

THE ORDER OF THE COLUMNS
IN THE JAPANESE KANA SYLLABARY:
A STUDY IN HISTORICAL PHONOLOGY

Ivan R.V. RUMÁNEK

Institute of Oriental Studies, Slovak Academy of Sciences,
Klemensova 19, 813 64 Bratislava, Slovakia
e-mail: azia.lingua@stonline.sk

The Japanese kana script is derived in its form from Chinese characters. But the order of the kana letters is based on that used generally in scripts of India. The study centres on the historical background of this order and searches for historical values of the old Japanese sounds as reflected in this order.

Key words: syllabic writing, Japanese historical phonology, “semantic transcription”, delabialization, Indian system of writing.

The Japanese script basically consists of three parts, namely the Chinese characters (kanji), the hiragana and the katakana. The latter two are syllabaries, the former is a logographic script originated in China. The adoption of the kanji by the Japanese took several centuries, starting probably with the first official contacts of the Yamato court with the re-unified China at the end of the 6th century. It was used to record literature written in Chinese, like official chronicles and diplomatic correspondence, but gradually faced the challenge of how to put Japanese names and words down to script, which led to the phonetic use of the Chinese characters.

This innovation was nothing new, and definitely it was not any discovery of the Japanese. The phonetic use of the characters had long been a practice back in China, especially in the sphere of Buddhism where it was one of the approaches to recording the foreign terms and names of the Buddhist deities, places, utensils and elements of architecture. The Chinese Buddhists, or rather the translators of the Buddhist scriptures, chose either of the two possible ways: translation or phonetic transcription. The translation – or I would rather use the term “semantic transcription” – tried to reflect the formant parts of Indian words in their Chinese counterparts (ālayavijñāna – zongshi 藏識, lit. “store-awareness”). The phonetic transcription aimed at putting down the pronunciation by means of those characters the reading of which would

correspond most closely to the original pronunciation in the Indian language (Sanskrit or Pali in their classical or contemporary pronunciations). Thus there is Amito-fo 阿弥陀仏 for Amitābha-buddha.

The first scribes in Japan are believed to have been Koreans who sought asylum in Japan, many of whom were highly educated people well versed in Chinese-based literacy – a culture thitherto unknown in Japan. The high probability of the Korean provenance of some of the traditional ways of recording Japanese is discussed by Young-hee Lee who brings evidence that the traditional writing of some place-names might be influenced by Korean. For example, “Asuka”, one of the ancient imperial sites, has two ways of writing, 明日香 and 飛鳥. The latter probably is an original *kake-kotoba* (a constant epithet) to this place-name, without, however, any apparent logics as to any connection of its meaning (flying bird) or sound (*hichou* or *tobu-tori*) with the meaning of the place-name. If, however, read in Old Korean, “flying bird” becomes “*nar-se*” which might be a homonymical pun meaning also “the night is dawning” and the logics comes much clearer, as one of the possible etymologies of “Asuka”, both via Old Korean and Old Japanese, is “morning place, the place of dawn”.¹

Basically, the Korean scribes, and their Japanese followers later on, apparently used, for the recording of Japanese, that is non-Chinese, words, the same techniques as those applied to the Indian terms. The name of the ancient capital Nara can serve as the best representative of them, as there are two ways of writing it. The first one is a “semantic transcription” based on the lexical meaning of the place-name (actually, only one of the possible meanings, as there are several explanations as to its origin): 平城京 is traditionally read “*Heijoukyou*”, but according to some scholars like Professor Ii Haruki of Osaka University, it is nothing else but a Chinese rendering of the phrase “Nara no miyako” – the Imperial city of Nara. The first character is a semantic transcription of “nara” as “flat”, the remaining two meaning “city” and “capital”. The other way of writing Nara uses Chinese characters in their purely phonetic value: 奈良 as “*Na-ra*” – a phonetic transcription. The semantic transcription is used in connection with the Nara period (710-784) when Nara was the seat of the Emperors, while the phonetic transcription is the usual, generally used rendering of the name up to this day.

The case of Nara at the same time shows how various ways of writing the same word could, and indeed did, add to the versatility of the Japanese system of writing and the richness of shades of expression inherent in the script itself, without any actual connection with the spoken tongue.

The recording of Japanese by means of the Chinese script started with the more or less occasional cases like place-names and personal names, expanded to the sphere of poetry which was quoted in the chronicles, and from poetry it was only a

¹ Lee, Young-hee, pp. 189-197.

little step away from the full recording of the language. The first example of a continuous Japanese text in Chinese characters is the Man'yōshū 万葉集, a vast collection of poetry from the latter half of the 8th century. This system of writing was named man'yō-gana, after the name of the anthology, and used the characters indiscriminately either in the semantic, or the phonetic, value. This of course led to confusions, as it was very difficult to know which character should be taken as semantic, and which as phonetic.² It might have been this confusion, which led, over a century later, to the tendency to distinguish between the two: the characters in their semantic value (and read by the corresponding Japanese counterpart of the word – the KUN reading) preserved their normal graphical form, while those used phonetically (that is, read in their phonetic, Sino-Japanese way – the ON reading) gradually acquired a more and more simplified graphical form.

This simplification stemmed from the Chinese practice of calligraphy, in which the characters acquired several graphic versions according to the style in which the whole text was written. The Heian period Japan (794-1195) revelled in the elegant falling lines of the *sōsho* – the grass style, in which most of the strokes of an individual character were melted together into a code of lines and strokes, and the letters, placed one under the other in vertical columns, were connected together much in a way of how we write nowadays in the West, the result of which was a graphic practice of a nearly esoteric character, as the reader would sooner have to “guess”, rather than “read”, what was written on the fine paper of a scroll or a letter before his eyes. These simplified forms of characters based on the “grass” form came to be used for the phonetic transcription of the syllables of Japanese words, while the “fuller” forms tended to be used to denote words. This distinction stood behind the system known in Japanese till this day, for it was the hiragana syllabary that evolved from these phonetically used simplified characters.

The term “kana” itself originally served as opposition to the Chinese texts. In the *Kokinshū* anthology (cca 920) we find the designations “mana” 真名 for a text in Chinese, and “kana” 仮名 for that in Japanese. The terms can be etymologized as “the genuine script” and “the borrowed script”, respectively, and while the former went out of usage, the latter came to be used to name the two systems of graphical representation of the Japanese syllabic phonology.

The Japanese Buddhist monk Kuukai 空海 (774-835) is generally believed to have stood behind the development³ of the Chinese characters into what later

² According to Lee, there might even be a connection between the origin of man'yō-gana and the Korean writing system of (*r*)*idū*: “なぜかといえば、漢字の音訓を徹底的にごっちゃまぜにして読む読み方、書き方が吏読であるからです。” (It is because the way of reading and writing by means of a complete medley of the ON (= Chinese-based) reading and the KUN (vernacular-based) reading of the Chinese characters, is actually IDU.) Lee, p. 199.

³ Krupa, Genzor, p. 300.

became the hiragana, and duly venerated for it, especially in the Kinai area where his activities were centred in his lifetime. His nearly two year stay in China (804-806) highly influenced not only his own life but Japanese culture in general. He brought to Japan the esoteric teaching of the Shingon sect, introduced two basic mandalas, founded two major and several minor temples, but what is most relevant for us now is his excellence in linguistics and literacy. He was probably the first Japanese ever to master Sanskrit, he made comparative studies of Chinese and Sanskrit phonology, produced Sino-Japanese dictionaries and his virtue of calligraphy became proverbial. And it is especially to the latter that can be ascribed the close connection of the phonetic script (what later developed to the hiragana) with the graphic "grass style" of the Chinese characters.

Putting aside the question whether the katakana was really developed by Saichou 最澄, Kuukai's contemporary (767-822), head of the Tendai sect based on the Mt Hiei above Kyoto, and whether the existence of two parallel syllabary systems is an indirect continuation of the initial rivalry between the two sects whose respective founders had actually been to China at the same time (Saichou's stay 804-805), the general character of the syllabary seems much more due to Kuukai than to Saichou. The ancient Buddhist poem which includes all the syllables necessary for a graphic representation of the Japanese language, is ascribed, by the tradition, to Kuukai. It is called "iroha-uta":⁴

Iro fa nifofedo, / tirinuru wo. / waga yo tare zo / tsune naramu? / u-wi no okuyama / kefu koete / asaki yume mizi / wefi mo sezu.

This poem consists of 47 syllables. It is written in the traditional Japanese syllabic meter, based on alternating 7 and 5 syllabic lines, in a form of the "imayou" songs popular in the Heian period. Had the syllabic rhythm been followed strictly, the resulting number of syllables would be 48. The standard number of syllables in the Japanese language being 47, this discrepancy was solved by a trick in the third line (*waga yo tare zo*) which only has six syllables instead of the supposed seven – a slight irregularity not uncommon in classical poetry. So the resulting form has all the syllables traditionally necessary for writing Japanese. From the "ideal" gojuuon (50 sounds) pattern, it lacks the three syllabic combinations of "yi", "ye", and "wu", which were not regarded as phonologically distinct, as well as the final nasal element -N, which must have developed (or the awareness of the necessity of its graphical representation anyway) at some later stage of the language.

⁴ In the transcription of classical Japanese, I use those phonetic values of the phonemes which correspond to the phonological system reflected in the graphical system of the syllabaries, thus transcribing the present-day "h" as "f" (actually a bilabial [Φ]), preserving this "f" also in the intersyllabic position where it turned soon, probably in the very time of the formation of the syllabaries, into a "w". I also preserve the phonological identities of "s" and "t" in front of "i" (or "e", "u", respectively), as well as combinations like "wi, we" etc.

The tradition of Kuukai's authorship is challenged by the fact that the oldest extant record of the iroha-uta is from 1079 and it is written in the man'yōgana⁵. Nevertheless, the very existence of such a tradition can be seen as a reflection of the general awareness in Japan of its culture's indebtedness to Kukai for his close involvement with elaborating the Japanese graphic system.

The order of syllables in the iroha-uta was used in the similar way as alphabetical order is used in the West, but there was the alternative order to the syllabary, which prevailed and has been a standard for centuries. This is clearly based on the traditional Indian order of letters, which is a fact obviously connected with Kuukai's command of Sanskrit.

In the arrangement of the syllables, kana basically follows the the Indian scripts in its order of the place of articulation of Sanskrit sounds. The Indian system starts with plosive consonants, in the order from the back of the oral cavity towards its front (guttural, palatal, retroflex, dental, labial), followed by liquids and sibilants. The plosives start from the voiceless, the voiceless aspirate, the voiced, the voiced aspirate, to the nasal (e.g. K, KH, G, GH, NG). The liquids are R, L, V (bilabial), the sibilants Ś (palatal), SH (retroflex), S (dental), and the voiced H. Each consonant forms one "column", within which the arrangement of the syllables follows the vowel order A – I – U – R (each short and long) – E – AI – O – AU. The very first column of the system is occupied by vowels, as supposed to contain the initial glottal stop, the backmost of all consonants. Furthermore, the syllables could end in finals like –h (voiceless), –m (nasal) and start in various combinations of consonants.

The Japanese phonological system was much plainer than the Sanskrit one. There were no retroflex consonants. Aspirates and some nasals were absent. There was no phonological distinction between R and L, and no aspirate of the H kind (the modern Japanese H appeared comparatively recently, see below). Voiced counterparts to voiceless consonants did not achieve separate letters. The voicing was to be guessed from the context – a feature which only came to a more satisfactory solution in the Kamakura period with the introduction of the "nigori" mark which designated the voicing of the syllable's consonant.

From the order of the columns in kana, and from its general system, several conclusions can be drawn regarding the quality of the respective sounds in old Japanese. The correspondence of kana and the Indian system is as follows (the values of the Japanese sounds are given in the modern version, their historical value discussed below):

INDIAN: A, KA, KHA, GA, GHA, NGA, CA, CHA, JA, JHA, ÑA, TA, THA, DA, DHA,
 KANA: A, KA, x (GA) x x SA x (ZA) x x x x x x

⁵ Kogo jiten, pp. 154-155.

INDIAN: NA, TA, THA, DA, DHA, NA, PA, PHA, BA, BHA, MA, YA, RA, LA, VA,
KANA: x TA x (DA) x NA HA x (BA) x MA YA \RA/ WA

INDIAN: ŚA, SHA, SA, HA
KANA: x x x x

It is a well-known discrepancy, troubling scholars for decades, nay centuries, why the Japanese columns SA (ZA) are arranged in the position corresponding to the Sanskrit CA (CHA, JA, JHA) series, and not in the place against the Indian SA. What led Kuukai, or some other founder of this system, to this order? The most plausible explanation is that the sound we now know as [s] (or [ś] in its palatalized version before -i) was then an affricate of a [ts] / [tś] kind. This could also account for those Sino-Japanese readings which have versions of initial S- and CH-, like 茶 (= tea) is read both SA and CHA. SA could correspond to the Southern Chinese pronunciation [ts'a], as is general there until this day (with the absence of the distinction between the standard Chinese ZH and Z, CH and C, the Southern dialects ending up with the latter member of the pair). On the other hand, the Sino-Japanese SA reading might well correspond to a Chinese CHA pronunciation, since this might have been the closest possible representation through any genuine Japanese sound (because what we now know as Japanese CH, i. e. the palatalization of T before I, fully developed only later), whether SA was actually pronounced [tsa] or [tśa], it does not matter. Nevertheless, it could have been the voiced counterpart that was conclusive for the position corresponding to the Sanskrit palatals. Japanese [z] is "usually preceded by a weak plosive element",⁶ and in the palatalized position before -i, its sound might have been as close to the articulation of the Sanskrit voiced counterpart as any other Japanese sound of the period. And it might have been exactly this allophone that led the founder of the syllabary to place the "SA-column" in the position of Sanskrit CA-column. As Yoshitake pointed out, "It is, of course, impossible to conclude from this alone that the Japanese s was pronounced [tś] in the tenth century as some scholars seem to believe, for it may simply be for convenience that the author of the Gojuondzu placed the s-syllables in that particulate position".⁷ The "convenience" here mentioned might have been the otherwise absent set of sibilants in Japanese. Sanskrit had three columns of voiceless sibilants and one column of a voiced aspirate, whereas Japanese only had the SA/ZA column. It seems to be beyond any doubt that the palatalization before -i should have been at its most conspicuous exactly with these two sounds (plus in NI, probably), and various evidence like remnants in dialects also testifies to their palatalization before -e as well. Thus, if we take into consideration all the variety of phonetic realizations of the sounds in the

⁶ Yoshitake, p. 52.

⁷ Yoshitake, p. 52.

SA/ZA column, it is by no means unimaginable that the founder of the syllabary should have been confused as to which position should be best for a sound which corresponds to Sanskrit S as well as Ś as well as J (or indeed to C, provided the Japanese S was affricated.). With this broad variety, it could really have been placed anywhere, and it might appear to be better to fit it in against the Sanskrit palatals to fill the broad gap between KA and TA, rather than at the end at the place of the sibilants.

Another very interesting point is the lack of distinction between voiceless and voiced consonants. This was probably due to the fact that a lot of the voiced consonants occurred in circumstances where they provided for little more than a phonetic variant of the basic voiceless counterpart. The awareness must have been similar to Korean in which, too, voiced variants appear freely when in intervocalic position. The Japanese voicing takes place not only in compounds but also in suffixes and particles, like the particle *-ga* hardly ever having existed voiceless (in the historic period anyway), and the verbal suffixes *-ba* and *-domo* became voiced very early on. However, some of the voicings we now consider general, like the name of the god *Izanagi*, are thought to have originally been voiceless in the Nara period (*Izanaki*), with the voicing appearing only later. In the Heian period, the voicing was also accompanied by a pre-nasalization which sometimes led to a full nasalization (*afarebu* > *awaremu*), and further systematic voicings are supposed for Kamakura period when they indeed got their definitive graphic representation maybe also due to their growing conspicuousness and more frequent occurrence. This tendency shows that, despite of the fact that voicing was no doubt present in Japanese, the reason why it was in a way ignored by the author of the syllabary might have been its lesser frequency in the language of the 9th century than in what is known from later periods.

My supposition, mentioned above in the case of the SA/ZA column, that it was the quality of the voiced variant, rather than the voiceless, which seems to have been decisive in the placing of a particular column in its particular position in the system, also proves valid in the case of the HA/BA column. It is generally acknowledged that voiceless H developed from the original P in a centuries-long process of a gradual delabialization. It still could have been a P in the beginning of the Nara period, yet for the time of the formation of the syllabary, the delabialized [φ] is generally acknowledged, for which a new voiced variant developed in the intervocalic position – [w], which, in its further development, led to a certain degree of merging with the original W phoneme. Nevertheless, the original voiced counterpart, B, remained intact throughout the known history of Japanese. And it was this voiced version which apparently served as representative.

From the position of columns within the system of the Japanese kana syllabary, several results on the phonetic character of the sounds can be drawn

regarding the period of its formation in the first half of the Heian period, if compared with the system of the Indian script based on Sanskrit.

A further research of the level of the Indian graphic and phonetic studies in the China of those days, as well as the state of correlation between the Chinese and Indian (Sanskrit, Pali, Prakrit) phonological systems could extend the view, yet it is far beyond the limits of the here-presented study.

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