

On the Names of Chinese Tones in Japanese

Alexander Zapryagaev

NRU Higher School of Economics (Moscow)

Together with the borrowing of the writing system and the mass adaptation of the lexicon, Japan also became aware of China's tonal distinctions. However, the names applied to these tones in modern Japanese do not seem to form a connected system, not matching exactly neither the most frequent ordinary readings of the same sinograms nor each of the formally defined types of *on*-readings. We will attempt to establish the processes that fixed the currently standard forms, specifically the unexpected reading *hyō* for the Level Tone (*píngshēng*).

The awareness of the Chinese tones must have come to Japan early. As early as 630 Japanese state was launching diplomatic missions to Tang China, where an everyday, spoken form of Chinese could be learnt. In the 8th century we encounter the widespread composition of Chinese poetry at the court (*Kaifūsō*, the earliest extant anthology, dates from 751), which requires tonal knowledge. The orthography of the poems in the so-called “alpha” section of the *Nihon Shoki* (720) (see [Miyake 2003, pp. 37-9]) has been suspected to contain the representation of Japanese pitch through the level and oblique tones of the Chinese characters.

The key role of tones, however, was in the Buddhist chanting. While doctrinal texts are normally reset in *kanbun-kundoku* [Zisk 2018], the *dhāraṇī*, or mystical formulae, require pronunciation as exact as possible, and it was specifically for the pronunciation of those that the production of tones was being studied vigorously [de Boer 2010, Vol. II, pp. 350ff.].

It would be expected for the fixed names of the tones themselves to be established in Japan. And yet the terms currently used in Japan do not conform to the standard systems (Table 1):

#	1	2	3	4
Modern <i>pǔtōnghuà</i> reading (<i>pīnyīn</i>)	<i>píng</i> (Level)	<i>shǎng</i> (Rising)	<i>qù</i> (Falling)	<i>rù</i> (Entering)
EMC (Pulleyblank- Miyake)	biəŋ ⁱ	ḍziəŋX	k ^{hiə} H	ŋip [̃]
Formal <i>go-on</i>	(byaũ)	zyaũ	(ko)	nipu
Formal <i>kan-on</i>	peĩ	syaũ	kyo	zipu
Current Japanese tone names	hyō-shō (*pyaũ)	jō-shō (*zyaũ)	kyo-shō (*kyo)	nis-shō (*nipu)

Table 1. Names of Chinese tones

Here *Jōyō kanji* readings are in **bold**, parentheses marking rare or unique among these.

The standard readings for tone names do not correspond to everyday usage, both for *hyō* (beside the name of the tone the reading is known in some era names), and the fourth tone *nis-*, contradicting the general tendency of the element *nyū* “to enter” not to assimilate to *niQ-* before voiceless consonants.

Yet, the readings also do not match the formal *kan-on* (which should have been expected, were the names of the tones formed in the sphere of formal Chinese poetry creators at court) or the *go-on* (if they emerged in Buddhist circles, which seems more probable). The reading *hyō* for *píngshēng* is most problematic, as the awareness of both the *kan-on* reading *hei* < *peĩ* (as in *Gen-pei* “Minamoto and Taira”; now a primary reading for this character) and the *go-on* reading *byō* < *byaũ* (as in *byōdō* “equality”, originally a Buddhist term) probably never lapsed.

Indeed, the evidence of 16th century Portuguese *Vocabulário da Lingoa de Iapam* and the grammars of João Rodrigues confirm that while the modern names of the eras like *Tenpyō*

might be a later innovation, *hyō* as a name of the tone came earlier; while in the dictionary the character is read as *hei* or *byō*, *hyō* appears as a tone name in the discussion of Chinese poetic metrics.

The phenomenon of combining go-on and kan-on elements in the initial and final of the same segment is known and not limited to *pyaũ* “level”; [Wenck 1957] comments the same happens specifically with several characters using “level” as phonetic element, such as *píng* “to evaluate” and *píng* “apple”, both also rendered in Japanese as *hyō*. It is possible to propose *pyaũ* as borrowed from some intermediate stage of Middle Chinese, after [b] > [pʰ], but with [j] intact. However, any explanation has to account for the strange retention of *pyaũ* specifically in the context of tones despite the constant competition from the “correct” *kan-on* and *go-on*.

We propose a possible reason for *pyaũ*-retention in the nature of tone names themselves. In Chinese, the names of all tones correspond to the tone itself: [biəŋ˨˩] is level, [d͡ziəŋ˨˩˦] is rising, [kʰiəŋ˨˩˦] is falling, [ŋ̌p̌] ends with a stop. Furthermore, in Modern Mandarin, where the form continuing [d͡ziəŋ˨˩˦], naturally evolved into *shàng*, the name of the tone is rendered *shǎng* in order to specifically retain this property. This explanation immediately covers the morpheme for “entering” as well: the reading *nis-sei* emphasizes the final stop, concealed in the potential ***nyū-sei*.

Now an understanding is required as to for what reason could *pyaũ* be considered “more level” than **byaũ*. The reason probably lies in the tonal split of Late Middle Chinese (LMC). The Japanese were sufficiently aware of it happening [de Boer 2010: 386], and the logic as outlined below could apply.

The Middle Chinese initials according to their behaviour in during the split are classified as given in Table 2:

Category name	Definition	EMC	LMC
Clear	voiceless	[p]	[p]
Second Clear	voiceless aspirated	[pʰ]	[pʰ]
Muddy	voiced	[b]	[pʰ]
Second Muddy	nasals	[m]	[ᵐb] or [m], conditioned by additional factors

Table 2. Categories of initials

To simplify, the split involved the retention of clear initials together with the devoicing and denasalization of muddy, leading to a changed tonal contour.

The word for “level”, [biəŋ˨˩], contains a voiced [b] and thus undergoes a contour change: [biəŋ˨˩] level > [pʰiəŋ˨˩˦] rising. This allows the following line of thought: the name of Level Tone should be read level (with contour shifted due to the muddy consonant). However, the *go-on* reading *byaũ* [ᵐbyaũ] does not contain the expected [pʰ] reading of the initial (*go-on* being based on pre-LMC stages). The desire to retain the tonal contour of the original could lead to the substitution of the *kan-on* consonant.

The matter of unusual tone name readings still awaits further study. Further analysis of manuscripts referring to the tones and containing sound glosses, preferably with voicing distinctions marked, is required to achieve a clear picture.

Bibliography

[de Boer 2010] De Boer E. M. *The Historical Development of Japanese Tone*. Otto Harrassowitz, 2010.

[Miyake 2003] Miyake M. H. *Old Japanese: A Phonetic Reconstruction*. Routledge, 2003.

[Wenck 1957] Wenck, G. *Die Phonetik des Sinojapanischen*. Otto Harassowitz, 1957.

[Zisk 2018] Zisk, M. “Middle Chinese Loan Translations and Derivations in Japanese” in *Japanese/Korean Linguistics* 24 (2018)