shuidiao*/*Suichô* has been transposed down a tone.

These changes were probably made to accommodate the limitations of the more restricted range of instruments used in Japan. It is certainly the case that in its present-day form, the single fixed-pitch instrument in the Japanese ensemble, the *shô*, can play neither the F natural necessary to realise *Sôjô* in its original Chinese form, nor the D# required for *Suichô* at its original

Chinese pitch. As we shall see shortly, evidence from the flute score *Hakuga no fue-fu* suggests that the original Mixolydian form of the *Sôjô* mode may have continued in use as late as the mid-tenth century (Marett 1976: 69-70, 113). *Hakuga no fue-fu* also shows that Japanese form of *Shuidiao/Suichô* was on the other hand clearly established by the tenth century.

Hakuga no fue-fu

Hakuga no fue-fu exists in multiple copies, all of relatively late date (eighteenth century or later). The original score was compiled by Minamoto no Hiromasa ('Hakuga' is the Sino-Japanese reading of 'Hiromasa') from a number of named earlier sources stretching back to about 830, and thus contains a number of historical layers. The evidence considered in this paper is from the most recent of these layers which manifests the practice of the early to mid-tenth century. The surviving sources each comprise only about a quarter (or less) of the corpus that made up Hiromasa's original score. The title of the original thirteen-scroll score was *Shinsen gaku-fu* 新撰楽譜 (Newly edited music scores). As it survives, *Hakuga no fue-fu* contains pieces in three of what are now the principal modes of *tôgaku* plus notations in two sub-modes, *Suichô* and *Kakuchô* (this last is not part of the modern modal system).

The notation of *Hakuga no fue-fu* is a tablature. That is, notational symbols show the positions of the fingers on a standard flute rather than absolute pitch. For this reason we must rely on theoretical sources to determine the pitch that corresponds to each tablature sign in any one mode.

Modal changes in *Hakuga no fue-fu*.

In *Hakuga no fue-fu*, items are arranged under five modal headings: *Sôjô* piece; *Ôshikichô* pieces; *Suichô* pieces; *Banshikichô* pieces; *Kakuchô* pieces. The first four of these names survive in modern practice and were also mentioned in my discussion of Tang modes.

The fifth, *Kakuchô*, will be discussed shortly. Let us consider each of these in turn.

Banshikichô has the largest number of pieces (20). For reasons that I do not have time to spell out in detail here (for a full summary of the arguments see Marett 1976) we may safely assume that the pitches produced for each mode by each of the fingerings of the flute were as set out in Table 3 (Marett 1976: 70).

INSERT

Table 3: Pitches corresponding to tablature signs for each mode in *Hakuga no fue-fu*

All but four of the pieces listed under the heading *Banshikichô* in *Hakuga no fue-fu* have B as final, giving the mode precisely the shape it has in Tang modal theory, that is a Dorian (*shang/shô*) series on B. Three of these four pieces, however, have F# as final, that is instead of being in a Dorian (*shang/shô*) mode on B, they are in an Aeolian *jiao/kaku* mode on F#. The full title of one of these pieces is Taisô-kaku-banshikichô-Chôkamanzairaku 太簇角盤涉調 〔鳥歌萬歲樂, that is Chôkamanzairaku 鳥歌萬歲樂 in the *taisô-kaku* 太簇角 form of *Banshikichô* 盤涉調. It is generally agreed that the name *Taicoujiao/Taisô-kaku* was the name given in Tang modal theory to the Aeolian *jiao/kaku* mode in the same key as *Panshediao/Banshikichô*. That is, the modal nomenclature used by Hiromasa in describing the *jiao* mode on F# used for Chôkamanzairaku conforms exactly to Tang usage.

The last piece in this modal group is Sogô 蘇合香, a piece that survives to the present day, and which has D as final in all its movements. This is the mode known in Tang sources as

*Shatoudiao/Sadachô*⁴, which actually survives as a separate modal category in modern Japanese *tôgaku*.

From these examples of pieces whose finals are not B, but F# and D, it is clear that in Hiromasa's usage *Banshikichô* could include pieces in the same key (that is the key with three sharps), but with different finals from the standard Dorian (*shang/shô*) series on B. It seems therefore that where only a few examples of pieces in a particular mode survived, they were swept up into the most representative mode in that group, in this case *Banshikichô*.

Somewhat oddly, the single piece Sôrô kodatsu 曹娘禪脱, which is in exactly the same mode as title Taisô-kaku-banshikichô-Chôkamanzairaku, namely *taisôkakuchô*, is listed under a separate heading (*kakuchô*) after the pieces in *Banshikichô*. This is perhaps because Taisô-kaku-banshikichô-Chôkamanzairaku was already included among the *Banshikichô* pieces in the score upon which Hiromasa based his *Shinsen gaku-fu*, namely the *Nangu Ôjô-fu* 南宮横笛譜 compiled by Prince Sadayasu (Sadayasu Shinnô 貞保親王) in 921, whereas Sôrô kodatsu was not. We know that Hiromasa added an additional thirteenth scroll to the twelve scrolls of *Nangu Ôjô-fu*, and that this thirteenth scroll contained pieces in *kakuchô*.

In surveying all pieces in *Hakuga no fue-fu*, Hayashi Kenzô observed that within any group of modes that share the same key, the ornamental sign *yuri* 由 (and its related form 由引引引) falls most frequently on the notes that are fifth degree of the Lydian (*gong/kyû*) series in that key, followed by the first degree, followed by the second degree (see Table 1)) (Hayashi 1969: 298-99). Thus we might expect that pieces in the three modes listed under *Banshikichô* in *Hakuga no fue-fu* (all of which can be derived by

⁴ According to Ng 1998: 96 *Sadachô* has this form at the time of Sango yôroku. The reason that *Sadachô* pieces are generally classified along with *Ichikotsuchô* pieces is perhaps because they share a *biwa* tuning with *Ichikotsuchô*.

modal inversion from the *gong/kyû* mode on D), would have ornaments on the notes A (V), D (I) and E (II) of this *gong/kyû* series.

INSERT

Table 4: Occurrences of ornaments on degrees of the *gong/kyû* mode on D

This is in fact the case. Table 4 shows the number of occurrences of ornamental signs for each of the three modes listed under the *Banshikichô* heading. It is clear that the vast majority of ornamental signs in all three modes occur on degrees V and I, that is on the degrees above the auxiliary (*bian/hen*) notes. I do not want to enter into a detailed discussion of the meaning of *yuri* here. I have argued elsewhere that it is a quasi-mordent – a rapid lowering and raising of the pitch of a note either at the onset or the end of the note – and that the range of the pitch variation is in most cases a semitone (Marett 1976: 116-121). More detailed examination of individual pieces reveals that the four occurrences of ornaments on degree II are confined to two pieces only (Shûfûraku 秋風楽 and Rindai 秋風楽 – two each). That is, occurrences on II are not spread evenly across the sample. The single piece listed under *kakuchô* (whose more precise modal designation we now know is *taisôkaku*), follows a similar pattern to most pieces in *Banshikichô*, including the other *taisôkaku* piece Sogô, in that only degrees V and I are ornamented.

Turning now to the *Ôshikichô* and *Suichô* modal groups, there are 19 pieces listed under the *Ôshikichô* heading and four under the *Suichô* heading in *Hakuga no fue-fu*. Of those in *Ôshikichô*, all but one (Sekihaka torikwa 赤白桃李花) have A as final. Sekihaka torikwa has the final E and is thus the Aeolian (*jiao/kaku*) mode in the same key. This is consistent with the principle identified earlier with reference to *Banshikichô*, namely that when there are

only a small number of pieces, or a single item in a particular mode, they are grouped together with the principal mode in that key. All four pieces in *Suichô* have A as final. As mentioned earlier, *Suichô* was transposed down a tone in Japanese practice as compared with Tang Chinese theory, but nonetheless preserves intact its Mixolydian (*shang/shô*) modal character intact. Observation of the placement of ornaments in *Hakuga no fue-fu* confirms that this transposition was fully established by Hiromasa's time (see Table 5).

INSERT

Table 5: Occurrences of ornaments in *Suichô*

If *Suichô* in Japanese practice had retained anything of its association with the *gong/kyû* mode on A (*nanlu/nanryo*) rather than on G (*linzhong/rinshô*), one would have expected the pattern of distribution of ornaments to have been on E (V), A (I) and E (II). This is clearly not the case. As stated earlier, the reason for the transposition of the Tang mode down a tone was probably to avoid the D# in the *nanlu/nanro* series (see Table 1), which was a tone not able to be produced even on early Japanese mouthorgans (*shô*). In their 1951 paper Traynor and Kishibe suggested that two pipes, *boku* 卜 (producing F natural) and *to* 斗 (producing A#) may, in early times, have been substituted to increase the range of the *shô*. As we shall see shortly, *Hakuga no fue-fu* provides evidence for the survival of F natural as a modal pitch in *Sôjô* into the tenth century (which in my view goes some way to support Traynor and Kishibe's view), but there was never any question of the Japanese *shô* playing D#, the note required to realise *Suichô* in its original Tang form. We can therefore assume that the Japanese form of *Suichô* was well established by Hiromasa's time.

The most complex evidence with regard to ornamentation and mode occurs in the *Ôshikichô* and *Suichô* pieces, a pair of modes

that share a final (A) but have different modal characteristics, the former being a Dorian *yu/u* mode and the latter a Mixolydian *shang/shô* mode. This is significant because this sort of transposition alters the nature of the melody in a way that simple transposition to another key does not. Both differ from *Banshikichô* (and *Kakuchô*) in their distribution of ornaments with regard to modal structure. There is a much stronger pattern of ornaments occurring on degrees other than V and I of the *gong/kyû* series in the same key. Although in both modes there are a significant number of pieces (eight in all) that exhibit ornaments on V, I and II in patterns of distribution resembling the *Banshikichô* and *Kakuchô* pieces, a significant number of pieces display other patterns of ornament distribution. These include ornaments on only V and I (as was the case in most *Banshikichô* and *Kakuchô*) (3 pieces) and ornaments on other pairs, for example V and II (eight pieces, including one in *Suichô*). In attempting to account for these differences, there is a need to take into account a significant body of evidence, including independent textual references, of pieces having been transposed between *Ôshikichô* and *Suichô* and vice versa.

Turning now to *Sôjô*, we can see that in Tang practice this mode was a Mixolydian (*shang/shô*) mode on G. By the twelfth century (see Ng's paper in this volume) the mode had been converted to a Lydian (*gong/kyû*) mode on G by sharpening both the F and the D. Unfortunately none of the early sources for *biwa* – for example the *Gogen-biwa-fu* 五絃琵琶譜 or the *Nangu biwa-fu* 南宮琵琶譜 (see Nelson's paper in this volume) – that might have shed light on the form that *Sôjô* took in the early to mid-Heian period contains pieces in this mode. However, the distribution of ornamentation in *Hakuga no fue-fu* supports this evidence and further suggests that in tenth-century practice, *Sôjô* retained its Tang form.

Sôjô belongs to the group of modes derived from the *gong/kyû* mode on F (*zhonglu/chûro*). As Table 6 shows, ornaments occur most frequently on degrees V, I and VI.

INSERT

Table 6: Occurrences of ornaments in *Sôjô*

Leaving aside the rather oddly large number of occurrences on IV (which occur in only one piece in the mode), the important thing is the high number of ornaments on the tablature sign *go* 五, which yields either F or F#. We have observed already that ornaments occur overwhelmingly on the notes above the ‘*bian/hen*’ (altered) degrees, that is, on the notes that have a semitone below them. It seems therefore likely that the pitch yielded by the *go* fingering was F natural rather than F#. If F# had been in use at Hiromasa’s time one would expect the ornaments to have occurred on the note a semitone above it, namely G.

Steven Nelson, – who in his paper presents compelling evidence that modes and *biwa*-tunings (and the rendering of ornamentation in ‘correct’ Tang style) were altered between the time when Fujiwara no Sadatoshi returned from China (841) and the time of Fujiwara Moronaga 藤原貞矮敏, the late twelfth-century compiler of the *biwa*- source *Sangoyoroku* 三五要録– has questioned my view on this matter. In the absence of any evidence that the process of altering tunings and modes had occurred prior to the tenth century (which after all is much closer to Sadatoshi’s than to Moronaga’s time) the question must remain open. In my view however the balance of probability (based on patterns of ornamentation) inclines towards the survival of *Sôjô* in its ‘correct’ Mixolydian form at the time of Hiromasa.

Conclusion

In this paper I have shown that by the tenth century Tang period modal terminology had been modified by the Japanese in a number of ways. First, certain modal categories – in particular those that

contained a large number of pieces – often included a small number of pieces that are in fact in different but little used modes. These little-used modes were nonetheless in the same key as the principal mode. For example, pieces listed under the *Banshikichô* heading included not only those in the Dorian *yu/u* mode that corresponds to Tang usage, but also a small number of pieces in the Lydian *gong/kyû* and Aeolian *jiao/kaku* modes that use the same set of pitches.

We have also seen that one mode, *Suichô*, which in Japanese usage is a tone lower than in Tang practice, was firmly established at the new pitch by Hiromasa's time, but that the original Tang form of *Sôjô* may have survived into the tenth century.

Although somewhat arcane, detailed studies of modal practice at key points in the history of *tôgaku* are essential to an understanding of how *tôgaku* developed over the centuries. And because modern *tôgaku* represents the most recent point in this historical development, our understanding of present-day practice must also rest on studies that show how important features of the music (such as modality) came into being. Historical and analytical research thus go hand in hand. And it is only as we piece these fragments together that we will come to fully understand why pieces in the present-day repertory have the forms they do.

References

Courant, Maurice

1921 'Chine et Corée', *Encyclopédie de la musique et dictionnaire du Conservatoire*, I/I, 77-241

Endô Toru

2000 [title as per this volume]

Kishibe Shigeo

'*Tô no zokugaku 28 chô no seiritsu nendai ni tsuite*' [A historical study of the 28 modes of the popular music of the Tang period], *Tôyô gakuhô*, 26(3) 437-68, 26(4) 578-631, 27(1) 121-38.

Hayashi Kenzô

1969 '*Hakuga no fue-fu kô*' [Thoughts on the Hakuga fue-fu], *Gagaku: kogaku-fu no kaisetsu*, Tokyo: Ongaku no Tomosha,, 285-308.

Marett, Allan

2001 MODE V, 5 {East Asia} in *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie. London: Macmillan.

Ng, Kwok Wai

1998 *Modal Practice in Japanese Tôgaku of the Late Twelfth Century: Its relationship to the Modal Theory of Tang-period China (A.D. 618-907)*. Master Thesis, International Christian University: Tokyo

Picken, Laurence

1969 'T'ang music and musical instruments', *T'oung Pao* 55: 74-121

Yang Yinliu

1953 *Zhongguo Yinyue Shigang*, Shanghai

1994 *Zhongguo gudai Yinyue Shigao*. 2 volumes. Beijing: Renmin Yinyue Chunbansha.

Wolpert, Rembrandt

1977 'A ninth-century lute tutor', *Musica Asiatica* 1: 111-65

TABLES

Table 1: The eight *tôgaku* modes that appear in a Tang source *Gongfeng Yuequ Kaiming-biao* 供奉樂曲改名表 (754) (recorded in *Tanghuiyao*) 唐會要⁵.

	Modal Degrees	<i>gong/ kyû</i> 宮 I	<i>shan g/ shô</i> 商 II	<i>jiao / kak u</i> 角 III	<i>bianz hi/he nchi</i> 變徵 iv	<i>zhi/ chi</i> 徵 V	<i>yu/ u</i> 羽 VI	<i>biango ng/hen kyû</i> 變 宮 vii
Pitches								
D Taicou/ Taisô 太簇		D⁸	E¹	F#	G#	A	B⁵	C#
F Zhonglu/ Chûryo 仲呂		F	G²	A	B	C	D	E
G Linzho ng/ Rinshô 林鐘		G	A	B	C#	D	E⁶	F#
A Nanlu/ Nanryo 南呂		A	B³	C#	D#	E	F#	G#

⁵ See also Ng 1998:30-31

C Huangz hong /Kôshô 黄鐘		C	D ⁴	E	F#	G	A ⁷	B
-------------------------------------	--	---	----------------	---	----	---	----------------	---

KEY

<i>Shang/shô</i>) 商 modes (Mixolydian)	<i>Yu/u</i> 羽 modes (Dorian)
1. <i>Dashidiao/Taishikichô</i> (final E) 大食調	5. <i>Panshediao/Banshikichô</i> (final B) 盤涉調
2. <i>Shuangdiao/Sôjô</i> (final G) 雙調	6. <i>Pingdiao/Hyôjô</i> (final E) 平調
3. <i>Shuidiao/Suichô</i> (final B) 水調	7. <i>Huangzhongdiao/Ôshikichô</i> (final A) 黄鐘調
4. <i>Yuediao/Kotsuchô</i> (final D) [一]越調	
	<i>Gong/kyû</i> 宮 modes (Lydian)
	8. <i>Shatuodiao/Sadachô</i> (final D) 沙陀調

Table 2: Comparison of Tang period Chinese forms of modes with those of present-day *tôgaku*

	Tang form	Present-day form
<i>Yuediao/Ichikotsuchô</i>	D E F# G A B C	same
<i>Pingdiao/Hyôjô</i>	E F# G A B C# D	same
<i>Dashidiao/Taishikic hō</i>	E F# G# A B C# D	same
<i>Shuangdiao/Sôjô</i>	G A B C D E F	G A B C D E F#
<i>Huangzhongdiao/Ôs hikichō</i>	A B C D E F# G	same
<i>Panshediao/Banshiki chō</i>	B C# D E F# G# A	same
<i>Shuidiao/Suichō</i>	B C# D# E F# G# A	A B C# D E F# G
<i>Shatuodiao/Sadachō</i>	D E F# G# A B C#	same

Table 3: Pitches corresponding to tablature signs for each mode in *Hakuga no fue-fu*

Tablature signs	六	丁	中	夕	上	五	平	口
<i>Banshikic hō</i>	D	C#	B	A	G#	F#	E	D
<i>Kakuchō</i>	D	C#	B	A	G#	F#	E	D
<i>Ôshikichō</i>	D	C	B	A	G	F#	E	D
<i>Suichō</i>	D	C#	B	A	G	F#	E	D
<i>Sôjô</i>	D	C	B	A	G	F	E	D

Table 4: Occurrences of ornaments on degrees of the *gong/kyû* mode on D

Mode	Final	Occurrences on V	Occurrences on I	Occurrences on II	Other
<i>Banshikic hô</i>	B	168	52	4	IV(G#)) 1
<i>Taisôkaku chô</i>	F#	19	9		
<i>Sadachô</i>	D	39	9		

Table 5: Occurrences of ornaments in *Suichô*

Mode	Final	Occurrences on V (D)	Occurrences on I (G)	Occurrences on II (A)	Other
<i>Suichô</i>	A	46	45	29	IV (C#) 1

Table 6: Occurrences of ornaments in *Sôjô*

Mode	Final	Occurrences on V (C)	Occurrences on I (F)	Occurrences on IV (D)	Other
<i>Sôjô</i>	G	12	10	10	II (C) 1