ON THE AUTHENTICITY OF
ON-READINGS IN SINO-JAPANESE*

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Introductory

The approach to the phonetic history of Chinese is inevitably conditioned by the nature of the ideographic script and must differ from the study of languages written with an alphabet. In the study of languages written with an alphabet a phoneme has been represented either directly by a Roman letter or by a so-called phonetic symbol which is as a graph identical with the form of a Roman letter[1]. But whatever the definition of the term, the phoneme must establish itself as a unit of speech sound of a given language in terms of function. Naturally, the functional value of one and the same sound varies from language to language. When one uses the term *phoneme,* one must postulate the empirical antecedence of sound to phoneme on the one hand, and the logical antecedence of phoneme to sound on the other. Thus phonology can be independent of whether the phonetic value of a phoneme in the past can be reconstructed in the present. From the peculiar nature of the Chinese script we may understand how traditional Chinese scholars like Ch'en Li (in his *Ch'ie yun k'ao*) have reconstructed phonological systems merely by grouping and classifying characters. Basing themselves on the ancient rhyme-dictionaries, they were able, exclusively from the structural point of view, to diagrammatise every constituent part of each word,[2] such as the opposition of the points of articulation, the

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[1] A phoneme can be symbolised with a conventional sign. In its nature this symbolisation should resemble that used for chemical elements (e.g, H for hydrogen) or vitamins (e.g. vitamin B), provided that the concept of a phoneme is understood in terms of human activities (as against nature). However, has the relation between a so-called phonetic symbol and a Roman letter not been tacitly understood as φύσει? In my opinion, the concept of a phoneme in the tradition of Western scholarship should be seen against the background of the alphabet, since in the last analysis a phoneme is regarded as an abstraction in view of the ideal of the alphabet. So-called phonemics is nothing else but the study of the alphabet from the functional point of view. A phoneme in itself can be broken up into smaller units termed by modern phonologists 'distinctive features'. The historical background in China is different.

[2] To translate this into the terms of phonology, 'every distinctive feature of a minimum prosodical unit'.

contrast between oral and nasal, aspirate versus non-aspirate and so on, together with the differentiation of tones.[3]   This may indeed be regarded as a brilliant achievement of phonological analysis combining the phonemic aspect and the prosodical.   It is all the more remarkable as it was achieved long before phonology as a science of phonemes arose in the West.[4]   However, the phonological system of Chinese established in this way had basically nothing to do with the tangible realities of sounds, as a result of the fact that they are concealed behind characters.   In other words, Chinese characters caused phonetic history to be left out of consideration in China. If we wish to advance towards the historical description of phonetic changes, we must tackle the problem by reducing each class of characters to its corresponding sound in each dialect and by comparing various sources for the Chinese pronunciation.   It has long been recognised that for this reconstruction Sino-Japanese is a very important source.   In his unprecedented work Karlgren has in fact taken into account this material.   One can not praise too highly his pioneer effort, and by making some critical remarks I only hope to contribute to a closer collaboration between Sinologists and Japanologists.

I

The first item I want to touch upon is the different grammatical function of compounds in Sino-Japanese as compared with Chinese.   In Chinese a minimum prosodical unit is as a rule throughout its history *the smallest formal unit with its own meaning;* thus each Chinese character as individually representing such a unit deserves to be called an ideograph.   This is necessary if Chinese is to be termed a monosyllabic language.   But this of course does not mean that the Chinese vocabulary consists only of monosyllables.   On the contrary, many Chinese words were and are dissyllabic or polysyllabic.   Even in modern Mandarin, however, the proportion of semantically indivisible dissyllabic words such as *tungsi* (東西),[5] meaning 'thing', is exceedingly small in the vocabulary.   The majority of dissyllabic

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[3] In the *Yün ching*, in each *chuan* all phonemic features are classified on the horizontal rows and the prosodical on the vertical. Irrespective of the pronunciation in the past the reconstruction of which still remains open to argument in details, it is clear to the extent that the differentiation of *i têng, êr têng, san têng* and *sï têng* in each tone is of prosodical nature. Incidentally, the concept of *prosody* here, as opposed to that of *phoneme*, should be understood in terms of phonology.

[4] It may be interesting to note that in spite of the unparalleled scrupulosity in his analysis Twaddell's method (*On defining the phoneme*, 1935) resembles that of Chinese phonology. This may prove the wide scope of the latter, whether or not it was conscious of its own methodological significance.

[5] Cf. *tungsi* which means 'east and west', provided that the *chungnien* or stress accent is given on the second syllable in contradistinction to *túngsi*.   Incidentally, in Sino-Japanese, *toozai* is not used in the meaning of 'thing', but 'east and west' only.

words are loose units which can be easily broken up into their constituent parts. A unit in terms of syntax is not necessarily identical with a unit in terms of morphology.[6] In contrast to this, ninety-nine percent[7] of Sino-Japanese words are written with two Chinese characters, but they are not at all compounds in the same way as Chinese. In fact, they are single units no less morphological than syntactical. Although it is true that from the etymological point of view, or if one has a fair knowledge of characters, *toozai* (東西) can be analysed into *too* and *zai*, there are no such independent words in Japan as *too* meaning 'east' and *zai* meaning 'west'. We can only say that in the linguistic consciousness of Japanese speakers there are a number of words beginning with *too*[8] and also a number of words ending with *zai*. Besides, Chinese *si* (西) as a single character is read *sai* or *sei* in Sino-Japanese and not *zai* or *zei*.[9] In the case of *toozai*, however, original *sai* was welded into a morphological unit so that *s* of *sai* became voiced as a constituent part of a single word. This sonorisation is based on a regular rule which once operated in Ancient Japanese. This rule was that a voiceless initial became voiced if it was preceeded by a nasal final, whether labial, dental or guttural.[10] Thus we may infer that even in Japan *too* in *toozai* was once pronounced with the nasal in some way.[11]

This is not the time to list other examples, of which one may find any number. I hope, however, to have made it clear that we should distinguish between a Sino-Japanese word and the *on*-reading of each single character.

As is well known, Japanese, which is a language with a structure completely different from Chinese, was written with Chinese characters from about the sixth century onwards. However, not only were the purely Japanese words written—sometimes in a very arbitrary way—with Chinese characters, but at the same time a large number of Chinese words were learned by the Japanese together with the characters. Thus very often one single character was and is used to write both original Japanese words and Chinese loan-words. The pronunciation of each character as applicable to such loan-words is called *on*. Now it seems that Sinologists often believe

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[6] Provided that it is permissible to use these traditional terms. Cf. my contributions to Question A (2) in the *Proceedings to the seventh international congress of linguists.*

[7] The reader may take this figure as it is, viz. literally and not as rhetoric.

[8] Words beginning with 唐一, 答一, 統一, 逃一, 投一, 倒一, 等一, 燈一, 當一, 盗一, 島一, 黨一, 頭一, 騰一, 湯一, 陶一, etc.

[9] Hence, in the cases of the initial, e.g. *seihoo* (西方) *saihoojoodo* (西方浄土) etc.

[10] For instance, cf. examples such as *tooguu* (東宮—*tung kung*) on the one hand, and such as *chinzei* (鎮西—*chen si*) on the other. There are hundreds of examples of this kind. In traditional scholarship in Japan, as early as in the Heian period, this kind of sonorisation was termed *shindaku* (新濁) which itself roughly means *sonorisation*, in contradistinction to originally voiced sounds, termed *hondaku* (本濁="originally voiced").

[11] The pronunciation of the guttural final must once have been imitated in Japan as it appeared, but the ordinary Sino-Japanese pronunciation of *toozai* in the Heian period may have been *toŭⁿdzai* and *toogoku* (東國) *toŭᵑgoku* etc.

that the phonetic renderings[12] of such *on*-readings as listed in modern dictionaries like the *Daijiten* and the *Daijirin* go directly back to the time that these loan-words were first introduced into Japan. However, as we may see from these dictionaries themselves, these phonetic renderings have been theoretically established by the compilers and their predecessors (like Shirai Hirokage) from the Chinese *fanch'ie*.[13] Thus these readings do not provide conclusive evidence for the historical study of Chinese pronunciation. They are a vulgarisation of the *fanch'ie* given in the *K'angsi-tsitien*. In fact, these dictionaries themselves are nothing else but Japanese versions of the *K'angsi-tsitien*. One may find in both of them plenty of *on*-readings which have practically never been used in Japan. I should point out one other absurdity in these dictionaries. It is well known that two different phonetic systems of Chinese came to Ancient Japan in successive waves and that the pronunciation of the characters used for Chinese loan-words is accordingly differentiated into *Kan-on* and *Go-on*. However, any attempt to render all characters both in the *Kan-on* and the *Go-on* seems to be pointless, since in many cases either the *Kan-on* or the *Go-on* is exclusively chosen for reading all the words written with a particular character.[14] It is needless to say that we are not at liberty to pronounce any Sino-Japanese word in both ways. On the contrary, there is no alternative form of *toozei* for *toozai*, nor *chinzai* for *chinzei* (鎮西).

I hope to have shown that one should not take the reconstructed *on*-readings but Sino-Japanese vocabulary *as such* as a source for the phonetic history of Chinese. Of course, not all Sino-Japanese words can serve this purpose. Setting aside new coinages, the vast majority of them have been revived in modern times in order to express Western ideas with the aid of Chinese characters. In these cases and even in the traditional vocabulary as well, there has been a tendency to change the pronunciation by attempts to read afresh a Sino-Japanese word character by character,[15] or to replace the *Go-on* by the *Kan-on*,[16] unless the former alone has been used from of old in the case of a specific character in question.

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[12] By this I mean the *kana*-renderings, (which need not answer to the phonetic system of Modern Japanese).

[13] Those who are not Sinologues and might not know what *fanch'ie* is may consult Karlgren's *Philology and Ancient China* p. 67, where a clear explanation is given.

[14] Cf. the contrast between *ronri* (論理), *rompaku* (論駁), *ronkyo* (論拠), *ronnan* (論難), *ronsoo* (論争), *giron* (議論), *meiron* (名論), *guron* (愚論), *booron* (暴論), etc. and *rinri* (倫理), *jinrin* (人倫), and *gorin* (五倫), or *chinrin* (沈淪), and *rinraku* (淪落).

[15] Cf. e.g. *gappei* (合併) versus *goohoo* (合法). One of the funniest examples is the replacement in pronunciation of a word which is written 七顛八倒: i. e. *shittembattoo* > *shichi-tembattoo* > *shichi-ten-hattoo* > *shichi-ten-hachi-too*. Of these four, nowadays, the first one is expressive, the second is quite common, the third is tolerable and the forth is more or less clumsy. Cf. spelling pronunciation.

[16] Cf. e.g. *hossoku* versus *hassoku* (発足), *ryakuge* versus *riakkai* (略解) and a number of this kind. In many cases, however, the one form has already become obsolete. Thus, for instance, *jinen*, the *Goon* form of *shizen* (自然) is now only preserved in *jinenjoo* (自然生).

Here one may raise the question what *Go-on* and *Kan-on* really are. This is an important problem.   The historical background of the *Go-on* and the *Kan-on* is well-known.   The *Go-on* had already established itself in Japan so solidly before the *Kan-on* that continuous efforts were needed to gain currency for the Sino-Japanese pronunciation based upon the *Kan-on*. In the ninth century, imperial decrees were even promulgated for this purpose, which stated that the *Kan-on* ought to be standard.[17]   However, the *Go-on* were only replaced word by word over a long period.   Finally, they receded into the background to such an extent that the proportion of remaining *Go-on* words is now considerably smaller than that of ever increasing *Kan-on* words.   They no longer form a *system* of foreign loan-words, and have been able to be incorporated into the Japanese vernacular far more easily than the *Kan-on* words.

So far a very rough sketch of the historical background of *Kan-on* and *Go-on*.   But the history in itself of the *Kan-on* as a system of Sino-Japanese pronunciation is a problem that has not received its due attention.   From internal evidence in a number of ancient manuscripts and from external evidence as well, we find that scholars of the Heian period tried to standardise Sino-Japanese by means of the *Ch'ieyun* and their example has been followed in later centuries.[18]   It is because the *Kan-on* was derived from the *Ch'ie-yün* that the phonetic renderings in the *Daijiten* and the *Daijirin* normally agree with the old sources.   In fact, these dictionaries based their phonetic renderings strictly upon a very marked *historical* principle.   Theoretically, therefore, we are able to reconstruct the *Kan-on* from the moment of its introduction, from the *Ch'ie-yün*.   But if we want to reconstruct the *Ch'ie-yün* language in its turn from the so-called *Kan-on*, we are moving in a vicious circle.

Between the *Kan-on* and the *Go-on* we may easily see a system of phonetic correspondence.   However, phonetic laws cannot be applied mechanically, and there is no excuse for ignoring the evidence that exists on the pronunciation of individual characters.   We cannot expect complete regularity in the alternation between *Kan-on* and *Go-on*.   Actually, from the discrepancies between the *Daijiten* and the *Daijirin*, irregularities have been pointed out (see *Grammata Serica, passim*).   However, here each dictionary

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[17] The data is collected by Yamada Yoshio (山田孝雄) in his *Kokugo no naka ni okeru Kango no Kenkyū* (国語の中に於ける漢語の研究) pp. 136-137.

[18] Of course, as a dictionary the *Yüp'ien* was perhaps more popular in old Japan. But, in reality, because of the simpler sound-system of Japanese, the discordance between the *fanch'ie* in the *Yüp'ien* and those in the *Ch'ieyün* did not produce any effect on the *on*-readings in Japan. Not only this, so far as the *fanch'ie* are concerned, there are not many differences between the two dictionaries. Incidentally, although it is not my purpose here to discuss the *Ch'ieyün*, it may be correct to consider that the *Ch'ieyün* does not illustrate the whole picture of one given contemporary dialect as an actual linguistic system of a given linguistic community and that it was compiled to codify the *fanch'ie*.   The *fanch'ie* thus established may not have been directly based upon colloquial usage.   Cf. Ch'ên Yin-k'o : *Ts'ung shi shi lung Ch'ieyün, Lingnan süepao* IX₂ pp. 1-18, (陳寅恪: 従史実論切韻, 嶺南学報第九巻第二期).

made an arbitrary compromise between traditional readings and theoretical renderings deduced from *fanch'ie*. Such things may also have already occurred in the past. Authentic material for the study of the *Go-on* is plentiful, e. g. in old dictionaries, glossaries to Buddhist texts and glosses in old manuscript copies. On the other hand, there was never a direct authority for the *Go-on* to depend on, like the *Ch'ie-yün* in the case of the *Kan-on*. Originally the *Go-on* was a separate system which was transmitted to Japan before the compilation of the *Ch'ie-yün*. For this reason, the study of the *Go-on* will attract our interest all the more. The history of the *Go-on* as a system of Sino-Japanese pronunciation is again a neglected problem. The establishment of the history of the *Go-on* would be a considerable contribution to the phonetic history of Chinese. Here I should add a few words about the tonal or tonemic correspondences between the *Kan-on* and the *Go-on*. In reality, a fair proportion of characters coincide so far as their phonemic features are concerned, but characters with the first tone of the *Kan-on* regularly belong in the *Go-on* system either to the class of the second tone or to that of the third tone, and similarly in the *Kan-on* system the first tone of the *Go-on* is differentiated either into the second or the third tone. This is rather a fundamental difference between the two phonological systems.[19]

II

Before the *kana* script was invented in Japan, Chinese characters were converted into 'phonographic' script to represent Japanese syllables and used as the predecessor of the *kana*. Characters used in this way are called *mannyōgana*. In these *mannyōgana* there are some remarkable readings about which nobody can tell how they were transmitted to Japan.[20] E. g. the use of the character *po* 播 in the name of the province Harima (播磨).[21,I] If this use of *po* for the Japanese syllables *hari* belongs to the same category as *chün* 駿 in Suruka (駿河),[21,II] *ch'ün* 群 in Heguru (平群)[21,III] and *yün* 雲 in Uruka (雲箇),[21,IV] it may be that the *po* still preserved its dental final in some way when it was first learned in Japan.

The *kao* 高 was used in the same peculiar way. Unless the *kao* preserved its guttural final, how could we explain that Kaguyama was tran-

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[19] Here, I deliberately avoid the traditional use of level tone, rising tone and falling tone, since these uses give the impression that they stood directly for the tonal particularity of each of them.

[20] The following examples are mere specimens among others.

[21] I *Harima* 播磨——針間 (古事記, 日本書紀, 播磨風土記 etc.)

    II *Suruga* 駿河——須流河 (万葉集)

    III *Heguri* 平群——幣具理 (古事記)

    IV *Uruka* 雲箇——宇留加 (播磨風土記)

Karlgren's reconstruction of 播 in his *Grammata Serica* (p.195) is **pwâr*, but I cannot agree with this assumption of *r*.

scribed as 高山[22 I] and Kagami as 高見?[22 II]

In the oldest inscriptions we find that the character 移 corresponds to a Japanese syllable *ya*.[23 I] 宜 and 奇 used for *ga*[23 II,III,IV] belong to the same rhyme-class. These readings help to solve the rhymes of the Chou period, especially those in the *Shiching*.[24] The pronunciation *ya* for 移 also serves as evidence that the dental initial *d*- had disappeared before the vowel was palatalised.[25] The use of these characters as *mannyōgana* for *ya* and *ga* respectively occurs only in very early days (as is seen on note 23). Already in the *Kojiki* dating from the early 8th century, the 宜 appears as a *mannyōgana* for ge_2.[26] In the *Mannyōshū* the 宜 is used both for ge_2 and gi_2.[27]

The character 義 differs from 宜 only in its tone. The other features are the same for both characters. Whether or not accidental, there are no examples of 義 being used for *ga*, but it appears as ge_2 in the archaic *mannyōgana*.[23 V] Whereas 義 does not appear in the *Kojiki*, it is used in the

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[22] I *Kaguyama*:—
  中大兄近江宮御宇天皇三山歌一首
  高山波雲根火雄志等耳梨与相諍競伎……
      反歌
  高山与耳梨山与相之時立見爾来之伊奈美国原 (萬葉集 *Lib. I nos. 13 et 14*).

  II *Kagami*:—
  猪名公高見 (日本書記, 孝徳紀)
  大紫韋名公高見 (*id.* 天武紀)
  卿諱……紫冠威奈鏡 (*Kagami*) 公之第三子也 (威奈大村墓誌銘)
      cf. 木村正辞：万葉集字音弁証 下附録
  Karlgren's reconstruction of 高 in his *Grammata Serica* (p. 421) is *kog*.

[23] I 止 (*to*) 与 (*yo*) 彌 (*mi*) 舉 (*ke*) 奇 (*ka*) 斯 (*si*) 岐 (*ki*) 移 (*ya*) 比彌天皇 (元興寺丈六光背銘)
  等 (*to*) 已 (*yo*) 彌 (*mi*) 居 (*ke*) 加 (*ka*) 斯 (*si*) 支 (*ki*) 移 (*ya*) 比彌乃彌己等 (天寿国曼
                                                              荼羅繡帳銘)

  有麻移 (*ya*) 刀等已 (*yo*) 彌彌乃彌己等 (元興寺露盤銘)
  〔彌 (*mi*) 移 (*ya*) 居 (*ke*) (欽明紀)〕
  II 巷宜 (*ga*) 名伊奈米大臣 (元興寺露盤銘)
  巷宜 (*ga*) 名有明子大臣 (*id.*)
  巷宜 (*ga*) 有明子大臣 (元興寺丈六光背銘)
  III 巷奇 (*ga*) 名伊奈米大臣 (*id.*)
  巷奇 (*ga*) 大臣名伊奈米足尼 (天寿国曼荼羅繡帳銘)
  IV 奴奈宜 (*ga*) 波比賣 (出雲記土記)
  Va 牟義 (*ge*) 都国造 (上宮記逸文)
      cf. 古事記：牟宜都君
          日本書記：身毛都君
  Vb 伊我留我乃, 止美能井之美豆, 伊加奈久爾, 多義氏麻之母乃 (*Ta-ge-te-ma-si-mo-no*),
      止美乃井乃井能美豆 (上宮聖徳法王帝説).

[24] This problem was thoroughly studied by Ōya Tōru in his *Shūdai-koin-kō* (周代古音考), who was instructed to undertake these studies by the Japanese Ministry of Education.

[25] Karlgren formulates the shift in the case of 移 as follows: *dia/ie/yi* (*Grammata Serica* p. 126). We may postulate an intermediate stage, *ia*. In passing, this reconstruction may contribute to Tung T'ung-ho's critical comment on the assumption of Karlgren. Cf. 上古音 韵表稿 (史語集刊 Vol. XXVIII) p. 94.

[26] *e* after the Heian period was under certain conditions differentiated into e_1 and e_2 in archaic Japanese. The phonetic value of e_2 is unknown, but is it not likely that we may assume that the phonetic value of the syllable ge_2 was [gǝe]?

[27] In archaic Japanese, *i*, parallel with *e*, was differentiated into i_1 and i_2. The phonetic value of i_2 is also unknown, but as in the case of ge_2, was gi_2 not [gǐi] or [gǝi]?

Mannyōshū not for ge_2, but as a common character for gi_2, maintaining consistency, unlike 宜. Again, in the *Nihon-shoki*, it does not appear, but both 蟻 and 儀 are found. They stand for gi_1 only. The compilers of the *Nihon-shoki* may have shunned the use of the character 義 for fear that this common character, traditionally used for gi_2, should be misunderstood if used for gi_1.[28] Thus the table of the use of these characters is:[29]

	宜	奇	義	蟻	儀
Inscriptions etc.	ga	ka ga	ge_2	×	×
Kojiki	ge_2	×	×	×	×
Mannyōshū	ge_2 gi_2	ki_2	gi_2	×	×
Nihon-shoki	×	ki_2	×	gi_1	gi_1

(The cross × stands for 'is not used').

Although I cannot enlarge upon this subject here, these few examples will show how quickly the readings of characters changed in the course of only one or two centuries. These changes were caused by the efforts to conform to the standard of contemporary Chinese pronunciation.[30] They are all the more important because they are fundamentally different from the changes which were brought about in later periods by the phonetic evolution of Japanese itself.

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[28] If this is so, the situation may have been the same in the *Kojiki, mutatis mutandis*. That is to say, the *Kojiki* tried to avoid fluctuation in the reading of 義 between ge_2 and gi_2.

[29] It would be advisable for me to give here in addition the table of all those characters for *ge* and *gi* which were used in each text.

Kojiki	gi_1: 岐 藝	gi_2: 疑
	ge_1: 下 牙	ge_2: 宜 (氣)
Nihon-shoki	gi_1: 藝 嗜 伎 儀 蟻	gi_2: 疑 擬
	ge_1: 霓	ge_2: 礙 㝵 皚
Mannyōshū	gi_1: 藝 祇	gi_2: 疑 宜 義
	ge_1: 牙 夏 雅	ge_2: 礙 宜

[30] It is because such efforts came to an end before those in Korea that Sino-Japanese on the whole still retains archaisms in pronunciation more than Sino-Korean, while archaic usages were first introduced to Japan through Korea. Since Japan is severed from the Continent by the sea, the Japanese government, at the end of the ninth century, gave up sending delegations to China in view of the risk of such voyages in those days. After that, cultural contacts between the two countries became less close.

III

Now I shall content myself with making some general remarks on the study of Sino-Japanese.

1) Regardless of the *Kan-on* or the *Go-on* as a system, we should trace the pronunciation of each character individually.

2) As for Sino-Japanese *words*,

   (I) we must examine the pattern of compounds;

   (II) we should not neglect irregular cases;

   (III) the value of every-day pronunciations should be taken into consideration.

3) Special oral traditions of chanting and reciting some old Buddhist texts have been handed down to the present day; besides, valuable commentaries on these traditions have been published since the 17th century.