

Shakuhachi Honkyoku: Motivic Analysis of Sokaku Reibo

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Honkyoku is a repertoire of original pieces played on the Japanese bamboo flute, *shakuhachi*. In this study, I analyze the melodic and rhythmic content of one *honkyoku* piece, *Sokaku Reibo* (巢鶴鈴幕, “The Nesting of Cranes”). Whereas previous analyses of *shakuhachi honkyoku* have relied on the frameworks of octave-species scales as well as trichords spanning a perfect fourth,¹ I favor a bottom-up approach. Although three transpositions of the *miyakobushi* trichord ($m_2+M_3=P_4$)² account for a portion of what is heard in *Sokaku Reibo*, several frequently occurring tones and intervals are left unaccounted for. I will show how analysis of these smaller elements, in addition to analysis of pitch and rhythm cells, is relevant to the greater structure of the piece.

SOKAKU REIBO: TRANSMISSION AND VARIANTS

Sokaku Reibo is a programmatic piece from the *honkyoku* repertoire of the *Kinko-ryū*, the *shakuhachi* performance tradition established in the name of Kurosawa Kinko (1710–1771) in the eighteenth century. As with all *Kinko-ryū honkyoku*, the composer and date of composition for *Sokaku Reibo* (and variant *Tsuru no Sugomori* 鶴の巣籠) are unknown. However, the piece has been traced to the mid-eighteenth century, when prototype melodies were heard in the Kyōto and Ōsaka areas and Kurosawa Kinko was collecting *shakuhachi* repertoire (Tsukitani 2006, 20–21).

Sokaku Reibo, *Tsuru no Sugomori*, and other variants are connected by a loose program concerning the life cycle of a family of cranes. They differ with regard to structure in that they have different numbers of *dan* (sections) and different motivic content. Some versions of the piece can be traced to the *kokyū*, a traditionally three-stringed bowed instrument similar to the *shamisen*. *Tsuru no Sugomori* melodies had been transcribed for the *kokyū* during the Tenpō era (1830–1844) and then re-introduced to the *shakuhachi*. This contributed to the large number of variants of *Tsuru no Sugomori*, including the 7-*dan* version played by practitioners of the Myōan Taizan-*ha*. *Sokaku Reibo* of the *Kinko-ryū* had developed its 12-*dan* form by the middle of the nineteenth century. Tsukitani Tsuneko (2006, 20–21) calls its line of transmission the “Edo line.”

The *honkyoku* are not understood as fixed objects; instead they are always “in progress” (Fritsch 1983, 17). Modifying the standard pieces is a part of performance practice and “owning the piece,” while also a form of composition (Matsunobu 2009, 62). The creative choices of *dai shihan* (grand masters) are especially respected: they may make subtle changes, or even add or

1. For example, Tsukitani (2008), Tokita (1996), Weisgarber (1968), and Koizumi (1958).

2. This shorthand stands for “minor second + Major third = Perfect fourth.”

omit whole sections of a piece at their discretion, re-creating the piece at each performance (Lee 1993, 228). This creative license is one factor that has led to many variants of pieces in the *honkyoku* repertoire.³

Variants can retain the same name, while the composition differs in content or structure. However, two very similar compositions could also appear under different names (Lee 1993, 173). Renaming a piece is one means of taking ownership of it (Matsunobu 2009, 62). *Shakuhachi dai shihan* Yokoyama Katsuya (2003, 4) writes, “The very nature of this body of music—with its purpose of ‘expressing one’s true intention’ or playing ‘one’s own tune’—means that the pieces will inevitably change gradually over time along with the spirit of each age.”

Sokaku Reibo is related to *Tsuru no Sugomori* and *Koden Sokaku* of different lineages, and together there may be as many as 20 or 30 variants (Tamba 2003; Tsukitani 2006, 20). These popular pieces have been recorded numerous times by master players, often more than once in variant forms. For example, a recording of the *Kinko-ryū Sokaku Reibo* by Yamaguchi Gorō appears on the album *A Bell Ringing in the Empty Sky* (1969, 13:13), and in longer versions on *Japan: Music of the Shakuhachi* (1991, 20:54) and *Great Masters of the Shakuhachi Flute* (1988, 21:34). Sakai Syōdō of the *Chikuho-ryū* recorded five variants of the piece from four lines of transmission on a single album, *Five Metamorphoses of “Nesting of Cranes”* (2006). Masters may also teach the same piece differently to different students or during different periods of their lives (Matsunobu 2009, 58).

Regardless of changes made by different players and in transmission through different lineages, variants tend to retain identifying elements. *Sokaku Reibo* and its variants can be considered one piece in the repertoire because they are related by programmatic storyline and technical elements. Each depicts the life cycle of cranes and, for example, each includes a distinctive onomatopoeic performance technique called *koro-koro*. *Koro-koro* combines tremolo and multiphonic effects to represent the flapping of the crane’s wings, an element essential to the character and story of the piece.

All the same, practitioners of different schools of playing might consider their own variants to be distinct pieces, especially when the differences are substantial and the lines of transmission quite separate. For example, variations in melodic content and structure, and differences in playing style and title between the *Kinko-ryū honkyoku Sokaku Reibo* and Watazumi Fumon’s *dokyoku* crane piece titled *Tsuru no Sugomori* are such that the two could be viewed as separate pieces, despite the shared program of nesting cranes and characteristic onomatopoeic musical elements. Indeed, in the liner notes for Sakai Syōdō’s *Five Metamorphoses of “Nesting of Cranes,”* Tsukitani (2006, 19) writes: “The present CD ... includes five pieces taken from among the many variants that have the same (or, similar) title but are, in fact, different pieces.”

3. Other factors include the limited use of notation before the late nineteenth century, and the practice of monks wandering from temple to temple, sharing pieces.

According to Riley Kelly Lee (1993), variation in *honkyoku* is a natural result of oral tradition. However, “any modification or reinterpretation of Kinko *honkyoku* ... would tend to be minor if compared with the variation and change that can be seen in *honkyoku* that have been transmitted outside the Kinko tradition” (295). In addition, “Kinko *honkyoku* in Kinko notation are generally far more detailed and precise in performance prescription than are non-Kinko *honkyoku* scores used by *shakuhachi* players who are not associated with Kinko *ryū*. Furthermore, notation appears to have been used in the transmission of Kinko *honkyoku* since at least the early 1800s” (294). It is for these reasons that I have chosen to analyze scores and recordings by *shakuhachi* masters of the Kinko-*ryū*, specifically of the *honkyoku* piece *Sokaku Reibo*. A comparison to variants of different schools, such as *Tsuru no Sugomori* and *Koden Sugomori*, is beyond the scope of this study.

SOKAKU REIBO TABLATURE AND AUDIO RECORDINGS

Shakuhachi notation is a tablature system. The tablature mainly specifies particular fingerings, thus absolute pitches of tones will differ depending on the length of *shakuhachi* played and additional markings in the notation. In this study, I have consulted tablature notation of *Sokaku Reibo* by Kurahashi Yodo I (1909–1980), as taught by Jin Nyodo (1892–1966) (Kurahashi, n.d.), and Aoki Reibo II (b.1935), both of Kinko-*ryū* lineage via Kawase Junsuke I (1870–1959).⁴ I also refer to recordings by Aoki Reibo II (COCJ-33975) and Yamaguchi Gorō (1933–1999) (H-720025), both designated “Living National Treasures” by the Japanese government under the 1950 Law for the Protection of Cultural Property. Additional available recordings are listed in the References section.

Example 1 shows notation for the first *dan* of *Sokaku Reibo* by Aoki and Kurahashi. The tablature is read vertically, from right to left. Approximate pitches for the tablature used in *Sokaku Reibo* are given in Figure 1. Example 2 shows the first of 12 *dan* of *Sokaku Reibo* in Western staff notation, transnotated from the two scores by Aoki and Kurahashi in Example 1.⁵ A legend of transnotation and transcription symbols appears in Appendix A.

On a 1.8-foot standard-length five-hole *shakuhachi* (played on both of the recordings I consulted), the basic tones produced when the tone holes are fully opened one by one from the bottom of the instrument to the top with a neutral embouchure position in the lowest register are as follows: D₁ (□ *ro*), F₁ (ツ *tsu*), G₁ (レ *re*), A₁ (チ *chi*), C₂ (リ *ri*). However, the instrument is not limited to this anhemitonic pentatonic scale. Semitones and microtones are

4. The latter of the two notated sources is an unpublished hand-written score with the postscript, “Sheet music for use at Boulder, Colorado, USA World Shakuhachi Festival ’98 (7/5–7/11) (written) 4/8/’98, (signed) Aoki Reibo.” (Postscript translation by David Wheeler in email communication, October 25, 2013).

5. Avigdor Herzog (1964, 100n) defined transnotation as “transference of notation revised from one form to another” in contrast to “transcription: notation of music already existing in performance.”

The image displays two pages of handwritten musical notation for the piece 'Sokaku Reibo'. The left page, titled 'Kinko Ryo Vokaku Reibo', is attributed to Aoki Reibo II. It features four vertical staves of notation, each starting with a circled number (1, 2, 3, 4). Annotations in blue ink include 'repeat note', 'omote-ma', and 'breath phrase'. The right page, titled 'Sokaku Reibo', is attributed to Kurahashi Yodo I. It also features four vertical staves of notation. Annotations in blue ink include 'kan', 'breath phrase', 'omote-ma', and 'meri'. Both pages include vertical Japanese text and various musical symbols such as circles, lines, and arrows.

Example 1. First dan of Sokaku Reibo, notation by Aoki Reibo II, Reibo-kai guild of Kinko-ryū (left), and Kurahashi Yodo I (right), from *Jin Nyodō Honkyoku: Notation by Kurahashi Yodo, Level IV*.

possible when tone holes are partially closed, forked fingerings⁶ are used, and/or the angle of the breath stream against the mouthpiece is altered. The most common indication for changing the pitch is め *meri*. The resulting pitch and the method used to achieve it differ from school to school, but the general meaning is to lower the pitch one to two semitones (in contrast, 力 *kari* means to raise the pitch). In the *Kinko-ryū*, while ツ *tsu* is played F on a 1.8-foot *shakuhachi*, ツ め *tsu-meri* is lowered to approximately E \flat . The fingering system allows not only for all tones of the Western chromatic scale, but also several fingerings for some tones to alter the timbre, intonation, and loudness of the given tone.

1st octave		2nd octave		3rd octave		
BASIC TONES						
口	レ	口	レ	チ	ヒ	ヒ五
<i>ro</i>	<i>re</i>	<i>ro</i>	<i>re</i>	<i>chi</i>	<i>hi</i>	<i>go no hi/i</i>
D ₁	G ₁	D ₂	G ₂	A ₂	C ₃	D ₃
BASIC MERI TONE						
	リ め	ツ め		チ め	ヒ め	
	<i>ri meri</i>	<i>tsu meri</i>		<i>chi meri</i>	<i>hi meri</i>	
	B \flat ₁	E \flat ₂		A \flat ₂	B \flat ₂	
OTHER, MERI TONES						
	ハ		ウー三/ウ大 め			ハ五
	<i>ha (ni shi go no ha)</i>		<i>ichi san no u/u dai meri</i>			<i>go no ha</i>
	C ₂		G/A \flat ₂			D ₃
OTHER, NON-MERI TONES						
	ア /				ウ三	ア
	ハ四五					ハ二四五
	<i>a/shi go no ha</i>				<i>san no u</i>	<i>a ni shi go no ha</i>
	D ₂				B \flat ₂	D ₃ E \flat ₃

Figure 1. Approximate tones in tablature used for *Sokaku Reibo*, played on 1.8-foot *shakuhachi*. C₁ = middle C. Tablature not used in *Sokaku Reibo* is omitted. Some tones have more than one possible fingering and therefore more than one tablature symbol, e.g., D₂. For some pitches, the tablature symbol changes for the third octave, e.g., *ri* C₂ becomes *hi* C₃.

6. This term is not typically applied to *shakuhachi* fingerings. However, by “forked fingering,” I mean that below an open tone hole there is a closed or partially closed hole. For example, *san no u* (B \flat ₂): only the third hole from the root end is open.

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Dan 1 (simile slides not notated)

Kurahashi Yodo I
Aoki Reibo II

(no L/R given)

KY
AR

KY
AR

KY
AR

KY
AR

KY
AR

KY
AR

KY
AR

The image displays a musical score for the piece 'Dan 1' from 'Sokaku Reibo'. It is a transnotation for two performers: Kurahashi Yodo I and Aoki Reibo II. The score is organized into six systems, each representing a measure of music. Each system contains two staves: the upper staff is for the Kyushu (KY) part and the lower staff is for the Arai Hakuseki (AR) part. The first system is labeled 'Dan 1' and includes the instruction '(simile slides not notated)'. The first system also has the note '(no L/R given)'. The notation includes various musical symbols such as slurs, accents, and fingerings. Annotations include 'hiku', 'nayashi', 'fukikomi', and 'tam.'. The score is presented in a clear, analytical format, showing the relationship between the two parts.

Example 2. Transnotation of dan 1 of Sokaku Reibo scores by Kurahashi Yodo I and Aoki Reibo II.

Additional markings in the notation indicate register (lower: 乙 *otsu* or 呂 *ryo*; upper: 甲 *kan*), breath phrases (horizontal lines), dynamics (crescendo and decrescendo), meter (*ura-ma* and *omote-ma* left and right dots), repeated figures and tones, finger articulation (e.g., the symbol 二, i.e., 2, indicates that the second hole from the bottom is to be used for articulation), as well as special tremolo (㇀㇀ *koro-koro*), flutter tonguing (玉音 *tamane*), and sliding and bending techniques (e.g., ス *suri*, へ *nayashi*, and メリ コ ミ *meri-komi*).

TWELVE-DAN FORM

Although a performance of *Sokaku Reibo* can include 12 possible *dan*, the player may omit several sections. Figure 2 shows which *dan* are performed or notated in each of the recordings or scores consulted in this study. Each *dan* appears in at least one of the two recordings, but each recording omits two or three *dan*. With regard to scores, *dan* 8 and 11 are absent from both, and Kurahashi includes only six of the possible *dan*. The five *dan* present in all of the selected recordings and scores are 1, 2, 6, 10, and 12. I consulted an additional recording by Yamaguchi (A-6139) on which he performs all 12 *dan*. Likewise, a score by Satō Seibi ([1954] 1989) in Book 6 of his *honkyoku* compilation, *Shakuhachi Honkyoku Zenshu*, includes all 12 *dan*.⁷ I used this score as a reference to confirm the locations of the *dan* in the recordings and other scores when they were not clearly marked. The nature of transmission is such that even when the *dan* are clearly marked in the scores, the content may differ from score to score.

Kurahashi Yodo I score	Aoki Reibo II score & recording	Yamaguchi Gorō recording
1	1	1
2	2	2
	3	3
	4	4
	5	
6	6	6
	7	8
	9	
10	10	10
		11
12	12	12

Figure 2. *Dan* included in selected scores and recordings.

7. Satō (1906–1983) was a student of Miura Kindo and Yoshida Seifu. He ran the Kinkosha publishing company and sought to “consolidate and unify” the various *Kinko-ryū* notation systems (“Satō Seibi” 2016).

FIXED RHYTHM AND FREE RHYTHM

In *honkyoku* notation, dots to the right and left of the tablature columns indicate metric pulse. These *omote-ma* and *ura-ma* (right- and left-side) beats reflect the cyclical nature of the human breath and pulse, and create the appearance of fixed rhythm in the pieces. Notation and performance practice differ, however. As Tsukitani (2006, 20) points out, “Generally speaking, most classical *honkyoku* of *syakuhati* are composed in free rhythm. In the case of *Turu no sugomori*, however, only the pieces from the Tōhoku district are played exclusively in free rhythm; others insert melodies here and there in more or less fixed rhythm.”⁸ Rhythmic patterns, referred to as rhythm cells in this study, are repeated throughout the *Kinko-ryū Sokaku Reibo*.

In contrast to the fixed rhythm of repeated patterns, the free rhythm of *Sokaku Reibo* is felt on sustained tones and breaks between phrases. A comparison of the first measures of the Aoki transnotation (Example 3a) to the first breath phrases of his recording (Examples 3b and 3c) reveals the discrepancy between notation and practice in free passages.

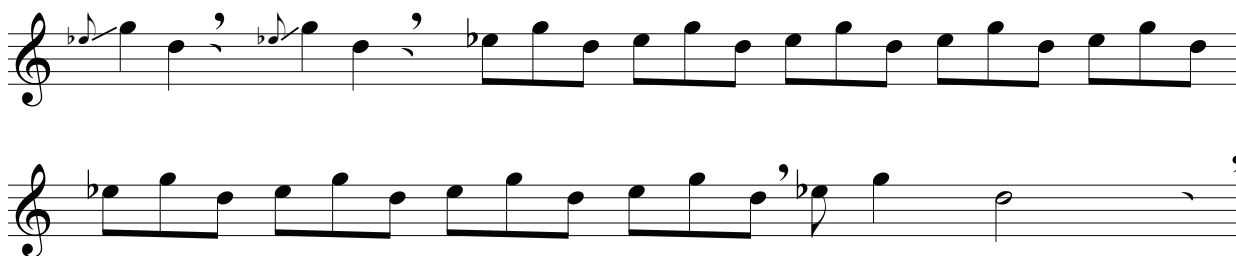


Figure 3a. Beginning of *Sokaku Reibo*, transnotation of Aoki score.

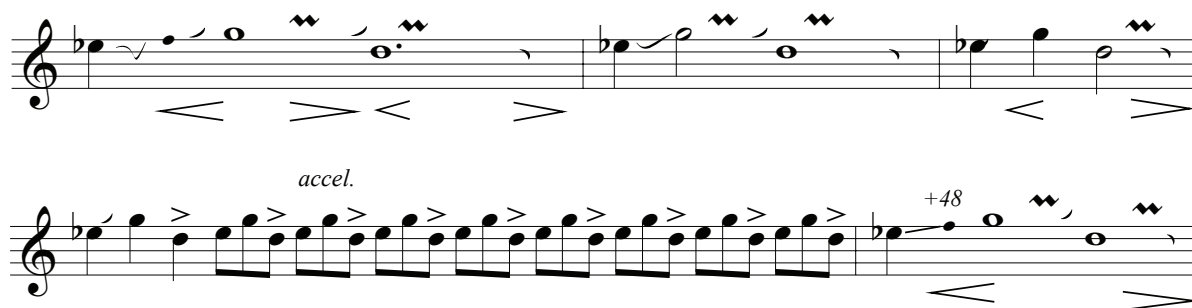


Figure 3b. Beginning of *Sokaku Reibo*, transcription of Aoki recording.

8. Tsukitani uses Kunrei-shiki romanization of Japanese (*syakuhati*, *Turu no sugomori*); I use Hepburn romanization (*shakuhachi*, *Tsuru no sugomori*).

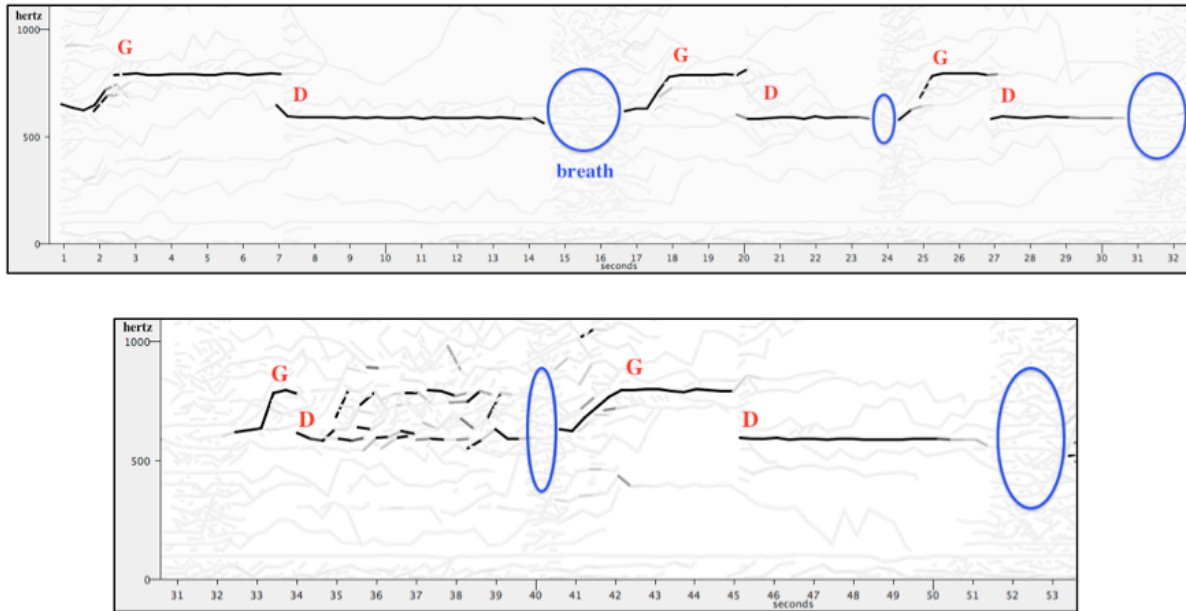
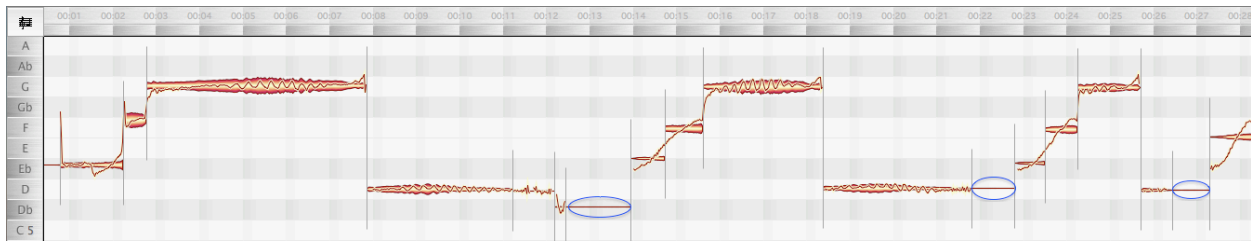


Figure 3c. Beginning of *Sokaku Reibo*. Annotated image of Aoki recording (corresponding to phrases in Example 3b) shows lengths of tones and breaths. Analysis using SPEAR software.

Gutzwiller (1992, 269) observes: “In the notation of [the Kinko] school we find a duple-time pattern clearly depicted, although such a pattern can hardly be perceived when listening to the music itself.” Regarding “imprecision” of durational values, Lee (1993, 355) explains, “in the performer’s mind, a note with a ‘long duration’ is held a ‘long time,’ not ‘four seconds’ or ‘eight seconds.’ How long the note ends up being held depends upon the circumstances of the individual performer and performance.”

Absent from the notations are indications of the durations of the rests that connect the phrases. Phrasing in *honkyoku* is based on the breath of the performer: each phrase is performed in one breath. Breath phrases are indicated in the Aoki and Kurahashi scores by short horizontal lines separating the tablature. The quality and length of the inhalation between breath phrases must be learned from a teacher and can be understood in terms of the Japanese aesthetic concept of *ma*: “an ‘interval’ between two (or more) spatial or temporal things and events” (Pilgrim 1986, 255). Phrases in *honkyoku* are thus temporal events separated (or connected) by intervals. These intervals do not necessarily belong to the events preceding or following them; however, the quality of a phrase ending has an impact on the quality of the ensuing breath intake, which in turn affects how the next phrase is begun, with respect to factors such as loudness, timbre, and duration. The durations of the rests between phrases are not indicated in original scores, nor in my transnotations, since each performer will differ in his or her approach from performance to performance. In a comparison of six recordings of *Hifumi Shirabe*, Gutzwiller (1992, 277) concludes: “We cannot make any clear statement about the proportional lengths of tones that holds true for a majority of players.” The same would

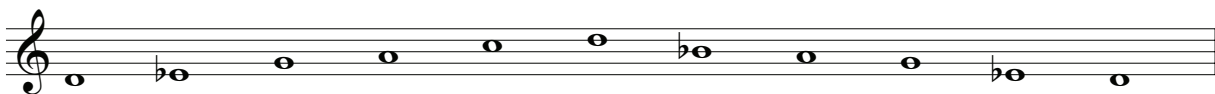


Example 4. Rests (circled in blue) between breath phrases of *Sokaku Reibo*, Yamaguchi recording. Analysis using Melodyne software.

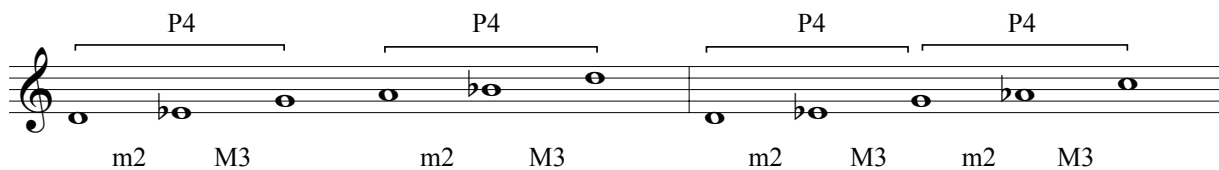
follow for the lengths of rests between phrases. However, to give a general idea of duration in performance practice in two samples, in the Aoki recording I consulted, rests last up to approximately 2 seconds, whereas in the Yamaguchi recording the longest rest is about 2.4 seconds long, with the longest rests appearing towards the end of the recording. See Example 4 for one set of rests in the latter recording. These rests are an integral part of *honkyoku*, and form the interval of silence from and into which many of the motivic elements analyzed in this study emerge.

MODE

In previous studies (e.g., Weisgarber 1968, 317; Tokita 1996, 5; Tsukitani 2008, 156), scholars have argued that *shakuhachi honkyoku* can be analyzed based on octave-species *in* or *miyakobushi* scales, illustrated in Example 5, or on *miyakobushi* tetrachords ($m2+M3=P4$).⁹



Example 5a. *In* scale on D.



Example 5b. *Miyakobushi* scale on D, disjunct (left) and conjunct (right) forms.

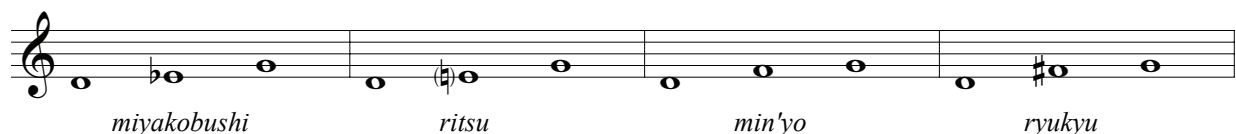
9. *Miyakobushi* (urban) scales are so-called because they are found in the urban melodies of the *koto*, *shamisen*, and *shakuhachi*. *In* scales are so-named in contrast to *yō* scales. The Japanese concept of *in* and *yō* is related to the Chinese *yin* and *yang*.

As early as 1891, Cargill Gilston Knott related the process of tuning fourths used by Japanese *koto* players to tetrachords of ancient Greek music theory. He referred to descending three-tone *koto* patterns spanning a P₄ (e.g., A-F-E) as “*koto trichords*” (380). Four years later, Uehara Rokushirō published an analysis of Japanese music that included the octave-species *in senpō* (or *in*) scale.

In his 1958 text, Koizumi Fumio would take these theories further in analyzing Japanese music genres in terms of tetrachords and scales, or modes. Koizumi discussed four three-tone patterns of intervals in Japanese music, calling them tetrachords. As in Greek theory, the patterns he identified all span a perfect fourth with movable middle tones, resulting in different internal intervals. However, since the patterns do not contain four tones, a second basis for use of the term tetrachord, I will instead follow Knott in using the term trichord. The four trichords discussed by Koizumi are shown in Example 6.

According to Koizumi (1977, 77), the *miyakobushi* scale made up of two disjunct *miyakobushi* trichords (D-E♭-G-A-B♭-D) “is the representative scale of the music of the *koto*, *shamisen*, *biwa*, and *shakuhachi*, all typical instruments of the Edo period (1603–1867) when Japan’s traditional culture divergently flourished.” I will show how much, but not all, of the melodic content of *Sokaku Reibo* is accounted for by three transpositions of the *miyakobushi* trichord (octave-species scalar passages do not occur in the piece). These three m₂+M₃ trichords, on D, G, and A, outlined below in Example 7, also account for the final tones of the 12 *dan*: D₂-A₂-A₂-G₂-G₂-A₂-A₂-A₂-A₂-A₂-C₃-D₁.

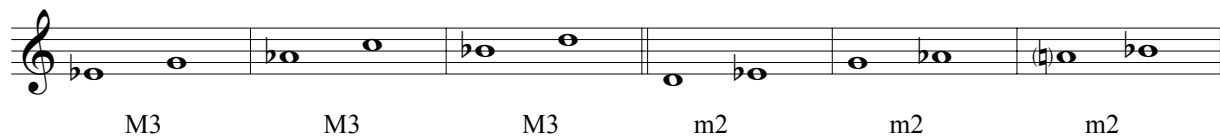
Despite the usefulness of trichord transpositions in analyzing *Sokaku Reibo*, transpositions of frequently occurring intervals also warrant independent investigation. The m₂, M₃, and P₄ intervals are consistent with the *miyakobushi* trichord (m₂+M₃=P₄); however, m₂ and M₃ are often immediately reiterated several times without the framework of P₄, and other intervals appear as well. Frequent m₂ and M₃ transpositions found in *Sokaku Reibo* are



Example 6. Four trichords discussed by Koizumi Fumio.



Example 7. *Miyakobushi* trichord on D, G, and A.



Example 8. Frequent M3 and m2 transpositions found in *Sokaku Reibo*.

given in Example 8. Note that both trichords and frequently occurring intervals are transposed up a P4 and P5, and the specific tones of the frequently occurring intervals can be extracted directly from the trichord transpositions.

In this study, rather than focusing primarily on octave species and tetrachords/trichords, I favor a bottom-up approach to analyzing motivic content, based first on transposition of frequently occurring intervals as well as on pitch and rhythm cells. In the following sections, I discuss and label pitch and rhythm cells—defined by repetition within breath phrases—in terms of frequently occurring intervals and transpositions of the *miyakobushi* trichord. It is important to note that not all *dan* nor all cells appear in all of the sources I consulted. However, I have consolidated information from all sources to facilitate an analysis of all 12 *dan* and their cells.

PITCH AND RHYTHM CELLS

Elliott Weisgarber (1968) refers to cells in his analysis of three *Kinko-ryū honkyoku* (*Hi-fumi Hashi Kaeshi*, *Banshiki-no-Shirabe*, and *San-ya Sugaki*). He states, “over three hundred different patterns or ‘cells’ may be found” in *honkyoku* (318–19). According to Andreas Gutzwiller and Gerald Bennett (1991, 58), “highly structured smaller units—what we have called tone cells—clearly have great musical significance.” Tone cells “generally last the length of a breath and are separated from one another by clear rests... Most of the tone cells have three parts. They consist of a first phase, the preparatory note, a second phase, the main note, and a third phase, the ending” (38). Gutzwiller and Bennett do not quantify the “generally” and “most” of the preceding passage but they do qualify their comments as being characteristic of tone cells in the 18 meditation- and ritual-related *honkyoku* of the 36 *Kinko-ryū* pieces, as opposed to the pieces “less strictly associated with the monks’ religious practices” (38), such as *Sokaku Reibo*.

I have found that tone cells are also fundamental to understanding *Sokaku Reibo*; however, cells in this piece do not necessarily “last the length of a breath.” In fact, a short cell may be repeated several times within a single breath. Therefore, I distinguish between cells of frequently occurring pitch material and breath phrases separated by rests.

I will show how cells in *Sokaku Reibo* are subject to expansion and contraction of melodic material and display common intervallic and rhythmic patterns. I refer to cells of intervallic patterns as pitch cells, and cells of rhythmic patterns as rhythm cells, and have identified 15

Main pitch cells		Frequently occurring variants	
1	E \flat -G-D	1.1	E \flat -D
2	D \flat -D		
3	D-B \flat -E \flat -E \flat -D	3.2	D-B \flat
4	E \flat -E \flat -D-E \flat -E \flat -G-A-E \flat -E \flat -E \flat -D	4.2	G-A-E \flat -E \flat -E \flat
5	C-A \flat -A \flat -A \flat		
6	B \flat -A-A-G+-G+	7.1	B \flat -B \flat -A-G+-G+-A
7	B \flat -B \flat -A-G+-G+-A-B \flat	7.1.1	B \flat -A-G+-G+-A
8	B \flat -B \flat -A-G+-G+-A-B \flat -D-G-A-E \flat -E \flat -E \flat -G	8.1	C-A \flat -A \flat -G-A-E \flat -E \flat -E \flat -G
9	(C)-D		
10	F-G		
11	(C)-D-E \flat -D-B \flat -D-(C)-A		
12	A-C		
13	C-C-B \flat		
14	C-A \flat -C-D-E \flat		
15	(C)-D-B \flat -A-G+-G+-A-B \flat -A		

Figure 3. Main pitch cells and frequently occurring variants in *Sokaku Reibo*. The note G+ in cells 6 to 8 and 12 is consistently played between G and A \flat . The label G+ is meant to distinguish it from G, as the two notes have distinct fingerings and tablature.

main pitch cells in *Sokaku Reibo*. A list of these and frequently occurring variants appears in Figure 3.¹⁰ I have labeled recurring rhythm cells as 2RC (two-note rhythm cell) and 3RC (three-note rhythm cell).

PITCH CELLS AND PRINCIPAL INTERVALS IN *SOKAKU REIBO*

Miyakobushi trichords account for much but not all of what is heard in *Sokaku Reibo*; therefore, in this section I discuss pitch cells in terms of both trichord modulations and intervallic relationships. I begin with an analysis of pitch cells in the first *dan* since it presents much of the intervallic and trichordal material of the piece. It also offers examples of expanded and contracted pitch cells.

Dan 1: Expansion and Contraction of Pitch Cells

In all of the *Sokaku Reibo* sources I consulted, the first cell (1: E \flat -G-D) is repeated at least nine times at the beginning of the first *dan* before any other motivic content is presented. This cell is then repeatedly contracted to E \flat -D and D throughout the remainder of the first *dan*. Cell 1 is also expanded in *dan 1* to D \flat -E \flat -G-D (where D \flat corresponds to a tremolo effect called *koro-koro*). This expansion, with D \flat added to the beginning of cell 1, could also be considered an expanded form of cell 2 (D \flat -D)—a cell also repeated several times—or a merging of the first two cells: [E \flat -G-D] + [D \flat -D] = D \flat -E \flat -G-D. In the first *dan*, cell 2 is also expanded to D \flat -

10. See Appendix B for detailed numbering of cells and complete labeling of variants.

E \flat -D and contracted to D. Cell 3 (D-B \flat -E \flat -D) is contracted to E \flat -D.¹¹

This compositional method of expanding, contracting, and repeating pitch cells and fragments of pitch cells (i.e., variants) is used throughout the piece to emphasize certain melodic and rhythmic patterns. In the first *dan*, the repetition, contraction, and expansion of the first three cells highlights the important melodic material, material that includes not only pitch patterns that will return at the end of the piece, but perhaps more significantly, the principal intervallic content of the entire piece.

Dan 1: Principal Intervals and Trichords

Three frequently occurring intervals in *Sokaku Reibo* are a minor second (m2), major third (M3), and perfect fourth (P4). The opening pitch cell of the piece sets up two of these intervals (M3, P4), and the first *dan* relies on all three. Together they form the *miyakobushi* trichord (m2+M3=P4). Including the *koro-koro* multiphonic tremolo effect (shown on D \flat), one of two exceptional cases to be addressed later, the pitch cells of the first *dan* are listed in Figure 4.

Not taking into account the *koro-koro* effect, playable only on D \flat ,¹² and indicated with an asterisk in the table, the *dan* 1 intervals shown in Figure 4 are: M3 (rising and falling), P4 (rising and falling), and m2 (falling). Again leaving aside the D \flat for a moment, all of the remaining tones of the first *dan* are accounted for by the *miyakobushi* trichord on D (D-E \flat -G), with the exception of B \flat . The D-B \flat of cell 3 could be explained as a brief transposition down a P4 to the trichord on A (A-B \flat -D), as shown in Figure 4; however, A, the lowest tone, is not heard. The B \flat is played directly after D, a M3 interval reiterated repeatedly in later *dan* as D- B \flat as well as

Dan 1 pitch cells					Versions	m2-M3 trichord	
1		D \flat_2 *	E \flat_2	G $_2$	D $_2$	all	D-E \flat -G
2					D $_2$	all	D-[E \flat -G] (NT: D \flat *)
		D \flat_2 *			D $_2$	all	D-[E \flat -G]
		D \flat_2 *	E \flat_2		D $_2$	all	D-E \flat -[G] (NT: D \flat *)
			E \flat_2	G $_2$	D $_2$	all	D-E \flat -G (NT: D \flat *)
3	D $_2$	B \flat_1	E \flat_2		D $_2$	all	[A]-B \flat -D / D-E \flat -[G]
			E \flat_2		D $_2$	KY, AR, SS	D-E \flat -[G]

Figure 4. Pitch cells in first *dan*, aligned vertically to match intervallic/pitch patterns. Notes repeated immediately are not included. The left column labels main cells by number; the far right column shows corresponding m2-M3 (*miyakobushi*) trichord transpositions. Recordings and scores in which cells appear are listed in the Versions column. For numerical labeling of all cells, see Appendix B; for explanation of symbols, see Appendix C.

11. In discussion of pitch cells, repeated tones are left out in order to simplify the identification of frequently occurring intervals. See Appendix B for more detailed analysis of pitch cells.

12. The *koro-koro* right-hand fingering pattern is also used later in trills on B \flat_2 and D $_3$; however, these are not true *koro-koro*.

G-E \flat and C-A \flat . The occurrence of the B \flat in *dan* I without the lowest tone of the A trichord thus immediately raises the question of whether it is appropriate to attempt to fit all of the pitch cells into trichords, or whether an intervallic approach would be more suitable. Adding to the problem is the D \flat of the *koro-koro* tremolo—this tone fits into none of the *miyakobushi* trichord transpositions on D, G or A. As mentioned above, I will deal with this exceptional case separately.





Also prominent throughout *Sokaku Reibo* is the major second (M2), an interval not part of the *miyakobushi* trichord. It is first heard in *dan* I in the pitch cell D \flat -E \flat -D. Together these four melodic intervals (m2, M2, M3, P4), recurring on specific tones in their original and retrograde forms, make up most of the melodic material of the piece. Significantly, this *dan* I material returns in the final *dan* in a sort of recapitulation of the opening.


First Exceptional Tone: D \flat

D \flat_2 first appears in cell 2 of *dan* I: D \flat -D. The D \flat_2 notation is an approximation of the fundamental that results from the special *koro-koro* multiphonic tremolo effect. I have chosen to name it D \flat instead of C \sharp , since the “ro” of *koro-koro* corresponds to D on a standard length 1.8-foot *shakuhachi*. *Koro-koro* imitates the flapping of the cranes’ wings in the program of *Sokaku Reibo* and is played using a set fingering pattern.¹³ The same effect is not achieved with other tremolo fingerings.



Since *koro-koro* is playable only on D \flat_2 , this non-trichord tone could be disregarded with respect to trichords and intervals; however, this tremolo effect is integral to certain pitch cells—it is frequently sustained and is consistently followed by D \flat_2 , either directly (D \flat -D) or indirectly (e.g., D \flat -E \flat -D and D \flat -E \flat -G-D). It thus serves as a lower neighbor to D \flat_2 , an augmented prime relationship that mirrors the m2 interval E \flat -D and its transpositions.

Dan I: Rhythm Cells

Rhythmic motives, or rhythm cells, are also repeated throughout the *Kinko-ryū Sokaku Reibo*, beginning in the first *dan*. The most prominent cell in the piece is  and its retrograde (labeled 3RC in Appendix B when it occurs on a single repeated tone).¹⁴ Other repeated figures include , , and . These figures can be considered part of the fixed rhythm sections of the piece.

The  3RC cell (and its retrograde) in particular appears at the end of several *dan*, but is also heard at the end of longer pitch cells, in turn leading to its repetition on a single tone or

13. Tone holes 1 and 2 of the lower joint are alternately opened and closed, hole 3 is closed, holes 4 and 5 are vented, and the instrument is played with a *meri* (lowered) head position.

14. Because right- and left-side beats in tablature notation do not correspond to strong and weak beats in the Western sense, the 3RC cell is essentially the same in its  and  forms. Beaming of notes in transnotation examples corresponds to groupings in the Aoki and Kurahashi scores, but not necessarily to how the tones are grouped in performance.

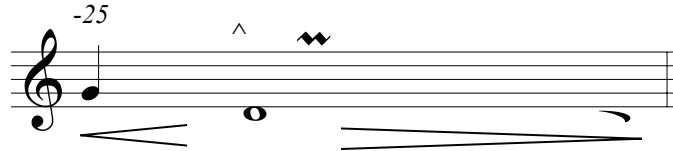
Example 9. 3RC examples from *dan 1*, transnotation of Aoki score.

interval. In these cases, I refer to 3RC as a terminal pattern. It appears at the end of the first *dan* on a m2 interval: E \flat -E \flat -D, a contraction of cell 3, which directly precedes it. This rhythmic pattern first appears in a variant of cell 2, again emphasizing the E \flat -D m2 as shown in Example 9. In later *dan*, the 3RC is played repeatedly on a single tone, becoming a motivic element as recognizable as the main pitch cells and frequently occurring intervals. As shown in Appendix B, the single-tone 3RC occurs primarily on G $_2$ and A $_2$, following contracted cell variants G-E \flat and A-G $_+$, respectively, whereas the single-tone 2RC repeats on D $_3$, E $\flat_{2/3}$, and B $\flat_{1/2}$.

Dan 12: Return of Dan 1 Cells

As mentioned above, the final *dan* (one of the five *dan* to appear in all sources) includes a sort of recapitulation of the first *dan* and its motivic content. Partway through *dan 12*, cells 1, 2, and 3 return together for the first time since *dan 1*, beginning with cell 2 (D \flat -D) and the programmatic *koro-koro*, a signal not heard since the beginning of *dan 2*. This cell is expanded as it was in *dan 1*, to D \flat -E \flat -D and D \flat -E \flat -G-D (also a variant of cell 1), and is followed by cell 3 (D-B \flat -E \flat -D). After a brief return to cell 2, a single iteration of cell 1 (E \flat -G-D) ends the piece, although an octave lower and without its initial E \flat : G $_1$ -D $_1$ (P4). Example 10 gives transcriptions of the initial and final breath phrases from Aoki's recording.

Example 10a. First breath phrase of *Sokaku Reibo*, transcription of Aoki recording.



Example 10b. Last breath phrase of *Sokaku Reibo*, transcription of Aoki recording. Aoki plays the initial note approximately 25 cents below G_4 , relative to $A=442\text{Hz}$.

Dan 12 pitch cells (excerpt)				Versions	m2-M3 trichord
2	$D_{b_2}^*$		D_2	all	$D-[E^b-G]$ (NT: D_{b^*})
	$D_{b_2}^*$	E_{b_2}	D_2	all	$D-E^b-[G]$ (NT: D_{b^*})
	$D_{b_2}^*$	E_{b_2} G_2	D_2	all	$D-E^b-G$ (NT: D_{b^*})
3	D_2 B_{b_1} E_{b_2}		D_2	all	$[A]-B^b-D / D-E^b-[G]$
	D_2 B_{b_1}			all	$[A]-B^b-D$
Iv		G_1 D_1		all	$D-E^b-[G]$

Figure 5. Pitch cell analysis, end of *dan 12*.

Since the treatment of cells 2 and 3 is basically the same as in *dan 1*, the last *dan* thus also restates the 3RC as well as the *miyakobushi* trichord on D and transpositions of frequently occurring intervals. Figure 5 provides a pitch cell analysis of the end of *dan 12*.

ELEMENTS OF OTHER COMMON DAN: 2, 6, 10

The three remaining *dan* that appear in all sources are 2, 6, and 10. Repetition, contraction, and expansion of pitch cells continues to occur throughout these *dan*, but whereas new material is introduced in the second *dan*, *dan 6* and 10 consist mostly of variants of earlier cells and intervals. In this section, I will discuss new material presented in these three *dan*.

Dan 2: Expansion and Contraction of New Pitch Cells

In the second *dan*, cell I is further expanded to $E^b-D-E^b-G-A-E^b-D$ (cell 4) (and a *koro-koro* variation: cell 4sb), which is in turn reduced to $G-A-E^b$ (cell 4.2), then to $G-E^b$, a retrograde of the E^b-G M3 interval that had appeared prominently as the first two tones of the piece, and finally to G , just as E^b-G-D had been contracted to E^b-D and D in *dan 1*. In *dan 2*, contraction also occurs after the introduction of cell 5 ($C-A^b$). This third transposition of the M3 interval, heard in *dan 1* on E^b-G and B^b-D , reduces to A^b . Similarly, cell 6 (B^b-A-G^+) is reduced to $A-G^+$,¹⁵ then further to a 3RC on A. As seen in the first two *dan*, contraction of pitch cells frequently leads to recurring rhythmic cells, the terminal 3RC in particular. Figure 6 analyzes pitch cells in *dan 2*.

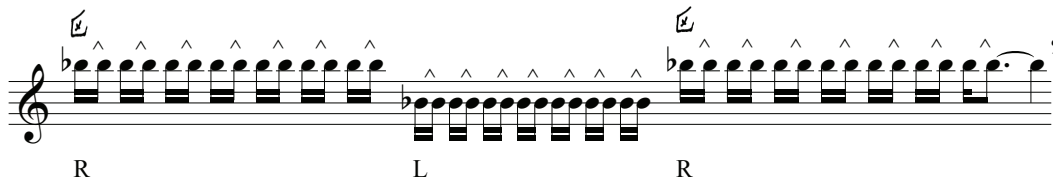
15. G^+ , a note that consistently falls between G and A^b , is explained below as an exceptional tone.

Dan 2 pitch cells		Versions	m2-M3 trichord
4	E \flat_2 D $_2$ E \flat_2 G $_2$ A $_2$ E \flat_2 D $_2$	all	D-E \flat -G/ A-[B \flat]-D
	D \flat_2^* D $_2$ E \flat_2 G $_2$ A $_2$ E \flat_2 D $_2$	KY, AR, SS	D-E \flat -G/ A-[B \flat]-D (NT: D \flat^*)
4.2	G $_2$ A $_2$ E \flat_2	all	[D]-E \flat -G/ A-[B \flat -D]
	G $_2$ E \flat_2	all	[D]-E \flat -G
3RC	G $_2$	all	[D-E \flat]-G
5	C $_3$ A \flat_2	all	[G]-A \flat -C
3RC	A \flat_2	all	[G]-A \flat -[C]
6	B \flat_2 A $_2$ G $_{+2}^*$	AR, YG, SS	A-B \flat -[D] (NT: G $_{+2}^*$)
	A $_2$ G $_{+2}^*$	AR, YG, SS	A-[B \flat -D] (NT: G $_{+2}^*$)
3RC	A $_2$	AR, YG, SS	A-[B \flat -D]

Figure 6. Pitch cell analysis, *dan 2*.

Dan 2, 6, and 10: New Intervals

In *dan 2, 6, and 10*, the most frequently played intervals continue to be m2 (e.g., E \flat_2 -D $_2$, B \flat_2 -A $_2$) and M3 (e.g., G $_2$ -E \flat_2 , D $_3$ -B \flat_2 , C $_3$ -A \flat_2), as well as M2 (e.g., G $_2$ -A $_2$ in cell 4). In addition, an occasional octave or falling perfect fifth (P5) is heard, but these occur between sub-phrases, separated by quick breaths or brief breaks in the sound, as illustrated in Example 11a. The falling augmented fourth (A $_2$ -E \flat_2) heard in the second *dan* is treated with a rising pitch bend at the end of the A, bringing the interval closer to a P5. Example 11b gives the transnotation of this cell.



Example 11a. Example of octave interval in *dan 6*, transnotation of Aoki score. On his recording, Aoki separates octave jumps with short breaths.



Example 11b. Transnotation of cell 4 containing A4 (A-E \flat) and M2 (G-A) intervals in *dan 2*, found in both Aoki and Kurahashi scores. A rising pitch bend (indicated in square brackets) is added to the end of the A in performances by Aoki and Yamaguchi.

However, if performance practice of movable pitch (e.g., bends and slides) is not taken into account, how can the augmented fourth (A₄) be accounted for? Similarly, how can the M₂ G-A within a pitch cell be explained in theoretical terms? If the *miyakobushi* trichord on D (D-E^b-G) is transposed up a P₅ to A (A-B^b-D), the A of cell 4 (E^b-D-E^b-G-A-E^b-D) can be understood as the lowest tone of the upper of two disjunct m₂-M₃ trichords: D-E^b-G-A-B^b-D. The M₂ (G-A) is then simply the interval between the upper note of the first trichord and the lower note of the second trichord, and the A₄ (A₂-E^b₂) results from movement from the trichord on A back to the trichord on D.

Because cell 4 (E^b-D-E^b-G-A-E^b-D) is contracted in *dan 2* to G-A-E^b, the A could also be treated as an intermediate non-trichord tone, embellishing the G-E^b M₃, an interval soon after transposed up a P₄ to C-A^b (cell 5) within the same *dan* (see Figure 9 above). The C-A^b interval forms part of the *miyakobushi* trichord on G (G-A^b-C), the tone to which the G-E^b M₃ is contracted immediately preceding the C-A^b cell. C-A^b is finally reduced to A^b before the introduction of cell 6. The trichord on A (A-B^b-D) recurs at the end of *dan 2* in cell 6: B^b-A-G+, a cell containing the second exceptional case, G+. I discuss this tone below.

In *dan 6*, analyzed in Figure 7, the highest register is exploited in octave transpositions of the E^b₂-D₂ (m₂) and D₂-B^b₁ (M₃) intervals from the first *dan*. The *dan* begins with a relatively long cell with regard to successive tones (cell II): (C₃)-D₃-E^b₃-D₃-B^b₂-D₃-(C₃)-A₂-[G₊₂-A₂], which is gradually reduced to a terminal 3RC on A₂. Before this rhythm cell, however, a descending M₃ is emphasized: D₃-B^b₂. This is an octave transposition of the first half of the D₂-B^b₁-E^b₂-D₂ cell (cell 3) from *dan 1*, but also a reminder of the C-A^b and G-E^b descending M₃ of *dan 2* (played also in *dan 4* and 5). The opening pitch cell of *dan 6* (cell II) with added ending (G₊₂-A₂) fits into two *miyakobushi* trichord transpositions (D-E^b-G and A-B^b-D), with a couple of non-trichord tones: C and G+. The first C₃ of the cell is a preparatory tone to D₃, performed by Aoki and Yamaguchi as a C-D trill before the D, and the second C₃ is a brief passing tone within the framework of a descending P₄ (D₃-A₂); G₊₂ is a lower neighbor to A₂ (as discussed in the next section). Within the context of D₃-C₃-A₂, the C in cell II could be interpreted instead as the

Dan 6 pitch cells		Versions	m ₂ -M ₃ trichord
II	(C ₃) D ₃ E ^b ₃ D ₃ B ^b ₂ D ₃ (C ₃) A ₂	all	D-E ^b -[G]/ A-B ^b -D (NT:C)
	(C ₃) D ₃ E ^b ₃ D ₃ B ^b ₂ D ₃ (C ₃) A ₂ G ₊₂ * A ₂	all	D-E ^b -[G]/ A-B ^b -D (NT:C, G+*)
7v	D ₃ B ^b ₂ A ₂ G ₊₂ * A ₂	AR, YG, SS	A-B ^b -D (NT:G+*)
3.2	D ₃ B ^b ₂	all	[A]-B ^b -D
2RC	B ^b _{2/1}	all	[A]-B ^b -[D]
	A ₂ G ₊₂ * A ₂	all	A-B ^b -[D] (NT:G+*)
	A ₂ G ₊₂ *	all	
3RC	A ₂	all	A-[B ^b -D]

Figure 7. Pitch cell analysis, *dan 6*.

middle tone of a descending *min'yō* (folk song) trichord (m₃+M₂ ascending, see Example 6 above). However, since the C is touched on so briefly, a shift of mode is unlikely.

Despite the fact that *dan* 6 and 10 are notated or recorded in all of the sources I consulted, all of the principal intervals of the piece (m₂, M₂, M₃, P₄), as well as secondary intervals (A₄, heard closer to P₅ in practice) are presented in the first two *dan*. Likewise, by the end of *dan* 2, all three trichord transpositions (on D, G, and A) and most pitch and rhythm cells have been introduced. The tones of some cells can be accounted for by a single trichord (e.g., cells 1 [D-E \flat -G] and 5 [G-A \flat -C]), whereas the tones of other cells come from two transpositions of the trichord (e.g., cells 3 and 4). Cells 3 and 4 both use trichords on D and A; stacked disjunctly, they form an octave scale: D-E \flat -G-A-B \flat -D. In the first two *dan*, the trichord on G appears only on its own, within cell 5; however, it directly follows the trichord on D. These two trichords can be stacked conjunctly: D-E \flat -G-A \flat -C. Thus, from the original *miyakobushi* trichord on D, transpositions up a P₄ and P₅ result in trichords on G and A, which when added to the trichord on D create disjunct and conjunct *miyakobushi* scales on D (see Example 5b, above). Octave-species scalar passages do not occur in *Sokaku Reibo*; however, these scales made up of trichords can account for the pitch content of all cells within the piece, with the exceptions of non-trichord tones D \flat and G $+$.

Second Exceptional Tone: G $+$

A second tone unaccounted for by m₂-M₃ trichord transpositions is the tone I have labeled in my analyses G $+$ ₂ (i.e., it lies between G₂ and A \flat ₂); it is notated *ichi san no u* in the Aoki score and *u dai meri* by Kurahashi. According to the Nyokai-an fingering chart, *ichi san no u* sounds a G₂ on the 1.8-foot *shakuhachi*,¹⁶ whereas according to Gunnar Jinmei Linder (2010, 217) it sounds an A \flat ₂. Tokuyama Takashi's (n.d., 7) chart includes a fingering for *u meri*, presumably *u dai meri*, sounding G₂. This tablature is not included in other fingering charts I consulted. I have transnotated this tone as G₂ (e.g., in Example 12c below), based on the Nyokai-an and Tokuyama charts, but in parentheses to distinguish it from the basic G₂ fingering (レ *re*) and A \flat ₂ (チ \times *chi-meri*);¹⁷ however, in the Aoki and Yamaguchi recordings, *ichi san no u/u dai meri* is played closer to A \flat ₂ than G₂, frequently between 25 and 50 cents low, especially in later *dan*.

In *Sokaku Reibo*, G $+$ ₂ first appears in the second *dan* in cell 6 (B \flat -A-G $+$, or B \flat -A-A-G $+$ -G $+$ including repeated tones) and recurs in later *dan*, always after A₂, and, with only one exception in *dan* 12, followed by A₂.¹⁸ If the tone is treated as a G, then the resulting B \flat -A-G

16. A detailed Kinko-ryū fingering chart in English is downloadable at <http://nyokai.com/students/fingerchart.pdf>. The Nyokai-an school was founded by Phil Nyokai James as a branch of Kurahashi Yodo II's Mujuan school.

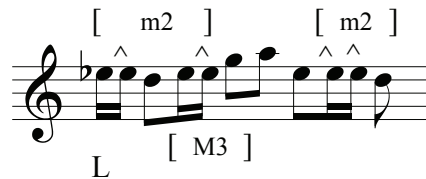
17. Tablature symbols and corresponding pronunciation are indicated in this and subsequent sections for clarity. A full list of tablature used for *Sokaku Reibo* is found in Figure 1.

18. In *dan* 12, E \flat substitutes for the A following G $+$. The A-G $+$ -G $+$ -E \flat cell leads into a repeated rhythm cell on E \flat , which in turn leads to the recurrence of the G-E \flat M₃ interval. The substitution of E \flat therefore contributes to motivic variation.

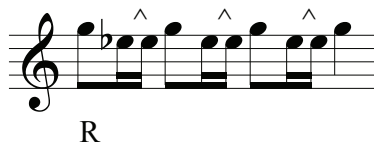
(m2-M2) cell will not fit into a single *miyakobushi* trichord; likewise if G+ is treated as A \flat (B \flat -A-A \flat : m2-m2). A M2 (A-G) could be explained here as the interval that connects two disjunct trichords (D-E \flat -G-A-B \flat -D), but A-G+ is not a true M2. This G+ (G/A \flat) *ichi san no u/u dai meri* fingering, frequently performed as A \flat_2 minus 25 to 50 cents, is sandwiched between two A $_2$ (𠮟 *chi*), thus creating an interval between a M2 and m2. Aoki and Yamaguchi both tend to play the 𠮟 *chi* (A) on either side of the *ichi san no u* about 25 to 35 cents high (especially in the second half of the piece), or with a rising pitch slide at the end of the first A, resulting in a melodic interval approaching, but not quite, a M2 (approximately 150 to 185 cents). Since G+ is not the G of the G-A \flat -C trichord, it can thus be considered a lower neighbor to A, the lowest note of the A-B \flat -D trichord.

Dan 2 and 6: Rhythm Cells

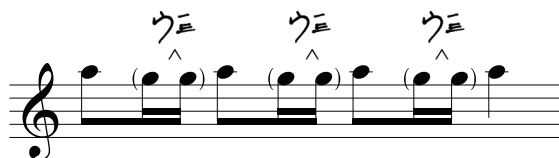
The 3RC rhythm introduced in *dan 1* is heard throughout *dan 2* and the entire piece on m2, M2 and M3 intervals, as well as on a single tone separated by finger articulation. Examples 12a through 12d show several appearances of the rhythm cell.



Example 12a. 3RC rhythm cell on m2, M3 in *dan 2*, Kurahashi and Aoki transnotations.



Example 12b. Repetition of 3RC rhythm cell on M3 in *dan 2*, Kurahashi and Aoki transnotations.



Example 12c. Repetition of 3RC rhythm cell in *dan 2*, Aoki transnotation (interval is approximately M2).



Example 12d. Repetition of 3RC rhythm cell on G_2 in *dan 2*; Aoki transnotation.

As in *dan 1*, the three-note rhythm cell has a terminal function throughout the piece. It appears at the end of *dan* and long pitch cells, emerging as a contraction of these pitch cells. In the second *dan*, it is played repeatedly on G_2 (\checkmark *re*), as in Example 12d, then transposed up a m_2 to $A\flat_2$ (チ \times *chi-meri*) following a $C-A\flat$ M_3 interval. At the end of *dan 2* (but omitted in the Kurahashi score), the rhythm is transposed up a semitone again, to A_2 (チ *chi*), leading into the third *dan*, which begins on $B\flat_2$ (ウ \equiv *san no u*). In this case, the $A\flat$ (チ \times *chi-meri*) could thus be understood as arising through successive chromatic transposition of the rhythm cell's pitch material: $G-A\flat-A-B\flat$ from cell 4 through 7. Alternatively, in terms of trichords, these repeated tones could result from a transposition in *dan 2* from $D-E\flat-G$, through $G-A\flat-C$, to $A-B\flat-D$. In Figure 8, highlighting of individual pitches and of trichords shows both alternatives.

In addition to this 3RC pattern, ends of *dan* or large segments within *dan* are signaled by *nayashi*, a pitch slide technique used to repeat a sustained tone by beginning it approximately a semitone below pitch and sliding upwards.¹⁹ Since *nayashi* figures in *Sokaku Reibo* consist of (1) a sustained tone, (2) a breath, (3) a *nayashi* slide to the same tone, and (4) a third iteration of the tone, sustained, this figure could be understood as an augmentation of quicker 3RC.²⁰ In addition to marking the end of large segments within *dan*, *nayashi* directly precede 3RC cells at the end of *dan 2* and 6, as in Example 13. This terminal rhythmic pattern is repeated in later *dan*.

Dan 2 pitch cells (abridged)		m2-M3 trichord
4	$E\flat_2$ D_2 $E\flat_2$ G_2 A_2 $E\flat_2$ D_2	$D-E\flat-G$ / $A-[B\flat]-D$
3RC	G_2	$[D-E\flat]-G$
5	C_3 $A\flat_2$	$[G]-A\flat-C$
3RC	$A\flat_2$	$[G]-A\flat-[C]$
6	$B\flat_2$ A_2 G_{+2}^*	$A-B\flat-[D]$ (NT: G_{+2}^*)
3RC	A_2	$A-[B\flat]-D$
Dan 3 pitch cells (beginning only)		
7	$B\flat_2$ A_2 G_{+2}^* A_2 $B\flat_2$	$A-B\flat-[D]$ (NT: G_{+2}^*)

Figure 8. Pitch cell analysis, *dan 2* and 3. Highlighted notes show chromatic progression of rhythm cell and correspondence to trichord transpositions.

19. Weisgarber (1968, 317) refers to *nayashi* as cadential.

20. It is treated as such in Appendix B.

Example 13. 3RC cell preceding and following *nayashi* slide in *dan 2*. *Nayashi* in the second phrase repeats G2 of the first phrase. Upper staff is Kurahashi score transnotation, lower staff is Aoki score.

Example 14. 2RC rhythm cell in *dan 6*.

Just as pitch cells are contracted, the three-note rhythm cell ♪♪♪ (3RC) is frequently reduced to a two-note cell ♪♪ (2RC) in *Sokaku Reibo*. In *dan 6*, after the D-B \flat M3 is reiterated, B \flat becomes the focal point of the middle of the *dan*. It is repeated in octaves in a 2RC pattern, notated or heard in most sources seven times in *kan* (upper octave), seven times in *otsu* (lower octave), then another seven times in *kan*, as shown in Example 14.²¹ This cell is reiterated on B \flat in *dan 7, 8, and 9*. For additional examples of 2RC on a single repeated tone, see Appendix B, where cells are labeled accordingly.

REMAINING SEVEN DAN: RECURRING PITCH CELLS AND TRICHORDS

As mentioned above, most of the melodic and rhythmic material of *Sokaku Reibo* has been presented by the end of the second *dan*. Intervallic relationships and trichord transpositions recur throughout the remainder of the piece. Below I discuss some additional notable cells and non-trichord tones that occur in the remaining optional *dan*.

The first cell that uses tones from all three transpositions of the *miyakobushi* trichord is

21. Yamaguchi plays it only six times in *kan*, and not in *otsu*.



Example 15. Cell 8.1, *dan 4*, transnotation of Aoki score. Letters below staff indicate trichord transposition.

presented in the fourth *dan*. Cell 8.1 begins with a descending M3-m2 pattern as C-A \flat -G, the *miyakobushi* trichord on G, a transposition first hinted at in *dan 2*. The cell continues with the recurring G-A-E \flat pattern, combining tones of the trichord on D and A.²² The result, shown in Example 15, is cell 8.1: C-A \flat -G-A \flat -E \flat -G, a cell containing tones of all three trichord transpositions, as well as a terminal 3RC.

At the beginning of *dan 5*, two tones pose questions with regard to trichord analysis: C₂ and F₂. The C ($\prime \setminus ha$) of cell 9 is played quickly before the main tone of the cell, D. Because of the manner in which it is notated and played in the sources I consulted, I consider this tone preparatory to the D₂, rather than a hint at the trichord on G. The C is treated similarly in later *dan*. The F₂ ($\prime \setminus tsu$) of the next pitch cell occurs only once in the piece, in cell 10 (F₂-G₂), and only in the Aoki score and recording, and the Satō score. Kurahashi instead notates E \flat ₂ ($\prime \setminus \times tsu-meri$) and Yamaguchi does not perform *dan 5*. Notably, Kurahashi notates cells 9 and 10 in one breath; the resulting (C)-D-E \flat -G thus outlines the trichord on D, with a preparatory C. In contrast, Aoki sustains the F in performance then lowers it approximately a semitone before sliding back up to F. Satō also notates a lowering then raising of the F before the G. Because of the lowering of the pitch, it is conceivable that the performer considers this movable tone (F, $\prime \setminus tsu$) to be in the same pitch area as E \flat ($\prime \setminus \times tsu-meri$). According to Gutzwiller (1974, 103), “moving notes,” as opposed to “main notes,” “serve to introduce the main note of a phrase,” in this case, the G, and “[do] not have a fixed pitch.” The G in the Aoki recording is comparatively stable.

A rare minor third interval (A-C, cell 12) appears at the beginning of *dan 7*. However, since *dan 6* ends on A and the A-C cell is followed by a reiteration of cell 5 (C-A \flat), the A-C cell could be understood as transitional: a brief departure from the A-B \flat -D trichord to the G-A \flat -C trichord. This departure is followed by a return to cell 11, the cell introduced at the beginning of *dan 6*. The highlighting in Figure 9 shows this interpretation.

Another consideration in analyzing this uncommon m3 interval is performance practice. Aoki notates and performs a *meri-komi* type of pitch bend on the A before moving to the C.²³ *Meri-komi* is primarily executed by a change in head position: lowering the head changes the

22. That is, if the A is understood as the lowest note of its trichord, and not as an embellishment of the E \flat -G M3.

23. Yamaguchi does not perform *dan 7*.

Dan 6 pitch cells									Versions	m2-M3 trichord
II	(C ₃)	D ₃	E \flat ₃	D ₃	B \flat ₂	D ₃	(C ₃)	A ₂	all	D-E \flat -[G]/ A-B \flat -D (NT:C)
	(C ₃)	D ₃	E \flat ₃	D ₃	B \flat ₂	D ₃	(C ₃)	A ₂ G ₊₂ [*] A ₂	all	D-E \flat -[G]/ A-B \flat -D (NT:C, G ₊₂ [*])
				D ₃	B \flat ₂			A ₂ G ₊₂ [*] A ₂	AR, YG, SS	A-B \flat -D (NT:G ₊₂ [*])
				D ₃	B \flat ₂				all	[A]-B \flat -D
					B \flat _{2/1}				all	[A]-B \flat -[D]
								A ₂ G ₊₂ [*] A ₂	all	A-B \flat -[D] (NT:G ₊₂ [*])
								A ₂ G ₊₂ [*]	all	
								A ₂	all	A-[B \flat -D]
Dan 7 pitch cells									Versions	m2-M3 trichord
12						A ₂	C ₃		AR, SS	[G-A \flat]-C/ A-[B \flat -D]
5							C ₃	A \flat ₂	AR, SS	[G]-A \flat -C
IIv	(C ₃)	D ₃	E \flat ₃	D ₃	B \flat ₂	D ₃	(C ₃)	A ₂ G ₊₂ [*] A ₂ B \flat ₂	AR, SS	D-E \flat -[G]/ A-B \flat -D (NT:C, G ₊₂ [*])
					B \flat _{2/1}				AR, SS	[A]-B \flat -[D] (NT:G ₊₂)
								A ₂ G ₊₂ [*] A ₂	AR, SS	A-[B \flat -D] (NT:G ₊₂ [*])
								A ₂ G ₊₂ [*]	AR, SS	
								A ₂	AR, SS	A-[B \flat -D]
3.2				D ₃	B \flat ₂				AR	[A]-B \flat -D

Figure 9. Pitch cell analysis, *dan 6* and *7*. Highlighted notes show trichord transition involving m3.

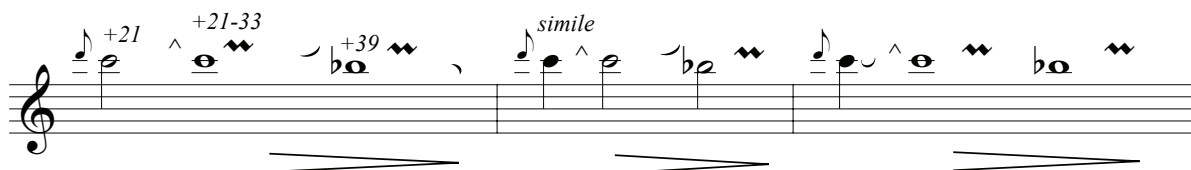
angle of the airstream against the mouthpiece, resulting in lowered pitch. Thus, the notated A of the A-C m3 cell is lowered in practice, approaching the A \flat played in the next breath.

Another analysis would be to consider the A₂-C₃ m3 as part of a *min'yō* trichord on A (A₂-C₃-D₃). However, the rarity of the m3 in *Sokaku Reibo*, the absence of the upper note in this brief transition, and the optional nature of *dan 7* make this theory less probable. Important motivic elements are repeated and emphasized in *Sokaku Reibo*. This does not occur with the m3 interval.

The more common M2 is introduced in a new transposition and pitch cell in *dan 9* (13: C₃-C₃-B \flat ₂). Example 16 provides transnotation and a transcription of this cell. Unlike in previous cases (C-D), the C here is not treated as a preparatory tone—it is sustained and repeated in the Aoki score and recording, and in the Satō score (*dan 9* is omitted in other sources), and in fact, in the Aoki recording, it is preceded by preparatory finger articulation on D₃ (see Example 16b). The descending M2 C₃-B \flat ₂ cell is followed by an ascending M2 (C₃)-D₃, where the C is preparatory, and then by a M3 (B \flat)-C-A \flat (Example 16a). If these cells are combined to create a conglomerate cell, C-B \flat -(C)-D-(B \flat)-C-A \flat , the initial C could be heard as belonging to the trichord on G, along with the end of the expanded cell; the B \flat -(C)-D, with the



Example 16a. Beginning of *dan* 9, transnotation of Aoki score.



Example 16b. First cell of *dan* 9, played three times, transcription of Aoki recording.

C disregarded, would form part of the trichord on A. However, since these two trichords cannot be combined to create a rational scale (as either of them could in concert with the trichord on D), and breaths interrupt this conglomerate cell, a simpler approach is to consider the initial repeated C to be a foreshadowing of the C-A \flat M $_3$, or simply an oddity with regard to *miyakobushi* trichords (the C is likewise not related to the end of the preceding *dan* 8). Analysis based on an alternative trichord—*min'yō* (m $_3$ +M $_2$: G-B \flat -C)—is not useful since there is no G present in the entire *dan* to anchor a shift of modality.

The analysis in Figure 10 indicates that two new cells are presented in *dan* 11, but they are composites of earlier cells. Cell 14 (notated only in Satō and not performed on either recording) begins with the C-A \flat M $_3$ of cell 5 (*dan* 2) added to (C)-D-E \flat , the first cell of *dan* 8, to produce C-A \flat -C-D-E \flat , together making use of all but the middle tone of the conjunct

Dan 11 pitch cells		Versions	m $_2$ -M $_3$ trichord
	E \flat_3	SS	[D]-E \flat -[G]
	D $_3$	SS	D-[E \flat -G]
14	C $_3$ A \flat_2 C $_3$ D $_3$	SS	[G]-A \flat -C/ D-E \flat -[G]
15	C $_2$ D $_3$ B \flat_2 A $_2$ G $_{+2}^*$ A $_2$ B \flat_2 A $_2$	YG, SS	A-B \flat -D (NT:C, G $_{+2}^*$)
	B \flat_2 A $_2$ G $_{+2}^*$ A $_2$ B \flat_2 A $_2$	YG, SS	A-B \flat -[D] (NT:G $_{+2}^*$)
	D $_3$ A $_2$ G $_{+2}^*$ A $_2$ B \flat_2 A $_2$	YG, SS	A-B \flat -D (NT:G $_{+2}^*$)
	B \flat_2 A $_2$ G $_{+2}^*$ A $_2$ B \flat_2	YG, SS	A-B \flat -[D] (NT:G $_{+2}^*$)
7.1.1	B \flat_2 A $_2$ G $_{+2}^*$ A $_2$	YG, SS	(NT:G $_{+2}^*$)
3.2	D $_3$ B \flat_2	SS	[A]-B \flat -D
	C $_3$	SS	[G-A \flat]-C

Figure 10. Pitch cell analysis, *dan* 11.

miyakobushi scale (D-E \flat -G-A \flat -C). This cell does not recur. Cell 15 is a composite of (C)-D (cell 9), added to the beginning of recurring cell variant 7.1.1 (B \flat -A-G+-G+-A). With an added ending as well, together they form the cell (C)-D-B \flat -A-G+-G+-A-B \flat -A. Yamaguchi performs the initial C as a trill to D, as in cell 11, *dan* 6, so if the C is labeled as preparatory and the G+ as a lower neighbor to A, the remaining notes all fit into the trichord on A. Analysis of these two cells (14 and 15) shows that the introduction of new melodic material this late in the piece can in fact be traced to earlier *dan*.

Remaining *Dan*: Terminal Three-Note Rhythm Cell

Dan 3 through 7 conclude with the three-note rhythm cell (3RC) on a single tone, as did *dan* 2. At the end of the second, third, sixth and seventh *dan* (as well as *dan* 8, 9 and 10 in the Satō score only), the cell is repeated on A₂ (𠄎 *chi*), whereas in the fourth and fifth it is repeated on G₂ (レ *re* or D₃ [ア *a*] in the Kurahashi score, *dan* 5 only), tones that correspond to the lowest note of the trichord transpositions.

Nayashi augmentations of 3RC directly precede 3RC cells at the end of *dan* 2, 3, 4, 5, 6, and 7 (and 8, 9 and 10 in Satō). A *nayashi* also precedes the final breath of the piece in the Kurahashi score.

CONCLUSION

I have identified 15 main pitch cells in *Sokaku Reibo* (see Figure 3 and Appendix B). The melodic content of these pitch cells can be understood in terms of frequently occurring intervals (m₂, M₃, P₄) and their transpositions up a P₄ and P₅, as well as *miyakobushi* trichords (m₂+M₃=P₄) on D, G, and A, with some exceptions, such as M₂ and A₄ intervals and the exceptional tones G+ and D \flat . Some pitch cells bear close resemblance to one other; for example, the pitch content of cell 6 (B \flat -A-G+-) recurs in cells 7, 8, and 15. Some pitch cells occur only once, or rarely, whereas others occur frequently in their original or variant (contracted or expanded) forms.

Some variants occur more frequently than the main pitch cells from which they are contracted or expanded. For example, cell 4.2 (G-A-E \flat -E \flat -E \flat), a contraction of cell 4, is found in *dan* 2, 4, 5, 10 and 12, whereas the original cell is heard only in *dan* 2. Contractions that correspond to the prominent M₃ and m₂ intervals of the piece also occur frequently. For example, cell 3.2 (D-B \flat), a descending M₃ and part of the trichord transposition on A, comprises the first two tones of cell 3 (D-B \flat -E \flat -E \flat -D). This D-B \flat contraction is heard in *dan* 6 through 11. Additional examples of recurring contracted cell variants appear in Appendix B. These examples include single-note rhythm cells (2RC, 3RC), patterns which also emerge as contractions of pitch cells.

The five *dan* common to all of the notated and recorded sources I consulted are 1, 2, 6, 10, and 12. With respect to *miyakobushi* trichords and frequently occurring intervals,

transpositions on D, G, and A heard throughout the piece have been introduced by the end of the second *dan*, as have M2 and A₄ intervals and G⁺ and D^b exceptional tones. These two tones, though exceptional with respect to *miyakobushi* trichord transpositions, can be said to function within the frameworks of frequently occurring intervals and pitch cell patterns. Regarding the D^b, the resulting programmatic effect of the multiphonic tremolo can be assumed to take priority over modal considerations. However, the fundamental does form a M2 with the adjacent E^b (cell 2am) as well as an augmented prime relationship heard as a m2 with D (cell 2). The G⁺, chosen perhaps for its timbral characteristics or for fingering considerations, is performed exclusively within a 3RC pattern with A, forming an interval that approximates a M2 (cells 6-8, 12), thereby repeating established intervallic and rhythmic patterns.

In addition to trichords and intervals, the first two *dan* also present the first six of the 15 main pitch cells, as well as the 3RC rhythm cell. The main pitch cells or their variants found in the five *dan* common to all sources are I through 9, 11, and 15, as summarized in Figure 11.

Missing from this group are cells 10 and 12 to 14. However, these four cells do not recur in the piece. Cell 10 (F-G) appears only at the beginning of *dan* 5 and is notated instead as E^b-G in the Kurahashi score. Cell 12 (A-C) is only heard at the beginning of *dan* 7, and cell 13 (C-C-B^b) at the beginning of *dan* 9. Cell 14 (C-A^b-C-D-E^b), an extension of cell 5, occurs only in the Satō score in *dan* 11. In contrast, cells 1 to 9 and 11 are heard frequently in their original and variant forms throughout the piece, as well as in *dan* 1, 2, 6, and 10 (Cell 15, found only in *dan* 11 and 12, is a combination of cells 9 and 7). In *dan* 12, cells from *dan* 1 recur in a sort of recapitulation of the opening of the piece, after the recurrence of a few other prominent cell variants (4.2, 9ae and 11.1).

Dan	Miyakobushi trichords or scales	Intervals	Pitch cells or variants	Rhythm cells	Excep. tones
1	D E ^b G D E ^b G [A] B ^b D	m2/A1, M2, M3, P4	1-3	3RC	D ^b
2	D E ^b G A B ^b D D E ^b G A ^b C	m2/A1, M2, M3, A4	4-6	3RC	D ^b G ⁺
6	D E ^b [G] A B ^b D	m2, M2, M3, P8	3, 7, 11	2RC, 3RC	G ⁺
10	D E ^b G A B ^b D [D] E ^b G A B ^b D [D] E ^b G A ^b C	m2, M2, M3, P4 (KY only: A4, P5)	3, 4, 7-8	3RC, 4RC	G ⁺
12	D E ^b G A B ^b D D E ^b G	m2/A1, M2, M3, P4	1-4, 9, 11, 15	2RC, 3RC	G ⁺ D ^b

Figure 11. Musical material found in each of the five *dan* common to all consulted sources.

In summary, the five *dan* heard in all of the sources I consulted could be understood as containing the main musical material of the piece—that is, pitch cells (1–9, 11), rhythm cells (2RC, 3RC), frequently occurring intervals (m2, M2, M3, P4, A4), exceptional tones (G+, D♭) and m2-M3 trichord transpositions (on D, G, and A)—with most of this material being introduced by the end of the second *dan*. Applying the framework of an octave-species *miyakobushi* scale to the melodic content of the piece was not necessary to this study. Nor was the trichord sufficient as an investigative tool. Rather, an analysis of smaller elements, notably melodic and rhythmic motives, exposed the greater structure of the piece.

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



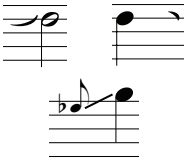



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APPENDIX A: SYMBOLS USED IN TRANSNOTATION AND TRANSCRIPTION OF *SOKAKU REIBO*

	Note values are approximate and loosely relative. Rhythmic groupings show emphasis (e.g., a dynamic or agogic accent on the first of three beamed eighth notes).
L/R	<i>Ura-ma/omote-ma</i> metric dots; given only for first note of breath phrase. Beaming of eighth notes in transnotation corresponds to R-L relationship:  = R-L  = L-R  = L-R-L
#/b	Accidentals are effective until the end of a breath phrase.
,	End of breath phrase in transnotation. (Barlines used instead in transcription.)
tablature symbols	Given above the note for tones with more than one fingering (e.g., ア <i>a</i> for D ₂). If not indicated, the basic fingering is assumed (e.g., \square <i>ro</i> for D ₂). <i>Simile</i> refers to tablature.
^	<i>Atari</i> (finger articulation), using standard fingering.
1, 2, 3, 4, 5	<i>Atari</i> (hit/push) indicated hole (hole 1 is at the lower end, hole 5 is on the back); <i>ru</i> is a special articulation fingering.
	Pitch bends and slides are shown graphically. <i>Nayashi</i> and <i>hiku</i> types are specifically indicated above the note. (All D ₃ ア <i>a</i> fingerings in the Kurahashi score are accompanied by a <i>hiku</i> symbol; these cases are not indicated in the transnotation.)
	<i>Koro-koro</i> multiphonic tremolo effect. D \flat_2 represents the approximate average pitch of the tremolo. D \flat is notated rather than C \sharp because the “ <i>ro</i> ” of <i>koro-koro</i> refers to D.
<i>tamane</i> 	Flutter tonguing; notated as <i>tamane</i> or <i>tam.</i> , depending on space.
<i>fukikomi</i>	“Strong breath,” i.e., no diminuendo.
	<i>Yuri</i> (vibrato); type, depth, etc. not shown.
+/-	Microtonal inflections are indicated numerically (in cents) above notes (e.g. +25). Values smaller than 10 cents (+/-) are not indicated.

APPENDIX B: SOKAKU REIBO: IDENTIFICATION OF CELLS AND THEIR VARIANTS

Versions:KY = score by Kurahashi Yodo I (*Jin Nyodō Honkyoku*)

AR = score by Aoki Reibo II (variations in AR recording indicated in parentheses)

YG = recording by Yamaguchi Gorō

SS = score by Satō Seibi

Variations:

db = deleted beginning

dm = deleted middle

de = deleted end

ab = added beginning

am = added middle


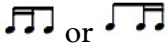


ae = added end

sb = substituted beginning

se = substituted end

' = varied a second time in this way

" = varied a third time in this way

2RC = two-note rhythm cell on given note: 3RC = three-note rhythm cell on given note:  or 4RC = four-note rhythm cell on given note: 

(Only single-note rhythm cells are indicated)

Repetitions (across all 12 *dan*):*immediate/iterative***non-immediate/recursive****Notes:**

Not distinguishing between different fingerings for same tone

D \flat * = *koro-koro* multiphonic tremolo effectG+* = tone between G and A \flat (occurs only after A; followed byA with one exception in *dan* 12, where it is followed by E \flat)kan = upper octave (*dan* 6–8)otsu = lower octave (*dan* 6–8)

[] = preparatory or passing tone

(koro) = trill using *koro-koro* fingering in lower hand (distinct from *koro-koro* technique)

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Dan I

Pitch cells

1: E^b-G-D

1.1: E^b-D

2: D^b*-D

3: D-B^b-E^b-E^b-D

KY	I E ^b -G-D x9	Idm = 1.1 E ^b -D x3	I E ^b -G-D	Idb D
AR	I E ^b -G-D x12 (13)			
YG	I E ^b -G-D x10			
SS	I E ^b -G-D x19			

KY	2 D ^b *-D x9			2db D			
AR	2am D ^b *-E ^b -D	2 D ^b *-D x5	2db D	2 D ^b *-D x3	2db D		
YG	2am D ^b *-E ^b -D			2 D ^b *-D x3			
SS	2am D ^b *-E ^b -D x9	2 D ^b *-D x12	2db D	2 D ^b *-D x3	2db D	2 D ^b *-D x3	2db D

KY	2 D ^b *-D x3	2am' D ^b *-E ^b -E ^b -E ^b -D	2am'' D ^b *-E ^b -G-D	2am' D ^b *-E ^b -E ^b -E ^b -D	2am'' D ^b *-E ^b -G-D	
AR	2 D ^b *-D x3	2am' D ^b *-E ^b -E ^b -E ^b -D	2am'' D ^b *-E ^b -G-D	2am' D ^b *-E ^b -E ^b -E ^b -D	(2am'') (D ^b *-E ^b -G-D)	(2am') (D ^b *-E ^b -E ^b -E ^b -D)
YG				2am'' D ^b *-E ^b -G-D	2am' D ^b *-E ^b -E ^b -E ^b -D	
SS	2 D ^b *-D x3	2am' D ^b *-E ^b -E ^b -E ^b -D x3	2am'' D ^b *-E ^b -G-D	2am' D ^b *-E ^b -E ^b -E ^b -D x3		

KY	3 <i>D-B♭-E♭-E♭-D</i> x2	3db <i>E♭-E♭-D</i> x5
AR	3 <i>D-B♭-E♭-E♭-D</i> x2 (3)	3db <i>E♭-E♭-D</i> x7
YG	3 <i>D-B♭-E♭-E♭-D</i>	
SS	3 <i>D-B♭-E♭-E♭-D</i> x3	3db <i>E♭-E♭-D</i> x7

Dan 2**Pitch and rhythm cells**4: *E♭-E♭-D-E♭-E♭-G-A-E♭-E♭-E♭-D*4.2: *G-A-E♭-E♭-E♭*5: *C-A♭-A♭-A♭*6: *B♭-A-A-G+*G+**

3RC

KY	4 <i>E♭-E♭-D-E♭- E♭-G-A-E♭-E♭- E♭-D</i>	4sb <i>D♭*-D-E♭-E♭- G-A-E♭-E♭-E♭- D</i>	4 <i>E♭-E♭-D-E♭- E♭-G-A-E♭-E♭- E♭-D</i>	4sb/de <i>D♭*-D-E♭-E♭- G-A-E♭-E♭-E♭</i>	4db/de = 4.2 <i>G-A-E♭-E♭-E♭</i>	4.2dm/de <i>G-E♭-E♭</i> x3	4.2de & 3RC <i>G-G-G</i> x6
AR	4 <i>E♭-E♭-D-E♭-E♭- G-A-E♭-E♭-E♭- D</i> x2 (1)	4sb <i>D♭*-D-E♭-E♭- G-A-E♭-E♭-E♭- D</i>		4de <i>E♭-E♭-D-E♭- E♭-G-A-E♭-E♭- E♭</i>	4db/de = 4.2 <i>G-A-E♭-E♭-E♭</i> x2 (1)	4.2dm/de <i>G-E♭-E♭</i> x3	4.2de & 3RC <i>G-G-G</i> x6
YG	4 <i>E♭-E♭-D-E♭- E♭-G-A-E♭-E♭- E♭-D</i>			4de <i>E♭-E♭-D-E♭- E♭-G-A-E♭-E♭- E♭</i>	4db/de = 4.2 <i>G-A-E♭-E♭-E♭</i> x2	4.2dm/de <i>G-E♭-E♭</i> x3	4.2de & 3RC <i>G-G-G</i> x6
SS	4 <i>E♭-E♭-D-E♭-E♭- G-A-E♭-E♭-E♭- D</i> x3	4sb <i>D♭*-D-E♭-E♭- G-A-E♭-E♭-E♭- D</i> x3	4 <i>E♭-E♭-D-E♭- E♭-G-A-E♭-E♭- E♭-D</i> x2	4de <i>E♭-E♭-D-E♭- E♭-G-A-E♭-E♭- E♭</i>	4db/de = 4.2 <i>G-A-E♭-E♭-E♭</i> x3	4.2dm/de <i>G-E♭-E♭</i> x3	4.2de & 3RC <i>G-G-G</i> x6

KY	5 C-A \flat -A \flat -A \flat	5db & 3RC A \flat -A \flat -A \flat x3	G+*
AR	5 [B \flat]-C-A \flat -A \flat -A \flat	5db & 3RC A \flat -A \flat -A \flat x9	
YG	5 [B \flat]-C-A \flat -A \flat -A \flat	5db & 3RC A \flat -A \flat -A \flat x7	
SS	5 C-A \flat -A \flat -A \flat	5db & 3RC A \flat -A \flat -A \flat x9	

KY				
AR	6 B \flat -A-A-G+*-G+*	6db A-A-G+*-G+* x3	6db' A-G+*-G+* x3	3RC A-A-A x8
YG	6 B \flat -A-A-G+*-G+*	6db A-A-G+*-G+* x2	6db' A-G+*-G+* x3	3RC A-A-A x8
SS	6 B \flat -A-A-G+*-G+*	6db A-A-G+*-G+* x3	6db' A-G+*-G+* x3	3RC A-A-A x8

Dan 3

Pitch and rhythm cells

7: B \flat -B \flat -A-G+*-G+*-A-B \flat (similar to 6)

7.I: B \flat -B \flat -A-G+*-G+*-A

7.I.I: B \flat -A-G+*-G+*-A

3RC

AR	7 B \flat -B \flat -A-G+*- G+*-A-B \flat x2	7de = 7.I B \flat -B \flat -A-G+*-G+*-A	7db/de = 7.I.I B \flat -A-G+*-G+*-A	7db/de' B \flat -A-G+*-G+*	7db'/de' A-G+*-G+* x4	3RC A-A-A x8
YG	7 B \flat -B \flat -A-G+*- G+*-A-B \flat x2	7de = 7.I B \flat -B \flat -A-G+*-G+*-A	7db/de = 7.I.I B \flat -A-G+*-G+*-A	7db/de' B \flat -A-G+*-G+*	7db'/de' A-G+*-G+* x4	3RC A-A-A x8
SS	7 B \flat -B \flat -A-G+*- G+*-A-B \flat x3	7de = 7.I B \flat -B \flat -A-G+*-G+*-A	7db/de = 7.I.I B \flat -A-G+*-G+*-A x2	7db/de' B \flat -A-G+*-G+*	7db'/de' A-G+*-G+* x4	3RC A-A-A x8

Dan 4**Pitch and rhythm cells**4.2: G-A-E \flat -E \flat -E \flat 8: B \flat -B \flat -A-G+*-G+*-A-D-G-A-E \flat -E \flat -E \flat -G (= 7.1ae + 4.2ae)8.1: C-A \flat -A \flat -G-A-E \flat -E \flat -E \flat -G

3RC

AR	8 B \flat -B \flat -A-G+*- G+*-A-D-G-A- E \flat -E \flat -E \flat -G	8sb (or 5de + 4.2ae) = 8.1 C-A \flat -A \flat -G-A-E \flat -E \flat - E \flat -G	8sb/de C-A \flat -A \flat -G-A- E \flat -E \flat -E \flat	8db/de or 4.2 G-A-E \flat -E \flat -E \flat	4.2dm/de G-E \flat -E \flat x3	3RC G-G-G x8
YG	8 B \flat -B \flat -A-G+*- G+*-A-D-G-A- E \flat -E \flat -E \flat -G		8sb/de C-A \flat -A \flat -A \flat -G- A-E \flat -E \flat -E \flat	8db/de or 4.2 G-A-E \flat -E \flat -E \flat x2	4.2dm/de G-E \flat -E \flat x3	3RC G-G-G x7
SS	8 B \flat -B \flat -A-G+*- G+*-A-[C]-D-G- A-E \flat -E \flat -E \flat -G	8sb (or 5de + 4.2ae) = 8.1 C-A \flat -A \flat -G-A-E \flat -E \flat -E \flat - G x2	8sb/de C-A \flat -A \flat -G-A- E \flat -E \flat -E \flat	8db/de or 4.2 G-A-E \flat -E \flat -E \flat x3	4.2dm/de G-E \flat -E \flat x3	3RC G-G-G x8

Dan 5

Pitch and rhythm cells

1.1: E \flat -D

4.2: G-A-E \flat -E \flat -E \flat

5: C-A \flat -A \flat -A \flat

8.1: C-A \flat -A \flat -G-A-E \flat -E \flat -E \flat -G

9: [C]-D

10: F-G

2RC, 3RC

KY	9 [C]-D	ide E \flat -G	8sb/de = 8.1 C-A \flat -A \flat -G-A-E \flat - E \flat -E \flat -G x2						8.1de or 5de C-A \flat
AR	9 [C]-D	10 F-G (F-F-G)	8sb/de = 8.1 C-A \flat -A \flat (-A \flat)-G- A-E \flat -E \flat -E \flat -G	8sb/de C-A \flat -A \flat -G- A-E \flat -E \flat -E \flat	8db/de or 4.2 G-A-E \flat -E \flat -E \flat x2 (1)	4.2de (G-A)	4.2de' (G-A-E \flat -E \flat x2)	4.2dm/de G-E \flat -E \flat x3 (absent)	3RC G-G-G x8
SS	9 [C]-D	10 F-G	8sb/de = 8.1 C-A \flat -A \flat -G-A-E \flat - E \flat -E \flat -G x2	8sb/de C-A \flat -A \flat -G- A-E \flat -E \flat -E \flat	8db/de or 4.2 G-A-E \flat -E \flat -E \flat x3			4.2dm/de G-E \flat -E \flat x3	3RC G-G-G x8
KY	9ae [C]-D-E \flat	2RC E \flat -E \flat x6	9db D	2RC E \flat -E \flat x7	1.1 3RC E \flat -E \flat -E \flat -D- D-D x2	1.1 2RC E \flat -E \flat -D-D x3	9db D	2RC D-D x6	9db D

Dan 6**Pitch and rhythm cells**

3.2: D-B♭

7: B♭-B♭-A-G+*-G+*-A-B♭

7.1: B♭-B♭-A-G+*-G+*-A

11: [C]-D-E♭-D-B♭-D-[C]-A

2RC, 3RC

KY	11 [C]-D-E♭-D- B♭-D-[C]-A	11ae [C]-D-E♭-D- B♭-D-[C]-A- G+*-G+*-A	3.2db B♭	2RC B♭-B♭ x7	3.2ae [B♭-]D-B♭-[B♭-]B♭ x2	3db = 3.2 [B♭-]D-B♭ x2	3.2ae [B♭-]D-B♭- [B♭-]B♭	2RC B♭-B♭ x7 kan, x7 otsu, x7 kan
AR	11 [C]-D-E♭-D- B♭-D-[C]-A	11ae [C]-D-E♭-D- B♭-D-[C]-A- G+*-G+*-A	7.1ab D-B♭-B♭-A- G+*-G+*-A x3			3db = 3.2 D-B♭		2RC B♭-B♭ x7 kan, x7 otsu, x7 kan (B-B♭)
YG	11 [C]-D-E♭-D- B♭-D-[C]-A	11ae [C]-D-E♭-D- B♭-D-[C]-A- G+*-G+*-A	7.1ab D-B♭-B♭-A- G+*-G+*-A			3db = 3.2 D-B♭		3.2db B♭ x6
SS	11 [C]-D-E♭-D- B♭-D-[C]-A x2	11ae [C]-D-E♭-D- B♭-D-[C]-A- G+*-G+*-A	7.1ab D-B♭-B♭-A- G+*-G+*-A x3			3db = 3.2 D-B♭ x3		2RC B♭-B♭ x7 kan, x7 otsu, x7 kan

KY	7.1db A-G+*-G+*-A x2	7db'/de' A-G+*-G+* x3	3RC A-A-A x6
AR	7.1db A-G+*-G+*-A x2	7db'/de' A-G+*-G+* x6	3RC A-A-A x8
YG	7.1db A-G+*-G+*-A x2	7db'/de' A-G+*-G+* x3	3RC A-A-A
SS	7.1db A-G+*-G+*-A x2	7db'/de' A-G+*-G+* x6	3RC A-A-A x8

Dan 7

Pitch and rhythm cells

3.2: D-B \flat

5: C-A \flat -A \flat -A \flat

7: B \flat -B \flat -A-G $^{+*}$ -G $^{+*}$ -A-B \flat

7.1: B \flat -B \flat -A-G $^{+*}$ -G $^{+*}$ -A

11: [C]-D-E \flat -D-B \flat -D-[C]-A

12: A-C

2RC, 3RC

AR	12 A-C	5de C-A \flat x2	11ae' [C]-D-E \flat -D-B \flat -D- [C]-A-G $^{+*}$ -G $^{+*}$ -A-B \flat	2RC B \flat -B \flat x7 kan, x7 otsu, x7 kan
SS	12 A-C	5de C-A \flat x2	11ae' [C]-D-E \flat -D-B \flat -D- [C]-A-G $^{+*}$ -G $^{+*}$ -A-B \flat	2RC B \flat -B \flat x7 kan, x7 otsu, x7 kan, x7 otsu, x7 kan

AR	7.1db A-G $^{+*}$ -G $^{+*}$ -A x2	7db'/de' A-G $^{+*}$ -G $^{+*}$ x6	3RC A-A-A	3.2 D-B \flat x8	3RC A-A-A x7 (8x interrupted by D-B \flat)
SS	7.1db A-G $^{+*}$ -G $^{+*}$ -A x2	7db'/de' A-G $^{+*}$ -G $^{+*}$ x6	3RC A-A-A x8		

Dan 8**Pitch and rhythm cells**1.1: E \flat -D3.2: D-B \flat 5: C-A \flat -A \flat -A \flat 7: B \flat -B \flat -A-G+*-G+*-A-B \flat 7.1: B \flat -B \flat -A-G+*-G+*-A

9: [C]-D

11: [C]-D-E \flat -D-B \flat -D-[C]-A

2RC, 3RC

SS	9ae C-D-E \flat	2RC E \flat -E \flat x7	9db D	2RC D-D x7	9db D	1.1 3RC E \flat -E \flat -E \flat -D- D-D x3	1.1 2RC E \flat -E \flat -D-D x3	2RC D-D x7	9db D
YG	9ae [C]-D-E \flat	2RC E \flat -E \flat x6	9db D	9db D x7			1.1 2RC E \flat -E \flat -D-D	1.1 E \flat -D x2	9db D x7

SS	11ae' [C]-D-E \flat -D-B \flat -D- [C]-A-G+*-G+*-A- B \flat								
YG	11ae'	9	5de	[2RC including finger articulation] A \flat x7					
	[C]-D-E \flat -D-B \flat -D- [C]-A-G+*-G+*-A-B \flat	[C]-D	[B \flat -]C-A \flat						

SS	2RC B \flat -B \flat x7	3RC D-D-D	2RC B \flat -B \flat x7 kan, x7 otsu, x7 kan	3.2ab/ae' B \flat -D-B \flat - B \flat -B \flat	2RC B \flat -B \flat x7	3.2 D-B \flat x8	2RC B \flat -B \flat x7 kan, x7 otsu, x7 kan
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SS	7.1db A-G+*-G+*-A x2	7db'/de' A-G+*-G+* x6	3RC A-A-A x8
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Dan 9

Pitch and rhythm cells

3.2: D-B \flat

5: C-A \flat -A \flat -A \flat

7: B \flat -B \flat -A-G+*-G+*-A-B \flat

7.1: B \flat -B \flat -A-G+*-G+*-A

9: [C]-D

11: [C]-D-E \flat -D-B \flat -D-[C]-A

13: C-C-B \flat

2RC, 3RC

AR	13 C-C-B \flat x2 (3)	9 [C]-D	5de C-A \flat	5db' & 2RC A \flat -A \flat x7
SS	13 C-C-B \flat x3	2RC B \flat -B \flat x21	9 [C]-D	5de [B \flat -]C-A \flat

AR	11ae' [C]-D-E \flat -D-B \flat - D-[C]-A-G+*- G+*-A-B \flat					
SS	13 C-C-B \flat x3	2RC B \flat -B \flat x7	11ae' [C]-D-E \flat -D-B \flat - D-[C]-A-G+*- G+*-A-B \flat	2RC B \flat -B \flat x7	3.2ab/ae' B \flat -D-B \flat -B \flat -B \flat x3	2RC B \flat -B \flat x7

AR	7de = 7.1 7de' & 2RC					
SS	B \flat -B \flat -A-G+*- G+*-A x3	B \flat -B \flat x7	3.2 D-B \flat x8	7.1db A-G+*-G+*-A x2	7db'/de' A-G+*-G+* x6	3RC A-A-A x8

Dan 10**Pitch and rhythm cells**3.2: D-B \flat 4.2: G-A- E \flat -E \flat -E \flat 7: B \flat -B \flat -A-G+*-G+*-A-B \flat 7.1: B \flat -B \flat -A-G+*-G+*-A7.1.1: B \flat -A-G+*-G+*-A8: B \flat -B \flat -A-G+*-G+*-A-D-G-A-E \flat -E \flat -E \flat -G8.1: C-A \flat -A \flat -G-A-E \flat -E \flat -E \flat -G

3RC, 4RC

KY						
AR					RC C x10 (8)	3.2de D (koro)
YG	7.1.1 B \flat (koro)-A-G+*- G+*-A	7.1.1 B \flat -A-G+*-G+*-A		3.2 retrograde B \flat -D	RC C x8	3.2de D (koro)
SS	7.1.1 B \flat (koro)-A-G+*- G+*-A		7db B \flat -A-G+*-G+*-A- B \flat	3de = 3.2 D-B \flat x3	RC C x8	3.2de D x8

KY					3.2 D-B \flat x3
AR	3.2 & 4RC D-D-D-D-B \flat -B \flat - B \flat -B \flat x3				
YG	3.2 & 4RC D-D-D-D-C-C-C- C x2 [C=B \flat ?]	3.2 D (koro)-B \flat (koro) x2	3.2 D-B \flat x3	3db' D	
SS	3.2 & 4RC D-D-D-D-B \flat -B \flat - B \flat -B \flat x3	3.2 D (koro)-B \flat (koro) x3	3.2 D-B \flat x3	3db' D	

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KY	7.1.1 B \flat (koro)-A-G+*- G+*-A	7.1.1 B \flat -A-G+*-G+*-A	7.1.1sb D (koro)-A-G+*- G+*-A	7.1.1 B \flat -A-G+*-G+*-A		
AR						
YG	7.1.1 B \flat (koro)-A-G+*- G+*-A					
SS	7.1.1 B \flat (koro)-A-G+*- G+*-A	7.1.1 B \flat -A-G+*-G+*-A x5		7.1.1ae B \flat (koro)-A-G+*- G+*-A-G+*-G+*	7db'/de' A-G+*-G+* x3	3RC A-A-A x7

KY	7de'' B \flat	7.1 B \flat -B \flat -A-G+*- G+*-A	7.1.1 B \flat -A-G+*-G+*- A	7de'' B \flat	7.1ae B \flat -B \flat -A-G+*- G+*-A-D-G-A	8db E \flat -E \flat -E \flat -G	7.1ae B \flat -B \flat -A-G+*- G+*-A-D-G-A	8db E \flat -E \flat -E \flat -G
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KY	8.1 C-A \flat -A \flat -G-A- E \flat -E \flat -E \flat -G	8.1de C-A \flat -A \flat -G-A- E \flat -E \flat -E \flat	8db/de or 4.2 G-A-E \flat -E \flat -E \flat x2	4.2dm/de G-E \flat -E \flat x2	3RC G-G-G x2
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Dan II

Pitch and rhythm cells

1.1: E♭-D

3.2: D-B♭

7.1.1: B♭-A-G+*-G+*-A

14: C-A♭-C-D-E♭

15: [C]-D-B♭-A-G+*-G+*-A-B♭-A

2RC

YG							
SS	2RC <i>E♭-E♭</i> x7	1.1db D	14 C-A♭-C-D-E♭	2RC <i>E♭-E♭</i> x7	1.1db D	2RC <i>E♭-E♭</i> x7	1.1db D

YG	15 [C]-D-B♭-A-G+*- G+*-A-B♭-A	15sb or 7.1.1ae' B♭ (koro)-A-G+*- G+*-A-B♭-A	15sb' D (koro)-A-G+*- G+*-A-B♭-A x3	7.1.1 B♭ (koro)-A-G+*- G+*-A	7db or 15db/de B♭-A-G+*-G+*-A- B♭
SS	15 [C]-D-B♭-A-G+*- G+*-A-B♭-A	15sb or 7.1.1ae' B♭ (koro)-A-G+*- G+*-A-B♭-A	15sb' D (koro)-A-G+*- G+*-A-B♭-A x3	7.1.1 B♭ (koro)-A-G+*- G+*-A	7db or 15db/de B♭-A-G+*-G+*-A- B♭

YG		
SS	3.2 <i>D-B♭</i> x3	RC C x8

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Dan 12

Pitch and rhythm cells

1: E \flat -G-D

2: D \flat *-D

3: D-B \flat -E \flat -E \flat -D

4.2: G-A-E \flat -E \flat -E \flat

9: [C]-D

11: [C]-D-E \flat -D-B \flat -D-[C]-A

11.1: [C]-D-E \flat -D-B \flat -D-[C]-A-G+*-G+*-A

15: [C]-D-B \flat -A-G+*-G+*-A-B \flat -A

2RC

KY			
AR	9ae [C]-D-E \flat	2RC E \flat -E \flat x7	9db D
YG	9ae [C]-D-E \flat	2RC E \flat -E \flat x6	9db D
SS	9ae [C]-D-E \flat	2RC E \flat -E \flat x7	9db D

KY									
AR	15de [C]-D-B \flat -A- G+*-G+*-A	11.1db D-B \flat -D-[C]-A- G+*-G+*-A	11.1db/se D-B \flat -D-[C]- A-G+*-G+*-E \flat	11.1db'/se or 7.1db/se A-G+*-G+*- E \flat x3	2RC E \flat -E \flat x7				9db D
YG	15de [C]-D-B \flat -A- G+*-G+*-A	11.1db D-B \flat -D-[C]-A- G+*-G+*-A	11.1db/se D-B \flat -D-[C]- A-G+*-G+*-E \flat	11.1db'/se or 7.1db/se A-G+*-G+*- E \flat x2	2RC E \flat -E \flat x7	4.2dm/de G-E \flat -E \flat x3	2RC G-G	2RC E \flat -E \flat x7	9db D
SS	15de [C]-D-B \flat -A- G+*-G+*-A	11.1db D-B \flat -D-[C]-A- G+*-G+*-A x2	11.1db/se D-B \flat -D-[C]- A-G+*-G+*-E \flat	11.1db'/se or 7.1db/se A-G+*-G+*- E \flat x3	2RC E \flat -E \flat x7	4.2dm/de G-E \flat -E \flat x3	2RC G-G	2RC E \flat -E \flat x7	9db D

KY	9ae'' [C]-D-D-Eb-Eb-D	9ae''' [C]-D-D-Eb-G-Eb-Eb-D
AR		9ae''' [C]-D-D-Eb-G-Eb-Eb-D
YG	9ae'' [C]-D-D-Eb-Eb-D	9ae''' [C]-D-D-Eb-G-Eb-Eb-D
SS	9ae'' [C]-D-D-Eb-Eb-D	9ae''' [C]-D-D-Eb-G-Eb-Eb-D x3

KY	2 Db*-D x3	2db D	2 Db*-D x3	2db D			
AR	2 Db*-D x3	2db D		2 Db*-D x3			
YG	2 Db*-D x3	2db D					
SS	2 Db*-D x3	2db D	2 Db*-D x3	2db D	2 Db*-D x3	2db D	2 Db*-D x3

KY	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D			
AR	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D (omitted)			
YG	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D	2am' Db*-Eb-Eb-Eb-D				
SS	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D	2am' Db*-Eb-Eb-Eb-D	2am'' Db*-Eb-G-D	2am' Db*-Eb-Eb-Eb-D

KY	3 D-Bb-Eb-Eb-D x2	3db Eb-Eb-D x3	3.2 D-Bb	2am Db*-Eb-D	2db D x2	1db' G-D
AR	3 D-Bb-Eb-Eb-D		3.2 D-Bb	2am Db*-Eb-D		1db' G-D
YG	3 D-Bb-Eb-Eb-D		3.2 D-Bb	2am Db*-Eb-D		1db' G-D
SS	3 D-Bb-Eb-Eb-D x3		3.2 D-Bb	2am Db*-Eb-D		1db' G-D

APPENDIX C: PITCH CELL ANALYSIS FOR EMBEDDED FIGURES

For each *dan*, all occurring pitch cells are given. They are aligned vertically to match intervallic/pitch patterns wherever possible. See example below.

$D\flat_2^*$ = *koro-koro* tremolo effect on approximately $D\flat_2$

$G+_2^*$ = a tone played between G_2 and $A\flat_2$, using the fingering *ichi san no u* (AR) or *u dai meri* (KY)

The left column gives cell numbers for main pitch cells. Some variants are indicated with “v,” e.g., 3v.

Versions in which cells appear are given in the second column from the right:

KY = Kurahashi Yodo I score

AR = Aoki Reibo II score and recording

YG = Yamaguchi Gorō recording

SS = Satō Seibi score

all = all of the above

The far right column shows corresponding m2-M3 (*miyakobushi*) trichords on D, G, or A. (NT = non-trichord tone, [] = absent notes)

The note C is an NT when it is a preparatory or passing tone (notated as either a sixteenth-note preparation to D or a grace note). It is indicated as: (C).

<i>Dan 1</i> pitch cells				Versions	m2-M3 trichord
1		$E\flat_2$	G_2 D_2	all	D-E \flat -G
2		$D\flat_2^*$	D_2	all	D-[E \flat -G] (NT: $D\flat^*$)
			D_2	all	D-[E \flat -G]
		$D\flat_2^*$ $E\flat_2$	D_2	all	D-E \flat -[G] (NT: $D\flat^*$)
		$D\flat_2^*$ $E\flat_2$ G_2	D_2	all	D-E \flat -G (NT: $D\flat^*$)
3	D_2 $B\flat_1$	$E\flat_2$	D_2	all	[A]-B \flat -D/ D-E \flat -[G]
		$E\flat_2$	D_2	KY, AR, SS	D-E \flat -[G]