

# A Critical Study on Karlgren's Medial *i* Theory<sup>a)</sup>

By †Hideyo ARISAKA

## I

Professor Bernhard Karlgren classified those rimes into the following three types which appear in both the third and the fourth divisions of the rime table.<sup>1)</sup>

- ( $\alpha$ ) The rimes belonging to both the third and the fourth divisions at the same time: 東董送屋·鍾腫用燭·支紙寘·脂旨至·之止志·魚語御·虞麌遇·祭·真軫震質·諄準稕術·仙彌線薛·宵小笑·麻馬禡·陽養漾藥·清靜勁昔·尤有宥·侵寢沁緝·鹽琰豔葉·蒸拯證職。
- ( $\beta$ ) The rimes belonging exclusively to the third division: 微尾未·廢·欣隱焮迄·文吻問物·元阮願月·庚梗敬陌·凡范梵乏
- ( $\gamma$ ) The rimes belonging exclusively to the fourth division: 齊齊霽·先銑霰屑·蕭篠嘯·青迥徑錫·幽黝幼·添忝帖帖。

The definitions given by Karlgren to each of these three types are different from those given here, but it will be much easier for us, who are accustomed to consult with the *Yün-king* 韻鏡, to comprehend the matter with our definitions. While in the fan-ch'ieh of the *Kuang-yün* the characters of the rime *tung* 東 are divided into two groups, those of the I division, on the one hand, and those of the II, III and IV divisions, on the other, we mean only the latter by the rime *tung* in the above list. The same holds good with the rimes *tung* 董, *sung* 送, and *wu* 屋. By the rime *ma* 麻 in the list are meant only the characters of the third and the fourth divisions, while in the *Kuang-yün* the rime has two groups, those of the II division as well as those of the III and the IV divisions. The same holds good with the rimes *ma* 馬 and *ma* 禡. In the same way, the rime *kêng* 庚 in the list represents the words of the III division (including 生 and 省 of the II division), whereas the characters of the rime *kêng* are grouped into two, those of the II division (except 生 and 省) and those of the III division (including 生 and 省). The rimes *kêng* 梗, *ching* 敬 and *mo* 陌 are to be treated in the same way. Besides, the rimes of the types  $\alpha$  and  $\beta$  may include characters of the initial category "ch'ih-yin" 齒音 of the II division not only in case of the rimes *tung* 東 and *kêng* 庚, but in general.

In the fan-ch'ieh of the *Kuang-yün* the characters used to indicate the initials *pang* 幫, *p'ang* 滂, *ping* 並, *ming* 明, *kien* 見, *k'i* 溪, *i* 疑, *hsiao* 曉 and *lai* 來 are

1) Etudes sur la phonologie chinoise, p. 625-626.

classified into two groups. In principle the first group of characters is employed in indicating the initials of the words belonging to the rimes of the I and the II divisions and those of the type  $\gamma$ , while the second group is used for indicating the initials of the characters belonging to the rimes of the types  $\alpha$  and  $\beta$ <sup>2)</sup>.

According to Karlgren, the rimes of the three types  $\alpha$ ,  $\beta$  and  $\gamma$  are considered to have had a medial *i* in the period of the *Ch'ieh-yün* 切韻. Karlgren explained the nature of the medial in the rimes of these three types as follows:

In Sino-Korean, the characters of guttural and laryngeal initials of the  $\alpha$  type show forms without any medial: e. g. 僊 *kən* (仙), 伴 *kən* (彌), 諺 *ən* (線), 權拳 *kuən* (仙), 捲圈 *kuən* (彌), 眷卷倦 *kuən* (線), 儉 *kəm* (琰), 險 *həm* (琰), 驗 *həm* (豔); in the same way, those of the type  $\beta$ : e. g. 言 *ən* (元), 掀 *hən* (元), 筵 *kən* (願), 憲獻 *hən* (願), 元原源 *uən* (元), 誼噎 *huən* (元), 卷勸 *kuən* (願), 愿 *uən* (願), 嚴 *əm* (嚴), 檢 *kəm* (儼), 欠 *kəm* (梵), and others; while the words of the type  $\gamma$  show forms with a medial *i*: e. g. 肩堅牽緯 *kiən* (先), 研 *iən* (先), 弦絃賢 *hiən* (先), 顯 *hiən* (銑), 見 *kiən* (霰), 硯 *iən* (霰), 衍縣 *hiən* (霰), 玄懸 *hiən* (先), 兼謙 *kiəm* (添), 嫌 *hiəm* (添), 歉 *kiəm* (忝), and others. From these examples the medial *i* element (élément intercalaire palatal) of the type  $\gamma$  rimes is assumed to be stronger than that of the rimes of the  $\alpha$  type or of the  $\beta$  type. In other words, the *i* element of the  $\gamma$  type rimes is supposed to have been an “*i* vocalique”, while that of the  $\alpha$  type or of the  $\beta$  type is an “*i* consonantique”.

What Karlgren really means by the expressions “vocalique” and “consonantique”, we are not certain, as he has not given a clear definition. What he calls “vocalique” cannot be a syllabic in this case and what he calls “consonantique” must not be a fricative, for it is distinguished from *j*. Both *i* must have been an *i*, neither syllabic nor fricative. Judging from his observation that the nature of *i* of the “*i* vocalique” was stronger than that of the “*i* consonantique”, he must have supposed that the “*i* consonantique” was a so-called “gliding” sound, while the “*i* vocalique” was a so-called “held” sound.<sup>3)</sup>

That the rimes of the type  $\gamma$  had a certain feature, distinguished from those of the type  $\alpha$  or of the type  $\beta$  is presumable in regard to the problem of the characters for the initials *ɸang*, *ɸ'ang*, *ping*, etc., discussed above. This might lead us to approve Karlgren's theory that the medial of the type  $\gamma$  was an *i*, whereas that of the type  $\alpha$  or of the type  $\beta$  was an *j*.

The instances adduced by him as evidences, however, are in not a few cases doubtful. All the Sino-Korean examples of the  $\alpha$  type quoted by him are the characters of the III division. In the rimes of the  $\alpha$  type, however, are included the characters of the IV division. The three characters 遣, 絹, 鉗, that

2) The initial *hsia* 匣 is used only for the first group and the initial *k'ün* 群 only for the second group.

3) Walter Ripman, *Elements of Phonetics* (8th edition), Section 87.

he remarked as "exceptions" in the foot-note, belong to the IV division in the *Yün-king* and therefore they should not be treated as "exceptions", even though they are few in number. Among these three the character 筭 (鉗) is located in the III division in the *Ch'i-yin-lüeh* 七音略. In fact it is certainly unreasonable to locate this in the IV division, as the IV division is to be filled with the rime 添 and the character 筭 (鉗), spelled as 渠淹切, belongs to the rime 鹽. But it can not be considered as a mere coincidence by accident that the character is placed in the IV division in the Kyôroku 享祿 edition of the *Yün-king*, on the one hand, and that the Sino-Korean value of 鉗 is *kiəm* in the dictionaries such as the *Kyu-chang-chôn-un* 奎章全韻, the *Chôn-un-ok-p'yôn*, 全韻玉篇 and the like, on the other hand. The character 筭 (鉗) may have had another value to be ascribed to the IV division. Not only these three characters, but also characters of the guttural and laryngal initials belonging to the IV division of the  $\alpha$  type such as 甄 *kiən* (r. 仙), 謹 *kiən* (r. 線), 延 *iən* (r. 仙), 拙 *iəl* (r. 薛), 翺 *hiən* (r. 仙), 沿 *iən* (r. 仙), 缺 *kiəl* (r. 薛), 悅 *iəl* (r. 薛), 厭 *iəm* (r. 鹽), 鹽 *iəm* (r. 鹽), 魔 *iəp* (r. 葉), 葉 *iəp* (r. 葉), etc. show all of them forms with a medial in Sino-Korean. As a matter of course we cannot lay aside such numerous examples simply as "exceptions".

The fact that the character 虔 has the Sino-Korean value *kən*, whereas it is located in the IV division in the Kyôroku edition of the *Yün-king*, requires explanation. It is not found in the *Ch'i-yin-lüeh*. Besides, this character is not found also in the editions by Shimpan 信範 and of Kakitsu 嘉吉, according to the *Inkyôkô* 韻鏡考. It is natural to discover it nowhere in the tables of the *Yün-king*, when we find that the texts of Fragment No. 3 of the *Ch'ieh-yün*, published by Wang Kuo-wei 王國維, of the revised version of the *Ch'ieh-yün* by Wang Jên-hsü 王仁煦 and of the *Kuang-yün*, do not set up an independent section for this character and place it under the character 乾 (with the fan-ch'ieh 渠焉反 or 渠焉切). It is due to the error on the part of the Kyôroku edition. Further, it is natural that the character 炎 is placed in the III division in the *Yün-king*, as it is spelled as 于廉切 in the *Kuang-yün*. Then we might expect the value *əm* in Sino-Korean, but in reality the Sino-Korean form is *iəm*. This is certainly a problem to be investigated. In the revised version of the *Ch'ieh-yün* by Wang Jên-hsü this character appears twice, namely in the rime 鹽 of p'ing shêng (于廉反 or 餘念反) and in the rime 鹽 of k'ü shêng (以贍反 or 于淹反) and it is noted with the fan-ch'ieh 于廉及 or 餘念反 under the same character in Fragment No. 3 in the rime 鹽. If the Sino-Korean form *iəm* corresponds to the value represented by the fan-ch'ieh 以贍反 or 餘念反 (in either case it belongs to the IV division of the initial *yu* 喻), the question will at once be solved.

In Sino-Korean the characters of the III division are reflected with forms of no medial, while those of the IV division show forms having a medial. This is

the principle that holds good in all cases except the groups *hsiao* 效 and *kêng* 梗. It is a grave error committed by Karlgren that he overlooked the distinction which is found between the III and IV divisions of characters of guttural and laryngeal, those of the III division giving forms without a medial and those of the IV division indicating forms with a medial.

In Ancient Chinese, among the  $\alpha$  type rimes, the medial of the characters of guttural and laryngeal initials belonging to the III division seems to have been weaker in its palatalized nature than that of the characters belonging to the IV division. The medial of the III division was probably a sound near to  $-i-$  against that of the IV division, which was a pure  $-i-$ . This, however, holds good of characters of gutturals and laryngals. I will not insist upon the distinction even in case of those of dental stops, or palatal, supradental, affricates, and fricatives. Further, the modern Sino-Korean is supposed to be based on the standard pronunciation of K'ai-fêng 開封 in the 10th century.<sup>4)5)</sup> In Chinese at that time the distinction between the rimes of the IV division of the  $\alpha$  type and those of the  $\gamma$  type was already lost. The distinction did not exist already in the fan-ch'ieh of the *I-ch'ieh-king-yin-i* 一切經音義 by Hui-lin 慧琳 which is supposed to reflect the standard pronunciation of Ch'ang-an in the middle of the T'ang dynasty.<sup>5)</sup>

Hitherto we have examined the problem exclusively from the *Ch'i-yin-lüeh* and the *Yün-king*. The problem of divisions is the same in the *Ch'ieh-yün-chih-chang-t'u* 切韻指掌圖 and the *Ch'ieh-yün-chih-nan* 切韻指南. Either in the *Chih-chang-t'u* or in the *Chih-nan* the character 虔 is not found in tables and the character 炎 is located in the III division. As to the character 筭 (鉗), it is placed in the III division, while the character 鍼 is located in the IV division in the *Chih-chang-t'u* in the same way as in the *Ch'i-yin-lüeh*.<sup>6)</sup> On the contrary, in the *Chih-nan* there is not found the character 筭 and instead the character 鍼 is in the III division of the initial *k'un*, while the column of the IV division of the initial *k'un* is blank. This contradiction is only apparent, for the character 鍼 had two values, 巨淹切 and 巨鹽切, the latter of which was adopted in the *Ch'i-yin-lüeh* and the *Chih-chang-t'u*, and the former of which was registered in the *Chih-nan*.

\*

\*

\*

4) Cf. my article "On Sino-Korean."

5) Cf. Huang Ts'ui-po 黃淬伯, Studies on the Fan-ch'ieh of the *I-ch'ieh-king-yin-i* 一切經音義 by Hui-lin 慧琳 (慧琳一切經音義反切攷).

6) In the *Ch'i-yin-lüeh* the character 筭 is located in the III division of the initial *k'un* of the table No. 31 (wai), the character 鍼 in the IV div. of the initial *k'un* of the table No. 32 (wai), but in the *Chih-chang-t'u* the two characters are found in Table 5.

Now each fan-ch'ieh of the *Ch'ieh-yün* and the *Kuang-yün* must represent a separate sound, when we consider it from its proper function. In the *Kuang-yün*, however, there are several pairs of fan-ch'ieh which appear to indicate identical sounds, for the upper character of each pair indicates the same category of initial and the lower character belongs to the same rime. Let us quote the examples in the following way:

(1)	鉞 (敷羈切)	比 (匹支切)	both	支韻	開口	滂母
(2)	皮 (符羈切)	陴 (符支切)	//	//	//	並母
(3)	奇 (渠羈切)	祗 (巨支切)	//	//	//	群母
(4)	犧 (許羈切)	詫 (香支切)	//	//	//	曉母
(5)	媯 (居爲切)	臻 (居隋切)	//	//	合口	見母
(6)	虧 (去爲切)	闕 (去隨切)	//	//	//	溪母
(7)	摩 (許爲切)	墜 (許規切)	//	//	//	曉母
(8)	彼 (甫委切)	俾 (并弭切)	//	紙韻	//	幫母
(9)	殍 (匹靡切)	諱 (匹婢切)	//	//	//	滂母
(10)	被 (皮彼切)	婢 (便俾切)	//	//	//	並母
(11)	靡 (文彼切)	涸 (綿婢切)	//	//	//	明母
(12)	跪 (去委切)	跬 (丘弭切)	//	//	//	溪母
(13)	賁 (彼義切)	臂 (卑義切)	//	寘韻	開口	幫母
(14)	帔 (披義切)	譬 (匹賜切)	//	//	//	滂母
(15)	鬣 (平義切)	避 (毗義切)	//	//	//	並母
(16)	寄 (居義切)	颯 (居企切)	//	//	//	見母
(17)	楸 (卿義切)	企 (去智切)	//	//	//	溪母
(18)	倚 (於義切)	綏 (於賜切)	//	//	//	影母
(19)	鴈 (詭僞切)	覷 (規恚切)	//	//	合口	見母
(20)	餞 (於僞切)	恚 (於避切)	//	//	//	影母
(21)	毀 (況僞切)	媯 (呼恚切)	//	寘韻	//	曉母
(22)	遠 (渠追切)	葵 (渠追切)	entirely the same fan-ch'ieh	脂韻	//	群母
(23)	軌 (居洧切)	癸 (居誅切)	both	旨韻	//	見母
(24)	郈 (暨軌切)	揆 (求癸切)	//	//	//	群母
(25)	祕 (兵媚切)	瘳 (必至切)	//	至韻	開口	幫母
(26)	滯 (匹備切)	屁 (匹寐切)	//	//	//	滂母
(27)	備 (平祕切)	鼻 (毗至切)	//	//	//	並母
(28)	郿 (明祕切)	寐 (彌二切)	//	//	//	明母
(29)	器 (去糞切)	棄 (詰利切)	//	//	//	溪母
(30)	媿 (俱位切)	季 (居悸切)	//	//	合口	見母
(31)	匱 (求位切)	悸 (共季切)	//	//	//	群母
(32)	瘞 (許位切)	臍 (香季切)	血	(火季切)	//	曉母
(33)	剝 (牛例切)	藝 (魚祭切)	//	祭韻	開口	疑母

(34)	彬 (府巾切)	賓 (必隣切)	//	眞韻	//	幫母
(35)	貧 (符巾切)	頻 (符眞切)	//	//	//	並母
(36)	珉 (武巾切)	民 (彌隣切)	//	//	//	明母
(37)	瞽 (於巾切)	因 (於眞切)	//	//	//	影母
(38)	葭 (去刃切)	蠶 (羌印切)	//	震韻	//	溪母
(39)	筆 (鄙密切)	必 (卑吉切)	//	質韻	//	幫母
(40)	弼 (房密切)	邨 (毗必切)	//	//	//	並母
(41)	密 (美畢切)	蜜 (彌畢切)	//	//	//	明母
(42)	暨 (居乞切)	吉 (居質切)	//	//	//	見母
(43)	乙 (於筆切)	一 (於悉切)	//	//	//	影母
(44)	肸 (羲乙切)	欸 (許吉切)	//	//	//	曉母
(45)	媼 (於權切)	媼 (於緣切)	//	仙韻	合口	影母
(46)	罔 (渠篆切)	罔 (狂衰切)	//	彌韻	//	群母
(47)	眷 (居倦切)	綸 (吉掾切)	//	線韻	//	見母
(48)	筓 (方別切)	驚 (并列切)	//	薛韻	開口	幫母
(49)	噤 (乙劣切)	缺 (於悅切)	//	//	合口	影母
(50)	鑣 (甫矯切)	颯 (甫遙切)	//	宵韻	開口	幫母
(51)	苗 (武瀟切)	蜩 (彌遙切)	//	//	//	明母
(52)	趨 (起黷切)	躡 (去遙切)	//	//	//	溪母
(53)	喬 (巨矯切)	翹 (渠遙切)	//	//	//	群母
(54)	妖 (於喬切)	耍 (於霄切)	//	//	//	影母
(55)	表 (陂矯切)	標 (方小切)	//	小韻	//	幫母
(56)	麤 (滂表切)	縹 (敷沼切)	//	//	//	滂母
(57)	蔗 (平表切)	標 (符沼切)	//	//	//	並母
(58)	夭 (於兆切)	闋 (於小切)	//	//	//	影母
(59)	廟 (眉召切)	妙 (彌笑切)	//	笑韻	//	明母
(60)	嶠 (渠廟切)	翹 (巨耍切)	//	//	//	群母
(61)	丘 (去鳩切)	恹 (去秋切)	//	尤韻	//	溪母
(62)	音 (於金切)	愔 (搃淫切)	//	侵韻	//	影母
(63)	邑 (於汲切)	揖 (伊入切)	//	緝韻	//	影母
(64)	箝 (巨淹切)	鉞 (巨鹽切)	//	鹽韻	//	群母
(65)	淹 (央炎切)	厯 (一鹽切)	//	//	//	影母
(66)	頤 (丘檢切)	腴 (謙琰切)	//	琰韻	//	溪母
(67)	奄 (衣檢切)	靨 (於琰切)	//	//	//	影母
(68)	儉 (於驗切)	厭 (於黠切)	//	黠韻	//	//
(69)	苞 (於輒切)	魘 (於葉切)	//	葉韻	//	//

All these are the examples of the characters of labial, guttural, and laryngeal initials, and in the rime tables, such as the *Ch'i-yin-lüeh*, the *Yün-king*, the *Ch'ieh-yün-chih-chang-f'u* and the *Ch'ieh-yün-chih-nan*, the character quoted first in

each pair listed above is placed in the III division, while that quoted after in each pair in the IV division. But the examples of the initial *yu* are omitted, because it is a well known fact that the distinction between the III and IV divisions is in this case marked not by the lower character of a fan-ch'ieh, but by the upper character. Among the examples the characters 逵 and 葵 of the pair No. 22 have the identical fan-ch'ieh, though they belong to different sections in the same rime. On this fact Ch'ên Li 陳澧 remarked, “葵 has the fan-ch'ieh 渠追, but in this rime there is already the character 逵 which has also the same fan-ch'ieh. Therefore the fan-ch'ieh of the character 葵 should not be 渠追. But the *Yü-p'ien* 玉篇, the *Lei-p'ien* 類篇 and the *Chi-yün* 集韻 have distinguished both of them in sound, which means that the confusion is not due to an error in the transmission of the text. I suppose that, as the character 葵 had no character of the same rime, it was forced to borrow for its fan-ch'ieh the character 追 which is not of the same rime.”<sup>7)</sup> When we look into the fragments of the *Ch'ieh-yün* published by Wang Kuo-wei, we find in Fragment No. 2 逵 as 渠追反 and 葵 as 渠惟反, and in Fragment No. 3 逵 as 渠追反 and 葵 as 渠惟反. In other words, these fragments clearly distinguish the two characters in fan-ch'ieh.

Further, the character 碧 belonging to the III division and to the initial *pang* 幫 was not in the original of the *Ch'ieh-yün*, as it is commented as “newly added” (新加) in Fragment No. 3 (Rime 昔). The character belongs to the rime 昔 in the T'ang MSS. of the *T'ang-yün* (方彳反), the Commentary by Hsü K'ai 徐鍇 to the *Shuo-wên* 說文 (idem), the Commentary by Hsü Hsüan 徐鉉 to the *Shuo-wên* (兵尺切), the *Kuang-yün* (彼役切), while it is classified in the *K'an-miu-pu-k'üeh-ch'ieh-yün* 刊謬補缺切韻 into the rime 陌 (i. e. the rime 陌) and the fan-ch'ieh of the *Ten-rei-ban-shô-mei-gi* 篆隸萬象名義 (彼戟反), the *Ta-kuang-i-hui-yü-p'ien* 大廣益會玉篇 (idem) and the *Yin-i* 音義 to the Tripitaka by Hui-lin 慧琳 for the character can be regarded as corresponding to the rime 陌. And in the *Chi-yün* 集韻 the character 碧 is found twice, in the rime 陌 (筆戟切) and in the rime 昔 (兵彳切). If we follow the *Kuang-yün* and adopt the fan-ch'ieh 彼役切, its relation to the character 辟 spelt by 必益切 is interpreted as the contrast between *k'ai* 開 and *ho* 合. But if we classify it into the rime 陌, its relation to 辟 is regarded as the contrast between the III division of the rime 陌 and the IV division of the rime 昔, though it remains a problem how to interpret the relations between the fan-ch'ieh 方彳反, 兵尺切 and 必益反 (切).

There are various opinions as to whether these pairs of fan-ch'ieh represent sounds different from each other or identical sounds. First, Ch'ên Li supposed

7) “葵, 渠追切。此韻已有逵字渠追切。葵字不當又渠追切也。玉篇·類篇·集韻, 逵葵皆不同音。則非傳寫誤分。實以葵字無同類之韻故, 切語借用不同類之追字耳。” (切韻考)

in many cases some difference in the pair of fan-ch'ieh, but in a few cases he regarded one of the pair as a character newly added to the text of the *Ch'ieh-yün*. The characters that he thought as interpolations are as follows: 16 駮, 17 禱, 18 倚, 33 剝, 38 蠹, 46 蝻, 48 筭, 55 標, 58 闕, 61 憊 and 64 鍼. In the pair 32 he supposed 儺 as "added". Now when we examine the fragments of the *Ch'ieh-yün* (only Fragment 3 can be taken into consideration in this case), the character 闕 is not found in the rime 小, hence it may be an interpolation but 蝻 and 筭 are attested. The rime 尤 has not the character 憊, but we find its variant 惆 with the fan-ch'ieh 去愁反. In the rime 小, 表 and 標 have independent headings (標目) in the *Kuang-yün*, while the *Ch'ieh-yün* has not divided them into two and described in the following way:

表 方小反又  
方矯反二 標

Here attention should be paid to the fact the fan-ch'ieh 方小 and 方矯 are treated as representing separate sounds. We know, however, nothing of the characters 駮·禱·倚·儺·剝·蠹, as the fragments have not the volume of k'ü-shêng. And we can not assert the existence of the character 鍼, as the part of the rime 鹽 in the volume 平聲下 is not preserved in perfect condition. Except these cases supposed as interpolations, Ch'ên Li considered without doubt these pairs of fan-ch'ieh as representing separate sounds. Dr. Ôya 大矢 also said, "Though both of the pair indicate similar sound (同音) so that both of them can be placed in the III division, there may have been a slight difference in the degree of the aperture of the mouth (洪細) so that they could not be considered to be entirely identical when one compared them in reality".<sup>9)</sup> Thus he, too, approved the existence of a phonological difference between the pairs of the fan-ch'ieh.

On the contrary, Karlgren concluded without any reason that these pairs of fan-ch'ieh indicate identical sounds.<sup>9)</sup> Mr. Hikojirô Takahata 高畑彦次郎, accepting Karlgren's theory, rejected the premise of Ch'ên Li that characters of the same heading (標目) in a rime represent different sounds, and declared that the establishing of different headings in spite of an identical sound was due to some reason, but not to any linguistic reason at least.<sup>10)</sup>

Against Takahata's theory, however, the commentary to the character 表

8) Cf. Ôya, *Inkyôkô 韻鏡考*, (Studies on the *Yün-king*) p. 189.

9) In case of Gr. *chên*, as the distinction between the III and IV div. of gutturals and laryngals is very clear in Go-on, Sino-Korean, Fuchow, Swatow, etc., Karlgren justifies himself by stating an excuse in the foot-notes on p. 784 and on p. 872. I can not understand why he neglected the distinction between the III div. and the IV div. in his reconstruction of the system of the *Ch'ieh-yün*, though he knew the distinction in gutturals and laryngals in k'ai-k'ou of the group *chih* (cf. *Etudes*, p. 644), and why he concluded the value of the III div. and that of the IV div. as identical, while the *Kuang-yün* distinguished them by establishing separate headings.

10) Takahata, "A Linguistic Study of Chinese," *Geibun 藝文* Vol. 20, No. 12.



of the rime 小 in Fragment 3 of the T'ang MSS. quoted above will be cited as a counter-evidence. In this respect we will try to compare the different editions of the *Ch'ieh-yün*, as there is an apparent discrepancy between them. At first we see in Fragment 3 of the T'ang MSS.:

- 表 方小反又 袖  
方矯反二 標 端

Secondly, in the *K'an-miu-pu-k'üeh-ch'ieh-yün* by Wang Jên-hsü 王仁煦 we find

- 表 方小反外又 袖端亦  
方矯反三 標 作紗 覲 日察  
省見

Thirdly, in the *Kuang-yün*

- 表 明也亦賤表 (下略) 袞 上同 襪 古文 蕞 草名  
跛矯切四

- 標 袖端方 覲 字林云目 標 標抄 標 峯  
小切四 有所察 木末 頭

Among these the fan-ch'ieh 跛矯切 of the *Kuang-yün* corresponds to the fan-ch'ieh 方矯反 of the two other versions. Both of them are identical in sound. Therefore the difference between the two rime dictionaries and the *Kuang-yün* lies after all in the fact that the *Kuang-yün* recognizes the only one sound represented by the fan-ch'ieh 方矯反 for the character 表, while the two rime dictionaries approve two sounds represented by the fan-ch'ieh 方矯反 and 方小反. Three of them coincide in the point that the character 標 had the fan-ch'ieh 方小反. The *Ch'i-yin-lüeh* 七音略, the *Ch'ieh-yün-chih-chang-t'u* 切韻指掌圖, and the *Ch'ieh-yün-chih-nan* 切韻指南 place the character 表 in the III division and the character 標 in the IV division, and the *Yün-king* sets the character 表 in the III division and the character 標 in the IV division. And since the characters 標 and 標 have the same sound, the four rime tables show essentially the same condition. But according to Karlgren and Takahata, these characters are of the same rime, -jäu, not distinguishing the difference in division, as they belong to the rime 小. Hence both 方矯反 and 方小反 indicate the same sound pjiâu. This view, however, is clearly in contradistinction with the intention of the compilers of the *Ch'ieh-yün*, because the dictionary comments to the character 表 as “方小反又方矯反” and thus clearly shows the difference in sound.

Moreover, it is remarked in the *Yen-shih-kia-hsün* 顏氏家訓 (*Yin-tz'ü-p'ien* 音辭篇) as follows; “*Yü-fan* 璵璠 is a jade produced in Lu 魯. It should be pronounced as 餘煩, whereas in Kiang-nan 江南 they pronounce like 藩 of 藩屏. *Ch'i-shan* 岐山 should be read as 奇, whereas in Kiang-nan they read it like 祇 of 神祇. After Kiang-ling 江陵 fell [into the hands of the enemy], this sound spread over the district of Kuan-chung 關中 and they do not know how these two sounds have transmitted. As my learning is very shallow, I have never

heard it before.”<sup>11)</sup> This description tells us that there was no doubt a real phonological distinction between the character 奇 (渠羈切) belonging to the III division of the initial 群, *k'ai-k'ou*, of the rime 支 and the character 祇 (巨支切) belonging to the IV division.

## II

As about half of 69 pairs quoted above concern the rime group *chih* 止, let us investigate Group *chih* first.

The distinction between the III and IV divisions of guttural and laryngeal initials, *k'ai-k'ou*, of Group *chih* is the best kept in Sino-Korean. The initials *kien* 見, *k'i* 溪, *k'un* 群-III div. *kji*: IV div. *ki*; *i* 疑, *ying* 影, *yu* 喻-III div. *ji*: IV div. *i*; *hsiao* 曉-III *hji*, hence the opposition of III div.-*ji*: IV div.-*i* is very clear. This fact was noticed even by Karlgren<sup>12)</sup>.

In the words of the labial initials the distinction is best represented in Sino-Annamese:

Table 4. K'ai-k'ou

支	{ III div. IV div.	卑 <i>ti</i>	鉞 <i>bi</i> 𪔐?	皮 <i>bi</i> 𪔐 <i>ti</i>	彌 <i>ji</i>
紙	{ III div. IV div.	俾 <i>ti</i>	諱?	婢 <i>ti</i>	弭 <i>nyi</i>
寘	{ III div. IV div.	賁 <i>bi</i> 譬 <i>ti</i>	𪔐 <i>bi</i> 譬 <i>t'i</i>	𪔐* <i>bi</i> 避 <i>ti</i>	

Table 5. Ho-k'ou

支	{ III div. IV div.	𪔐 <i>bi</i>	𪔐 <i>mi</i>		
紙	{ III div. IV div.	彼 <i>bi</i>	𪔐 <i>bi</i>	𪔐 <i>bi</i>	𪔐 <i>mi</i>

Table 6. K'ai-k'ou

脂	{ III div. IV div.	𪔐 <i>ti</i>	𪔐 <i>ti</i>		
旨	{ III div. IV div.	𪔐 <i>ti</i>	𪔐?		
至	{ III div. IV div.	祕 <i>bi</i> 痺 <i>ti</i>	𪔐? 𪔐 <i>t'i</i>	備 <i>bi</i> 鼻 <i>ti</i>	鄗 <i>mi</i> 寐 <i>mi</i>

11) “瓊璠魯之寶玉。當音餘煩。江南皆音藩屏之藩。岐山。當音爲奇。江南皆呼爲神祇之祇。江陵陷沒。此音被於關中。不知二者何所承。以吾淺學未之前聞也。”

12) Etudes, p. 644.

Table 7. Ho-k'ou

脂	{III div. IV div.	悲 fi	丕 fi	邳 bi	眉 mi
旨	{III div. IV div.	鄙 bi	齶?	否 fi	美 mi

Table 10. Ho-k'ou

微	{III div. IV div.	非 fi	菲 fi	肥 p'i	微 vi
尾	{III div. IV div.	匪 fi	斐 fi	贖?	尾 vi
未	{III div. IV div.	沸 fi	費 fi	癍 fi	未 vi

The above is the results of the investigation of the characters appearing in the tables of the *Yün-king* according to the Dictionary by Giles. The mark ? means a character not found in the dictionary. The mark \* indicates those not found in the dictionary, so replaced by another character of the same heading in the *Kuang-yün*. The character 𪛗 is found in the dictionary, but its Sino-Annamese value bi is perhaps not the sound for the fan-ch'ieh 匹支切, i. e. p'ing shêng, IV div., initial p'ang of Table 4, but the sound for the fan-ch'ieh 敷羈切, or 匹支切, or 符鄙切 (all of them belong to the III div.), therefore I have not adopted it here. And the character 牝 has Sino-Annamese value tén which corresponds to the sound in -n of shang shêng, IV div., init. ping of Table 17, but not the sound for shang shêng, IV div., init. ping, Table 6. Therefore I have placed the mark ? here also. The ny- in the transcriptions of Giles probably represents [ɲ]. As to Giles' j Maspero says: "... l'annamite rend toujours cette initiale par une consonne dont la prononciation varie suivant les dialectes (y en Cochinchine, z au Tonkin, d' à Ha-tinh, etc.), mais qui dans l'orthographe officielle est toujours écrite d." (Maspero, Etudes sur la phonétique historique de la langue annamite, BEFEO, 1912, p. 68)

When we look through the list above, we find that we have labials such as p', b, m, f, v always in the case of the III division, while dentals such as t, t', j, ny always in the case of the IV division. In other words, the labials of Ancient Chinese have become dentals exclusively in the latter case. We can find such examples as changed labials into dentals in Luchuan dialects of Japanese and regard them as the results of palatalization. For examples: in the dialect of Kunisaki 國頭, tiruma "noon" (<\*piruma), dadi "ashes" (<\*dabi), izini "fountain" (<\*izumi), and others. Now, in Sino-Annamese the dentalization of labials of Group *chih* is restricted to the case of the IV division and in the case of the III division labials remain unchanged. Accordingly, we suppose that

p'i, bi, mi, etc. in Sino-Annamese are not as they were formerly and there may have been a non-palatal element immediately after an initial consonant which disturbed the palatalization of the initial at first. Thus if we suppose there was in Ancient Chinese the distinction between the III division ʒi: the IV division i which has been maintained in the words of guttural and labial initials in Sino-Korean, the Sino-Annamese forms can be explained very well.

Now the character 寐, being a character belonging to the IV division of *k'ai-k'ou*, should have had a dental initial in Sino-Annamese. Nevertheless it has kept the labial initial m. This anomaly, however, is not particular to Sino-Annamese. It is identical in sound with 美 belonging to the III division, *ho-k'ou*, in all the 22 modern Chinese dialects collected by Karlgren.<sup>13)</sup>

To conclude, in Ancient Chinese the rimes of the III and IV divisions with labial, guttural, and laryngal initials seem to have been distinguished in the following way:

	幫	見	影	曉	喻
III division	pʒi	kʒi	?ʒi	xʒi	ʒi
IV division	pi	ki	?i		ji

Hitherto I have treated Group *chih* and from now on I will consider the rimes of Group *chên* 臻. The rimes of the group belonging to the II, III and IV divisions are divided into two; namely, the rimes *chên* 眞 and *chun* 諄 and the like, which are registered in Table 17 and Table 18 with *k'ai-k'ou* and *ho-k'ou* in contrast, on the one hand, and the rimes *hsin* 欣 and *wên* 文 and the like, which are registered in Table 19 and Table 20 with *k'ai-* and *ho-k'ou* opposition, on the other. These two were merged in one already in the fan-ch'ieh of Hui-lin's *Yin-i* to the Tripitaka. The rime *chên* 臻 was originally a part of the rime *chên* 眞. Lü Ching 呂靜 of the Chin 晉 dynasty, Yang Hsiu-chih 陽休之 and Tu T'ai-k'ing 杜臺卿 of the Northern Wei dynasty did not distinguish it from the rime *chên* 眞. In the fan-ch'ieh of Hui-lin's *Yin-i*, too, it has rime characters in common with the rimes *chên* 眞 and *hsin* 欣, and in Kan-on also it shows the final -in just as in the rime *chên* 眞. That Lu Fa-yen 陸法言 distinguished the rime *chên* 臻 from the rime *chên* 眞 was entirely due to the theory of Hsia-hou Yung 夏侯詠 of the South.<sup>14)</sup> Consequently, when we consider the northern pronunciation of the periods of Sui and T'ang, it may be reasonable to assume that the rime *chên* 臻 corresponded to the II division of the *ch'ih* initial 齒音 of the rime *chên* 眞.

13) Cf. Etudes, p. 724, foot-note. For example, it is not *mi*, but *mei* in Pekinese. And it is not *mi*, but *me* in Shanghai and *mui* in Swatow.

14) Cf. *K'an-miu-pu-k'üeh-ch'ich-yün* 刊繆補缺切韻 by Wang Jen-hsü 王仁脩.

Now the distinction between the III and IV divisions in labials, gutturals and laryngals of the rimes registered in the tables of the *chên* 眞 group is maintained also in Sino-Korean and Sino-Annamese. In Go-on also it is found and even in the modern Chinese dialects, such as in Fuchow and Swatow, we can discover the distinction.

First, when we examine the tables of *k'ai-k'ou*, Table 17 and Table 19, we find in Sino-Korean *kin* or *kən* in the III div. of the initials, *kien*, *k'i* and *k'ün* (in *ju-shêng* *kil* or *kəl*), *kin* in the IV div. (*ju-shêng* *kil*); *in* in the III div. of the initials *i*, *ying* (*ju-shêng* *il*), *in* in the div. (*ju-shêng* *il*); *in* in the IV div. of the init. *yu* (*ju-shêng* *il*); *hin* in the III div. of the init. *hsiao* (*ju-shêng* *hil*), *hil* in the *ju-shêng* of the IV. div. Thus the distinction between the III and IV divisions appears to be like a difference of the principal vowel. In Go-on we have -on (-otsu) in the III division of gutturals and laryngals and -in (-ichi, -itsu) in the IV division.

Secondly, according to the dictionary of Karlgren, gutturals and laryngals of the two tables are represented in Fuchow as follows:<sup>15)</sup>

III division (眞) 巾 *küŋ*, 僅 *köüŋ*, 銀 *ngüŋ*  
 (欣) 斤筋 *küŋ*, 謹 *king*, 懃芹 *k'üŋ*, 近 *köüŋ*, 欣 *hüŋ*,  
 殷隱癰 *üŋ*  
 IV division (眞) 緊 *king*, 因烟茵溼印 *ing*, 寅引 *ing*

So except the character 謹 the opposition of the III division to the IV division is kept as the difference of principal vowel. In case of *ju-shêng*, however, this distinction is not clear.<sup>16)</sup>

III division (質) 乙 *äik*,  
 (迄) 訖 *ngäik*, 乞 *k'öük*, 迄 *ngäik*  
 IV division (質) 吉 *käik*, 一 *äik*, 逸 *ik*

Again, in Swatow<sup>17)</sup>:

III division (眞) 巾 *kin*, 僅 *kin*, 銀 *ngin*  
 (欣) 斤筋謹 *kin*, 懃芹 *k'in*, 近 *kin*, 欣 *hin*, 殷隱 *in*, *hin*, 隱 *in*,  
 癰 *in*  
 IV division (眞) 緊 *kin*, 因烟茵溼印 *in*, 寅引 *in*

Thus, apart from the only exception of 癰, the opposition of the III and IV divisions is preserved as the difference of principal vowel. In case of *ju-shêng* this distinction is not clear.<sup>18)</sup>

15) op. cit., p. 783-787.

16) op. cit., p. 872-874.

17) op. cit., p. 783-787.

18) op. cit., p. 872-874.

III division (質) 乙 it

(迄) 訖 ngit, 乞 k'it, 迄 hit, ngit

IV division (質) 吉 kit, 一 it, tsäk 逸 it

In Sino-Annamese the distinction appears in labials, as in Group *chih*. First, in Table 17.

眞	{III div. IV div.	彬 bèn 賓 tèn	砵? 繽 tén	貧 bèn 頻 tèn	珉 mèn 民 jèn
軫	{III div. IV div.			牝 tèn	愍 mèn 泯 jèn
震	{III div. IV div.	債 tèn	兪?		
質	{III div. IV div.	筆 but 必 tèt	匹 tèt	弼 bêt 邲 bêt	蜜 mêt 蜜 mêt

There are two exceptions in *ju-shêng*, but as a whole, just as in case of Group *chih*, Ancient Chinese labials are preserved in the III division, while they have changed into dentals in the IV division. Both of Tables 18 and 19 have not labials. In the labials (dentilabials) of Table 20 the initials *fei* 非, *fu* 敷 and *fêng* 奉 are represented by f, and the initial *wei* 微 by v.

Summing up the facts discussed above, the III and IV divisions of the initials labial, guttural and laryngal, of the tables of the *chên* 臻 group are supposed to be distinguished in Ancient Chinese in the following way:

	幫	見	影	曉	喻
{III div. IV div.	pīən pīən	kīən kīən	?īən ?īən	xīən xīən	jīən jīən
{III div. IV div.	pīən pīən	kīən kīən	?īən ?īən	xīət xīət	jīət jīət

### III

Now let us cast a glance over the rimes of the *a* type of other groups than *chih* and *chên*.

In Sino-Korean the distinction between the III and IV divisions in the *a* type rimes appears everywhere in gutturals and laryngals. As stated in Chapter I, forms without any medial are found always in the III division, whereas forms with a medial always in the IV division.<sup>19)</sup>

19) The only exception is the *hsiao* 効 group, where both of them appear with a medial *i*. The reason will be discussed below.

Next, the results of the investigation of how the Ancient Chinese labials are reflected in Sino-Annamese in Giles' dictionary are as follows:<sup>20)</sup>

First, in the rimes *tung* 東 -*wu* 屋 of the *t'ung* 通 group; for III div. e. g. 嘗 mung; 目 muk; no example of the IV division.

In the rime *chi* 祭 of Group *hsieh* 蟹 no character belonging to the III division is found and the examples of the IV division are 蔽 te, 敝 te, 弊 te, 袂 jue.

In the rimes *hsien* 仙, *hsien* 獮, *hsien* 線, *hsieh* 薛 of Group *shan* 山 the examples of the III div. are 辨 bien, 鴉 bien, 辯 bien, 免 mien; 鼈\* biet, 別 biet; 變 bien, 卞 tien;

the examples of the IV division are

鞭 tien, 篇 t'ien, 便 tien, 縣 mien; 欄 bien, 榎 bien, 緬 mien; 徧 bien, 羈 bien, 便 tien, 面 jien; 驚 biet, 警 biet, 滅 jiet.

In the rimes *hsiao* 宵, *hsiao* 小 and *hsiao* 笑 of Group *hsiao* 效 the examples of the III division are

鑣 bieu, 漂\* fieu, 苗 mieu; 表 bieu, 蔗 bieu, 薰 bieu; 廟 mieu;

the examples of the IV division are

飄 tieu, fieu, 瓢 bieu, 蟀?; 標 tieu, 縹 tieu, fieu, 標 bieu, 眇 jieu; 裱 bieu, 剽 fieu, bieu, 驪 fieu, 妙 jieu.

In the rime of Group *chia* 假 there is no III division and the example of the IV division is 乜 mak, me.

In the rimes *ch'ing* 清, *ching* 靜, *king* 勁, *hsi* 昔 of Group *kéng* 梗 there are the examples of the IV division (in the III div. 碧 bik); 井 ting, 名 jaing; 餅 ping, 昭?; 擢 bing, 聘 sing, (shing), 倂?; 詔 jaing; 辟 bik, tik, 僻 tik, 擗 tik, fak.<sup>21)</sup>

In the rimes *ch'eng* 蒸, *chéng*, 證, *chih* 職 of Group *tséng* 曾, the III div. examples are 𠂇 bǎng, 砵 bing, 凭 bǎng, v'ing, 凭 (already quoted); 逼 bik, 悞\* bik, 復 fuk, 睿?; there is no IV div. character.

In the rimes *yu* 尤, *yu* 有, of Group *liu* 流, 謀 miu belongs to the III div., 秣? belongs to the IV div.

The rimes *ch'in* 寢, *ch'i* 緝, of Group *shên* 深; the III div. 藥 bêm, 品 fêm, 鷓?, 駟?; there is no IV div.

The rimes *yen* 鹽, *yen* 琰, *yen* 豔 of Group *hsien* 咸; the III div. 眨 biem, 眨 biem; 窆 biem; no IV div.

In this way the distinction between the III and IV divisions is not so clear as in case of the groups *chih* and *chên*, and we can find labials even in the

20) Here are quoted only bi-labials 重唇音, for there is no problem about denti-labials 輕唇音, the initial *fei* 非, *fu* 敷, and *fêng* 奉 being represented by f and the initial *wei* 微 by v.

21) As to 碧, see Chapter I.

IV div. Nonetheless, seeing that 22 out of 23 dentalized examples belong to the IV division, it is safe to say that it is only in case of the IV div. that the labials of the IV div. changed into dentals in Sino-Annamese. On the other hand, only 15 among 37 examples of the IV div. do not show dentals. In other words, a greater part of the characters of the IV div. of the  $\alpha$  type rimes with labial initials were dentalized.

If we take the groups *chih* and *chên* into consideration, 46 out of 47 examples of dentalization belong to the IV div. And among 64 examples of the IV div. only 18 (less than 30 %) do not show dentalization. In short, more than 70 % of the characters of the IV div. of the  $\alpha$  type dentalized their labial initials.

Summing up what we have discussed above, it is supposed that in Ancient Chinese the medial element of the III division was  $\text{ɿ}$  against the medial element  $\text{ɿ}$  of the IV div. Thus,

(Gr. <i>chih</i> )	III	-ɿi	IV	-i
(Gr. <i>hsien</i> )	//	-ɿei	//	-ɿei
(Gr. <i>chen</i> )	//	-ɿən, -ɿət	//	-ɿən, -ɿət
(Gr. <i>shan</i> )	//	-ɿen, -ɿet	//	-ɿen, -ɿet
(Gr. <i>hsiao</i> )	//	-ɿeu	//	-ɿeu
(Gr. <i>ching</i> )	//	-ɿek	//	-ɿeng, -ɿek
(Gr. <i>liu</i> )	//	-ɿəu	//	-ɿəu
(Gr. <i>shen</i> )	//	-ɿəm, -ɿəp	//	-ɿəm, -ɿəp
(Gr. <i>hsien</i> )	//	-ɿem, -ɿep	//	-ɿem, -ɿep

And the distinction between the III and IV divisions is reflected in Sino-Annamese in case of labials. The labials of Ancient Chinese are preserved in general before  $\text{ɿ}$  while they changed in many instances into dentals before  $\text{ɿ}$ .

In Sino-Korean the distinction is clearly reflected in case of guttural and laryngal initials. Thus, generally speaking, the III division is represented by forms without a medial and the IV division shows forms with the medial  $\text{ɿ}$ . Only Gr. *hsiao* shows the final -io both III and IV divisions. I suppose that the  $\text{ɿ}$  of -io might represent the vowel  $\text{e}$  of the Chinese original -ɿeu, -ɿeu.<sup>22)</sup> In Gr. *chên* -ɿən, -ɿət are represented by -in, -il (or -ən, -əl), -ɿən, -ɿət by -in, -il. By analogy of this also in Gr. *shên*, whereas -ɿəm, -ɿəp are represented by -im, -ip, -ɿəm, -ɿəp might be expected to be represented by -im, -ip, which is not the case. 檜  $\text{im}$ , (init. *ying*, IV div.), 涇  $\text{im}$  (init. *yu*, IV div.), 擗  $\text{ip}$  (init. *ying*, IV div.). So -ɿəm, -ɿəp are represented by -im, -ip in the same way as in -ɿəm, -ɿəp.<sup>23)</sup> This is probably due to the influence of the finals -m, -p.

22) Cf. my article, "On Sino-Korean", (Collected papers, p. 323).

23) These are the instances of guttural and laryngal initials.



The distinction between the III and IV divisions in case of labials is not preserved in Sino-Korean. Therefore, while forms with the medial *i* appear in both III and IV divisions in case of bilabials, the initial *ming* of the characters which belong to the same rime shows forms without *i* just like those with dentilabial initials. We find forms without *i* always in the dentilabials, but only the rime *fei* 廢 shows forms with *i*. And in Gr. *chên* the III division with labial initials is represented by -in, just as 彬 pin, 貧 pin, 珉 min. By analogy to this fact the form -im might be expected also in Gr. *shên*. But this is not the case. It is represented by the form -im, just as in 稟 phīm, 品 phīm. This, too, is due to the influence of the final -m. The characters of labial initials of Gr. *chih* however, show a simple -i both in the III and IV divisions and the labials of Gr. *tsêng* (all belong to the III division) show the finals -ing, -ik (-iək).

As to the behavior of the medial *i* Sino-Japanese Go-on coincides in many cases with Sino-Korean. The principal reason is considered to be due to the fact that Go-on was imported to our country through Korea and that consequently the Chinese original pronunciation was transmitted in the form adapted to the phonetic system of Korean which is abound in neutral vowels, either syllabic or non-syllabic.<sup>62</sup>

With the remarks above we have finished the argument concerning the nature of the medial of the words of labial, guttural and laryngal initials of the  $\alpha$  type rimes. What I shall state in the following will concern (1) the nature of medial *i* in the words of dental and affricates and fricatives of the  $\alpha$  type rimes, (2) the nature of medial in the  $\beta$  type rimes, (3) the nature of the rimes of the  $\gamma$  type and (4) the relations of the three lines *a*, *ya*, and *wa* of Japanese syllabary and the divisions, and so on.

#### IV

As stated above, in Ancient Chinese the medial element of the III division of labial, guttural and laryngal initials of the  $\alpha$  type rimes was a non-palatal  $\underset{-}{i}$ , while that of the IV division was a palatal  $\underset{+}{i}$ . In the fan-ch'ieh of the *I-ch'ieh-king-yin-i* by Hui-lin there is a strong tendency to discriminate these two kinds of the characters for indicating the rime in the words of labial, guttural and laryngal initials.<sup>63</sup> Moreover, in the *Ta-t'ang-hsi-yü-ki* 大唐西域記 Chinese characters, labial, guttural and laryngal of the *chih* group, for transcribing Sanscrit vowels  $\underset{-}{i}$ ,  $\underset{+}{i}$  are 比, 卑, 毘, 避, 臂, 彌, 祇, 耆, 伊, etc., all of which are of the IV division and there is no character of the III division. This is an evidence demonstrating that the hypothesis of the medial of the III div.  $\underset{-}{i}$ :

the IV div. -i stated in the Chapters II and III is valid.

Then how about the words of the initial category *ch'ih-yin* 齒音? There is no room for doubting Karlgren's theory about the initial consonants of the categories *chêng-ch'ih-yin* 正齒音 and *hsi-chêng-ch'ih-yin* 細正齒音 that the consonants of the II division were cerebrals, while those of the III division were palatals, when we infer from the Chinese transcriptions of Sanscrit. When we consider the nature of the initials, the medial element following immediately after the initials of the II division is appropriately  $\underset{i}{i}$  and that after the III division  $\underset{i}{i}$ . Sino-Korean has in the *k'ai-k'ou* of Gr. *chih* 醜·輜. -i, 差 -i, 師 -ă, in the II division, and -i everywhere in the III div. Thus, admitting a few anomalies, we must pay our attention to the fact that the final - $\underset{i}{i}$  appears in the II div., while the final -i everywhere in the III div. This condition ought to reflect the state of the Chinese original.<sup>23</sup> For instance, the Chinese original reading of the character 施 of the III div. of the rime *chih* 支 (Sino-Korean si) was  $\underset{i}{s}i$ , while that of the character 醜 of the II div. of the same rime (Sino-Korean s $\underset{i}{i}$ ) was  $\underset{i}{s}i$ . This hypothesis is quite reasonable when we consider the relations of initial and rime.

Sino-Korean is the reflection of the pronunciation of the dialect of K'ai-fêng in the 10th century. It is supposed that in Northern Chinese at that time the medial element ( $\underset{i}{i}$ ) after cerebral initials had been lost partially at least, except in case of the *chih* group. For instance, the  $\underset{i}{s}i$  for 所 belonging to the II div. had already changed into  $\underset{o}{s}o$  through the stage of  $\underset{o}{s}ö$ .<sup>24</sup> Therefore in Sino-Korean all the words of the II div. after cerebrals show forms without i. Against this those words which had palatal initials and probably had kept the medial element  $\underset{i}{i}$  show entirely forms with i in Sino-Korean.<sup>25</sup> In the Kan-on of the MS. of the *Mêng-k'iu* 蒙求 text in the possession of the Shôsôin 正倉院 and in the Tendai Kan-on 天台漢音 which was based upon Northern Chinese at the end of the T'ang dynasty the II div. of the *ch'ih-yin* show forms without i whilst the III div. forms with i.

The sounds of the IV. div. of the *ch'ih-yin* are the so-called *ch'ih-t'ou-yin* 齒頭音 or *hsi-ch'ih-t'ou-yin* 細齒頭音, and the phonetic values of the initials are fixed to have been ts, ts', dz (or dz'), s and z. The words of the IV div. are represented in Sino-Korean generally with the medial i and consequently the medial in the original Chinese must have been a palatal  $\underset{i}{i}$ .<sup>26</sup>

In short, in case of the *ch'ih-yin*, the medial element of the rimes of the  $\alpha$  type is supposed to have been  $\underset{i}{i}$  in the II div. and  $\underset{i}{i}$  in the III and IV div. This assumption is quite favourable for the explanation of another fact. Prof.

24) Cf. my article, "On Sino-Korean".

25) In case of Grs. *chên* and *shên*, however, we find some anomalies.

26) As to the Sino-Korean  $\underset{ä}{ä}$  in case of Gr. *chih*, see p. 305 of the article cited above.

Karlgren supposed, when he argued about Archaic Chinese that the AC. *ts*, *ts'*, *dz'*, *s* (the *ch'ih-yin* of the IV div.) and the AC. *tʂ*, *tʂ'*, *ɕʂ'*, *ʂ* (the *ch'ih-yin* of the II div.) were both of them derived from AC. *ts*, *ts'*, *dz'*, *s*. Only he could not explain the reason why the initial of 莊 *tʂiang* had been cerebralized, while that of 將 *tʂiang* had not, even though they had been before the same element *i*.<sup>27)</sup> Now, when one follows our assumption, only the *ts* etc. immediately before the *ɿ* had been cerebralized, and the *ts* etc. before the *i* had remained unchanged, as 莊 *tʂiang* > *tʂɿang*, 將 *tʂiang* > *tʂiang*, and thus the difference of conditions can be very clearly explained.<sup>28) 29)</sup>

As to the *pan-ch'ih-yin* 半齒音, as it is always used for transcribing Sanscrit palatals, *j*, *ñ*, its initial is supposed to have been palatal, and Sino-Korean shows the same behaviour as in case of the III div. of the *chêng-ch'ih-yin*, for Sino-Korean has always the medial *i*. Therefore, the medial element is supposed to have been a palatal *ɿ* just as in the III div. of the *chêng-ch'ih-yin*.

The III div. of the *shê-yin* 舌音 and the *pan-shê-yin* 半舌音 shows generally the medial *i*.<sup>29)</sup> Now, the traditional phonologists transmitted several methods of explaining fan-ch'ieh, and among them there was one method which was called "Kuang-t'ung-mên-fa 廣通門法". In the *Ch'ieh-yün-chih-nan* it is said, "Kuang-t'ung 廣通 is related to the initials, 見·溪·群·疑·幫·滂·並·明·非·敷·奉·微·曉·匣·影. These 15 initials are to indicate the rimes of the IV div., when they have to meet with the rime characters of the initials 知·徹·澄·孃·照·穿·牀·審·禪·來·日, i. e. of the III div."<sup>30)</sup> This remark seems to reflect the fact that the III div. of the init. categories, *shê-yin* 舌音, *ch'ih-yin* 齒音, *pan-shê-yin* 半舌音, and *pan-ch'ih-yin* 半齒音 had something common in its nature with the IV div. of the initials, labials (唇音), gutturals (牙音), and laryngals (喉音). If so, the medial element of the III div. of the *shê-yin* and the *pan-shê-yin* was a palatal *ɿ*, just like the III div. of the *ch'ih-yin* and *pan-ch'ih-yin* and the IV div. of labials, gutturals, and laryngals.<sup>31)</sup> Besides, the rimes of the type *α* have hardly dental stops (舌頭音) in their initials. The character 地 of

27) Cf. Analytic Dictionary of Chinese and Sino-Japanese, p. 25.

28) Only, the character 眞 has the fan-ch'ieh 側隣切 in the *Kuang-yün* and in the *T'ang-yün* quoted by Hsü Hsüan in his commentary to the *Shuo-wên*. This fan-ch'ieh seems to be in disharmony between its upper and lower characters, but in reality it is not the original one, for the fan-ch'ieh having the palatal initial is considered to be original, as seen in Fragment No. 3 of the *Ch'ieh-yün*: 職隣反, in the *Ten-rei-ban-shô-mei-gi* 篆隸萬象名義: 之仁反, in the *Ta-kuang-i-hui-yü-p'ien* 大廣益會玉篇: idem, in the *Ch'ü-yün*: 之人切, and the like.

29) There are, however, some instances where we find forms without a medial.

30) "廣通者謂見溪群疑幫滂並明非敷奉微曉匣影, 此十五母音爲切, 韻逢知徹澄孃照穿牀審禪來日第三等, 並切第四."

31) The method of "Kuang-t'ung-mên-fa" is not an independent rule which governs all cases, but only one of additional rules, and what it intends is merely to indicate a general tendency.

the rime *chih* 至 is the only case in common use. The Sino-Korean for the character is *t̄si*.<sup>32</sup> Generally speaking, the nature of the medial element of the *shê-shang-yin* 舌上音, *shê-t'ou-yin* 舌頭音, and *pan-shê-yin* 半舌音 in the Chinese original is still to be investigated.<sup>33</sup>

So far I have discussed about the rimes of the type  $\alpha$ . As the rimes of the type  $\beta$  show forms without a medial everywhere in Sino-Korean (except in Gr. *kêng* 梗), their medial element is supposed to have been a non-palatal  $\bar{i}$  in the Chinese original. The rimes of the  $\beta$  type contain normally only the words of labial, guttural and laryngeal initials, but rarely initials of the *ch'ih-yin* are found<sup>32</sup> and in that case the initials are always cerebrals (II div.). This fact marvellously coincides with the fact that the rimes of the  $\beta$  type had the medial  $\bar{i}$ .

Now let us pass on to the problem of the positions of Japanese lines *a*, *ya* and *wa*. No explanation is needed about the error committed by Karlgren who considered the initial of the III div. of the *yu* 喻 as *j* ("yod"). This theory was caused from his prejudice that every initial of the III div. should be palatal, but this is contradictory to the real facts seen in modern Chinese dialects, Sino-Japanese, Sino-Korean and Sino-Annamese. I think that it is very unnatural to suppose that before the III div. of the *yu* a palatal consonant *j* comes, as the medial was a nonpalatal  $\bar{i}$ . If either the III div. or the IV div. should have *j*, it must be no doubt the IV div. In fact, the IV div. of the *yu* is represented regularly by *z* in Sino-Annamese. And in Swatow also we find the following opposition: 位 *ui*, (the III div.): 惟·維 *dzui* (the IV div.); 于·羽·雨 *u* (the III div.): 逾·喻·裕 *dzu* (the I V div.). Further, in the Chinese translations of the Buddhist texts the characters for the IV div. of the *yu* are often used for the Sanscrit syllables beginning with *j* [dʒ], as in 羅闍祇 *Rājagrha*, 閻浮提 for *Jambudvīpa*, 阿逸多 for *Ajita* etc. Therefore, at the head of the syllable initial of the IV div. of the initial *yu* a palatal consonant like *j* is assumed to have existed. And, as the medial of the IV div. of the *yu* was probably a palatal  $\bar{i}$ , as stated above, there is nothing unnatural to suppose that a palatal *j* comes immediately before the medial.

In the Mannyōgana in the period of Nara and the preceding stage the Chinese characters of the III div. of the init. *ying* and the *yu* are used for the kana of *a* line, when they are *k'ai-k'ou*, and for the kana of the *wa* line, when they are *ho-k'ou*.<sup>33</sup> On the other hand, the characters of the IV div. of the initials *ying* and *yu* are utilized for the kana of the *ya* line either in *k'ai-k'ou* or in *ho-k'ou*. Therefore, insofar as the ancient readings of Chinese characters

32) 鱗·亂 in the rime 隱, 生 in the rime 庚 and the rime 敬, and 省 in the rime 梗.

33) We find in the *Izumofudoki* 出雲風土記 an instance where 最邑 is used for representing *sa-yo-fu* サヨフ; the character 邑 belongs to the III div. of the init. *ying*, and the *i* of *sa-i* (最) is combined with *o* of *o-fu* (邑) into *yo*, and thus it is out of question.

reflected in the Mannyôgana, the theory of Ôta Zensai 太田全齋 who held that the I, II and III divisions of the initials *yîng* and *yu* are the positions for the lines *a* and *wa*, (the *a* line in case of *k'ai-k'ou* and the *wa* line in case of *ho-k'ou*), the IV div. is the fixed position for the *ya* line,<sup>34)</sup> is practically right.

It is, however, worth noting that the law of Zensai can be applied only within the limits of the rimes of the  $\alpha$  and  $\beta$  types. The law cannot be applicable to the rimes of the  $\gamma$  type. Because the character 翳 (the IV div. of the init. *yîng*) in “弟翳”,<sup>35)</sup> a place name of the Shimomichigun 下道郡 in Bitchû 備中 which appears in the *Wamyôshô* 和名抄, is employed for transcribing the length of the vowel *e* of the syllable *se* and thus it should be the kana for the *e* of the *a* line. In this way there arises a doubt against the theory of Karlgren that the Ancient Chinese value of the character 翳 is ?iei.

I think that the rimes of the type  $\gamma$  had finals, such as -ei (齊), -en (先), -eu (蕭), -eng (青), and -em (添), in the period of the *Ch'ieh-yün*. The reason is that the upper characters of fan-ch'ieh for indicating the pronunciations of the characters of the rimes of  $\gamma$  type in the *Ch'ieh-yün* are generally of the same kind for the initial characters of the rimes of the I div. and are kept apart from those of the rimes of the  $\alpha$  and  $\beta$  types (rimes accompanied by a medial).<sup>36)</sup> The rimes of the type  $\gamma$ , different from the rimes of the  $\alpha$  type, cannot be in harmony with palatal initials like those of the III div. of the *ch'ih-yin* and *pan-ch'ih-yin* or of the IV div. of the *yu*. These conditions suggest us that they have something in common with the rimes of the I div. and thus they are possible to have had no medial *i*.<sup>37)</sup>

It is probable that at the end of the Sui dynasty or at the beginning of the T'ang dynasty the rimes of the  $\gamma$  type changed into ?ei (齋), -?en (先), -?eu (蕭), -?eng (青), -?em (添) and thus became identical with the rimes of the IV div. of the  $\alpha$  type, i. e. 祭·仙·宵·清·鹽. At the time when Hui-lin lived this merger was already perfected. Moreover, in fan-ch'ieh of the *Ch'ieh-yün* the upper characters for the rimes of the  $\gamma$  type are of the same kind as for those of the I div., while in the Hui-lin's *I-ch'ieh-king-yin-i* there grew a tendency to differentiate the upper characters for the IV div. of the  $\alpha$  type rimes and of the  $\gamma$  type rimes into a single category and to distinguish them from those of the rimes of the I div. Now, in the course of the history

34) Ôta Zensai, Kango-onzu-setsu 漢吳音圖說.

35) The word is explained as “勢” in the commentary to the *Wamyôshô*.

36) Cf. Chapter I, p. 328.

37) Dr. Seiken Ôshima 大島正健 advocated already in earlier times the theory of non-medial nature of the IV div., but he did not distinguish the rimes of the  $\alpha$  type from those of the  $\gamma$  type. Maspero, based upon the comparison of Chinese and Thai, imagined that the rimes 齊·眞·臻·諄·先·蕭·青·添 had not a medial *i* in Archaic Chinese. His view is coincident with mine insofar as the five rimes 齊·先·蕭·青·添 are concerned.

of phonology in China an attempt to classify all characters by rime into a certain number of categories and to give names to them existed in remote antiquity. But as to initials, even though a vague idea of classifying initials into "five sounds" 五音 derived from the school of *siddham* 悉曇 existed from a comparatively earlier period, the theory of concrete and clear classification is supposed to have begun at the end of the T'ang dynasty. Prior to that time even if forms of classification were fixed in the tradition in the history of phonology, no fixed tradition of classification of initials (consequently of the upper characters) had not yet grown. Therefore, the difference in the use for the upper characters of fan-ch'ieh of the *Ch'ieh-yün*, on the one hand, and of the *Yin-i* by Hui-lin, on the other, must be considered to reflect a difference of the phonetic systems which offered the bases of the two books respectively (directly or indirectly). The rimes of the  $\gamma$  type show forms with a medial i either in the transcriptions of Chinese by Tibetan letters or in Sino-Korean based upon the K'ai-fêng dialect of the 10th century. The *Yün-king* which is supposed to have been dressed up at the end of the T'ang or in the period of Five Dynasties places a part of the rimes of the  $\alpha$  type and the rimes of the  $\gamma$  type in the columns of the IV div., which reflects the phonetic conditions after the development of the rimes of the  $\gamma$  type.

Of course the facts stated above are not sufficient for the evidence of the non-medial nature of the  $\gamma$  type rimes in the time of the *Ch'ieh-yün*. These facts can be explained to a certain degree by assuming, as Karlgren tried, "i vocalique" as a medial element. For this, however, the simultaneous existence of three kinds of i must be assumed. This is clearly unreasonable. It is far more reasonable to suppose that the rimes of the  $\gamma$  type which had not a medial in the time of the *Ch'ieh-yün* came to develop a medial during the T'ang dynasty. When we consider in this way, the distinction made by Karlgren between "i vocalique" and "i consonantique" will be useless after all. In short, there were only two kinds of medial, namely a palatal  $\dot{i}$  and a non-palatal  $\bar{i}$ .

The only drawback of this theory of mine is the fact that Sino-Japanese Go-on shows a medial in the rime *ch'ing* 青 (迥, 總), e. g. 經 (kiyau), 青 (siyau), 聽 (tiyau), etc. But, even if the rime *ch'ing* had a medial element in a certain dialect, it cannot be, I suppose, a definite ground denying its non-medial nature in the Northern dialect in the period of the Sui dynasty. Actually, the remark in the Introduction to the *Ch'ieh-yün*: "The rime *hsien* 先, 蘇前反, and the rime *hsien* 仙, 相然反, or the rime *yu* 尤 and the rime *hou* 侯 are argued that they are of the same final."<sup>38)</sup>, suggests that the confusion of the rimes *hsien* 先 and *hsien* 仙 had begun already at the time prior to the *Ch'ieh-yün* in a

38) "先蘇前反仙相然反尤侯俱論是切."

certain dialect.

Among the rimes belonging exclusively to the IV div. only the rime *yu* 幽 (黝幼) is a unique one. This rime contains implicitly from the rime table the *ch'ih-t'ou-yin* 齒頭音 and the *hsi-chêng-ch'ih-yin* 細正齒音 beside labials, gutturals, laryngals, and *pan-shê-yin*. Moreover, the upper characters are of the same kind as in those of the  $\alpha$  type or of the  $\beta$  type. Therefore, though it is treated as one of the rime belonging exclusively to the IV div. in the rime tables, in reality it is not a  $\gamma$  type rime, but rather belongs to the type  $\alpha$ . Karlgren considered it as a  $\gamma$  type rime and reconstructed as *-iəu*, so that he distinguished it from the rime 尤 (有宥) *-iəu*. If both of them are of the  $\alpha$  type, what is the distinction? I cannot yet make this point clear, but when we examine the *Hokekyô-tanji* 法華經單字 written in the 2nd year of Hô-en 保延 (1136 A. D.) and in the *Hokekyô-onkun* 法華經音訓 by Shin-kû 心空 we find the final *-eu*, e. g. 幽 (*eu*), 幼 (*eu*), 謬 (*meu*), and distinguished from the final *-yu* (in the III div, *-u*, *-yu*, *-iu*). Thus, the difference between the rimes 尤 and 幽 is probably due to other elements than the medial.

## POSTSCRIPT

The present paper is based on my article published in serials in the Reports of the Association of Phonetics 音聲學協會會報 since 1937, with some corrections for this time. Chapter I was published in the issue No. 49 of the journal (December, 1937), Chapter II in No. 51 (March, 1938), and Chapter III in No. 53 (July, 1938). At that time I heard from the editors that the expenses for my article were somewhat high and I was so sorry that I refrained from having an article published for some time, but as I could not leave it aside, I asked the editors to publish my article in No. 58 of the journal in July, 1939. Under such circumstances Chapter IV became disproportionately concise. Though I tried to amend the chapter at some points for this time, I could not do as I expected, for I have been sick in bed. Fortunately, Mr. Rokurô Kôno's paper entitled, "A Characteristics of Sino-Korean," published in No. 3 of "Gengo-kenkyû" 言語研究, in September, 1939, contains not a few merits and complements each other with my article. As to the problem of medial, Mr. Lu Chih-wei's 陸志韋 articles, "The 51 Initial Categories Demonstrated 證廣韻五十一聲類," (Yen-king-hüeh-pao 燕京學報 No. 25) and "The Divisions III and IV and the So-called Yodicization 三四等與所謂喻化" (ibid. No. 26) are useful.

## Translator's Notes

a) This article is the translation of the late Dr. Arisaka's work entitled "Karlgrén-shi no yōnsetsu o hyōsu". Dr. Arisaka was one of the most brilliant scholars in the field of the Japanese philology. His discovery of traces of "vowel harmony" in Archaic Japanese is well known. Majoring in the study in historical phonetics of Japanese, he extended his scientific activities to the phonetic history of Chinese and the results of his researches deserve our serious attention, though they are few in number. His works were collected and published in 1944 with the title of "Kokugo on'inshi no kenkyū" (Studies on the Phonetic History of Japanese). The collection was revised in 1957 with several additions. The contents of his collected papers are as follows:

## First Part (the works concerning the Japanese philology)

- A Kind of Vowel Alternation in Japanese
- On the Law of the Vowel Alternation
- On the Syllable *mu* of the Word *kamukaze*
- On the Concept of "Vowel Harmony"
- On the Use of the Letter *mo* in the Kojiki
- The Law of the Combination of Syllables in Archaic Japanese
- On the Mannyō-gana *zo*
- Miscellaneous Remarks on the Mannyō-gana
- The Use of the Letter *ko* in the Shinsenjikyō
- The Initial Consonant *s-* in Archaic Japanese
- On the Syllables *ti* and *tu* in the Eastern Dialect in the Nara Period
- The Phonetic Conditions of Japanese in the Period of Kamakura, Reflected in the Fūkyō
- On the Initial *h-* in the Middle of the Edo Period
- The Verses Used to Distinguish the Tō-on from other Readings and the Verses Used to Recite the Names of the Chinese Rimes
- On the Spelling of the Word "Bōshi"

## Second Part (the works concerning the Chinese phonology)

- The Chinese Dialects during the Sui Dynasty
- On the Sino-Korean
- A Critical Study on Karlgrén's Medial *i* Theory
- On the Tendency of Weakening Labial Element in the IVth Division of Labials, Gutturals and Laryngals
- The Study of Archaic Chinese and the Problem of Medial *i*
- Are not the Readings such as *mei* (明) or *nei* (寧) Kan-on?
- On a Dialect of Shan-tung



## Third Part (the works concerning general linguistics)

On the True Nature of the Phonological System

On the True Nature of the Accent Pattern

The Value of Examples of Alternation as Sources of Reconstruction

## Appendices

On the Origin of the Auxiliary Verb *tamafu* of the Lower 2 Grade Conjugation

Studies on Words and Meanings of the Norito and the Semmyô

On the Phrase 金有等麻字之多麻敝禮

On the Phrase 申し賜へと申さく

On the Word "shirazu" Meaning Impossibility

On the Archaic Verb "miru" which Meant "to Turn"

Miscellaneous Remarks on Archaic Words

## Additions to the Revised Edition

Miscellaneous Remarks on the Mannyô-gana

The Values of *ti* and *tu* Reflected in the Tô-onOn the Phonetic Comments to the Iroha in the *Shu-shih-hui-yao* 書史會要

On the Chinese Tones Transmitted in the Shittanzô 悉曇藏

The Process of the Fall of the Ju-shêng Finals

The Kan-on in the MSS. of the Meng-k'iu in the Possession of the Shôsôin

On the Archaic Conjugation of the Verb "wasuru"

A Study on the Verb "shiru"

Miscellaneous Remarks on the Words and Meanings of the Mannyôshû

On the Concept of "Root"

On the Wamyôshû 和名集, an Old Dictionary

b) Dr. Arisaka proposed a theory about the origin of Sino-Korean in his article, "Chôsen kanjion ni tsuite" (On Sino-Korean), where he supposed that Sino-Korean was based upon Northern Chinese of K'ai-fêng in the 10th century. His arguments are founded upon various evidences, among which not a few are very convincing. Especially some characteristics of Sino-Korean present clearly the features of Modern Chinese and seem to confirm his theory. Moreover, he drew the attention of readers to the cultural facts in Korea under the Koryô dynasty, when the Chinese influences over Korea were fairly remarkable. Nevertheless, I am not convinced by his theory. One of weak points in his theory is to regard the present Sino-Korean as representing a purely homogeneous system at a certain stage of the phonetic history of Chinese, without any element from other stages of the development mingled in it. In Japan the reading of

Chinese characters, naturally adapted to the Japanese phonetic structure, has been well preserved as a whole. For example, the Kan-on can be said to reflect the pronunciation of Ch'ang-an at the T'ang period and kept apart from the older tradition, the Go-on. But the things are entirely different in Korea. In reality, we can easily discern several strata among the present Sino-Korean, which reflect different stages of Chinese phonetic history. Considering the facts, we can imagine that some characteristics are reflections of older phases, while some other are introductions at a comparatively recent period. Thus we cannot conclude the period of the original Chinese only from the present state of Sino-Korean, without taking the complexity of origin into consideration. But after I carried out a due stratification, I have found that the dominant stratum discernible in Sino-Korean seems to reflect the pronunciation of the T'ang period, because the system of the stratum presents remarkable coincidences with the system found in the *Yin-i* by Hui-lin. This result may confirm the historical facts that it was the period of the T'ang that Korea had the most intimate intercourse with China and it was the time when the Chinese culture was firmly established in this peninsula.

c) The theory that the Go-on was transmitted to Japan through the medium of Korea is a wide spread opinion, but not yet fully corroborated by proofs. Apparently the phonetic aspects of the Sino-Korean and the Go-on are in several points very similar to each other. For example, 強 S. K. kang, Go. go (ga-u), both of them show forms without a medial. And the character 建 is read kən in Sino-Korean, and kon in Go-on,—the value of the vowel o was something like  $\bar{o}$  (ə?), which seems to suggest us a common origin. But in reality this is not the case. The Go-on value reflects a more archaic stage of the rime 元, while the Sino-Korean value is considered to correspond to Ancient Chinese form kĭän. Thus the apparent coincidence is not to be explained as such. Anyway, the Go-on is certainly a reflection of Southern Chinese probably in the period of the Six Dynasties, whereas the Sino-Korean is the descendant of the T'ang Chinese in its dominant stratum. The fact that both of them show the same behaviour of the medial i is to be explained by assuming that they traced independently back to the original Chinese which had the neutral i.

d) The fan-ch'ieh of the *I-ch'ieh-king-yin-i* by Hui-lin has a very peculiar characteristics. One can easily find a conspicuous tendency in them. Huang Ts'ui-po discovered that the characters of the IVth division are used in the upper characters of the fan-ch'ieh for the characters of the same division. But this fact is not only restricted to the characters of the IVth division, but all the fan-ch'ieh found in the *Yin-i* show a remarkable harmony between the upper

and lower characters of fan-ch'ieh. This tendency was first discovered by Chao Yüan-jên and he called it as "medial harmony". The fact indicates clearly a progress in the method of fan-ch'ieh and what is more important is that the harmony can be used in reconstructing the T'ang Chinese, for the upper characters thus used indicate not only initial categories, but also principal vowels as well. Being the only material of the system representing the T'ang Chinese, this "medial harmony" may be fully utilized for the investigation of the system.

e) It is very easy to find a discrepancy in the tables of the *Yün-king* as to the distribution of the Ancient medial *i*. As Dr. Arisaka pointed out, the medial *i* is found in the II division in case of cerebral initials and in the III division in case of a certain group of gutturals and labials. On the other hand, the medial *i* is located in the III division in case of palatals including the initial *jih* 日, while in case of dental affricates and fricatives (齒頭音) the medial *i* is in the IV division. How should we interpret this discrepancy? If the same difference of medial *i* as in the *Ch'ieh-yün* was still maintained at the time when the *Yün-king* was compiled, such a discrepancy is absurd. It is, therefore, to be presumed that the system on which the *Yün-king* was based presents a different aspect from that of the *Ch'ieh-yün*. In other words, insofar as the problem of medial *i* is concerned, an evolution had been made from the system of the *Ch'ieh-yün* to that of the *Yün-king*. According to Prof. Tôru Mineya, in the time of the *Yün-king* the Ancient palatals were cerebralized so that the medial immediately after the palatals became somewhat neutralized and thus they came to be co-ordinated with a certain group of gutturals and labials in the III division. Anyway it must be strictly kept in mind that there was a fairly great change between the systems of the *Ch'ieh-yün* and of the *Yün-king* and therefore we must not confound them as representing the same system.

f) See Arisaka's article, "The Study of Archaic Chinese and the Problem of Medial *i*," (Collected Papers, p. 365-368).

g) The older orthography of the reading for the character 地 is *ti*.

h) The nature of the medial after dental stops is not clear, but there is one remarkable fact. When we scrutinize the fan-ch'ieh of the *Ch'ieh-yün*, we are often confronted with cases where the distinction of the so-called "fan-ch'ieh doublets" are obscured, and in such a case we often find characters of dental initials used in the lower characters of fan-ch'ieh. This fact suggests us a weak supradental feature of the so-called "dentals", which was considered to be neutral as to the nature of medial *i*. (Cf. my article, A Peculiarity of Sino-Korean, Gengo Kenkyû, Vol. 3, 1935.)