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CURRENT DEVELOPMENTS IN SINO-VIETNAMESE STUDIES

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0. ABSTRACT. The present article endeavors to examine and evaluate studies in the field of Sino-Vietnamese linguistics which appeared primarily in the twentieth century, but with particular emphasis on work accomplished since 1955. While a bibliographical listing is imperative for this kind of article, it is limited to a minimum, and the discussions are focused on how the studies were developed, what the current state is, and where problems are. The article is followed by a bibliography which covers only those works mentioned in the main text.

1. INTRODUCTION*. Among the numerous nations and tribes which surround the homeland of Sino-Tibetan languages, three countries, Korea, Japan, and Vietnam, accepted the central culture and, inevitably, a huge cultural vocabulary of the Sino-Tibetan homeland -- the Chinese. In fact, they accepted not merely the vocabulary but also the writing system, i.e. the Chinese characters, together with the 'reading' of them.[1] This wholesale loan of cultural words through the borrowing of the writing system is called Sino-Xenic (to adopt Samuel E. Martin's nomenclature[2]), namely, Sino-Korean, Sino-Japanese, and Sino-Vietnamese. Since their loan was 'wholesale' and the reading reflects a more or less homogeneous phonological system of pre-modern Chinese (more on this homogeneity later), the study of Sino-Xenic constitutes one of the most important fields of Sino-Tibetan linguistics and of Chinese historical phonology in particular. Apart from these three countries, other nations borrowed just as many loan words from Chinese, for example Uighur[3], but since their loan is not associated with the borrowing of the characters and hence not the borrowed reading of characters, we do not normally coin such expressions as 'Sino-Uighur'. It is also because their loan is not 'wholesale' (hence the information so obtained tends to be fragmentary though also important, like some old loan

words in Tai[4]) that Chinese loan words in Uighur do not play as great a role as Sino-Xenic does.

Among the three languages that constitute Sino-Xenic, Vietnamese has a unique value. It is first of all a tone language and hence systematically accepted (and still maintains) the old tonal system of Chinese according to their own fashion; speakers of the two other 'Altaic' languages merely have old phonological documents that contain some phonological information concerning old Chinese tones[5], but the languages themselves show very little trace of them. Another unique value of Vietnamese is that, thanks to the 'vulgar characters' the Vietnamese invented to record their own language, we can have a glimpse of a very old stage of the Chinese phonological system, perhaps that of Han. The construction of these 'vulgar characters' provide phonological information at least as useful as the Mannyoogana (phonetic use of Chinese characters recording Ancient Japanese words as adopted in the Mannyooshuu 'Myriads of Leaves') in Japan or I-du (phonetic recording of Sillan poems and proper nouns) in Korea.

The first linguist who systematically used Sino-Vietnamese for the study of Chinese phonology was K. Bernhard J. Karlgren, who relied mainly on Jean Bonet's Dictionnaire Annamite-Française for collecting the Vietnamese readings of the Chinese characters included in his Dictionary of Chinese Dialects (1926), the fourth volume of his Études sur la Phonologie Chinoise (1915-26). Before Karlgren, Henri Maspero had already systematically used Sino-Vietnamese as the only source material representing the Vietnamese language of arcund the tenth century A.D.[6] Maspero's goal was, however, to reconstruct the phonological system of Vietnamese initial consonants using Sino-Vietnamese materials, and his knowledge of Chinese phonology at that stage was much less than that of Karlgren (though he superseded Karlgren in some respects when he proceeded to the study of Tang phonology to complete his study of the background of the Chinese phonological data he relied on to reconstruct what he calls 'annamite archaïque').[7] For a systematic study of Sino-Vietnamese, however, we had to wait until after World War II.

Maspero himself says little about the source of the Sino-Vietnamese he used in reconstructing 'annamite

archaïque'. Even Karlgren, who spent more than ten years completing his Dictionary of Chinese Dialects after publishing L'Ancien Chinois (1915), the first volume of his Études sur la Phonologie Chinoise, was content to use the Vietnamese pronunciation of Chinese characters recorded by Edward H. Parker in Herbert A. Giles' A Chinese-English Dictionary (1892) whenever he found his own 'notes' and Jean Bonet's dictionary insufficient.[8] One may naturally suspect that what attracted Sinologists/linguists to a systematic study of Sino-Vietnamese itself was the presence of tones in Vietnamese reflecting the tonal values of pre-modern Chinese. This was not the case, however; Karlgren did not pay much attention to tones, as can be seen from the fact that his Dictionary of Chinese Dialects totally lacks tonal information on modern Chinese dialects, to say nothing of Sino-Xenic. What highlighted Sino-Vietnamese was its relevance to the newly discovered problem of 'fan-qie doublets' -- the first major revision of the Ancient Chinese phonological system as reconstructed by Karlgren. Hideyo Arisaka, who was already aware of the Ancient phonological distinction between the fan-qie doublets (a distinction between two subgroups of Chinese syllables of some of the Ancient Chinese rimes which Karlgren designated as the alpha group [9]) in his short article on the Mannyoogana, 'Mannyoogana zakkoo' (1935), published a detailed criticism of Karlgren's reconstruction from 1937 to 1939. In this he demonstrated that the rimes he (Arisaka) assumed to contain a central medial vowel *-ï- (rimes occurring in the third 'division' of the Yun-jing [The Mirror of Rimes]) maintained the Ancient Chinese labial initials, while those he assumed to contain a front medial vowel *-i- (rimes occurring in the fourth 'division' of the Yun-jing) have developed dental initials in Sino-Vietnamese, using the same Sino-Vietnamese pronunciation of Chinese characters given in Giles' dictionary.[10] While Jing-ru Wang was apparently informed of the discussion on the related distinction among the Mannyoogana in his study of the fan-qie doublet problem[11] (although he could not publish his paper discussing this Sino-Vietnamese initial distinction related to the fan-qie doublets until 1948 [12]), Paul Nagel independently noticed the same phenomenon in Sino-Vietnamese (see his Tables A-C, Nagel 1941) and concluded that Sino-Vietnamese syllables having labial initials corresponding to Ancient Chinese labials and those having dental initials yet corresponding to Ancient Chinese labials 'must have been different in the source dialect of Sino-Vietnamese'.[13] However, Nagel did not carefully examine the fan-qie's of the Qie-yun/Guang-yun and thought

that the distinction was not that of the initials[14] but was 'dependent upon the finals', although these initials are presumably 'strongly labialized'. Thus, he gave:

p^w p'^w b'^w m^w

for Ancient Chinese initials corresponding to Sino-Vietnamese labials, and a set of initials 'pronounced dentilabially':

p^t p'^t b'^d mb^d

for those corresponding to Sino-Vietnamese dentals. Nagel's uncertainty on the exact phonetic/phonological nature of the distinction between fan-qie doublets somehow reminds us of Tooru Ooya's observation on the same problem that these doublets 'should represent the same pronunciation...but if you compare these doublets, there seems to exist a slight difference in the degree of palatalization, and we therefore may not be able to regard them entirely homophonous'.[15]

At this point, one will naturally want to know in detail and with greater certainty what the Sino-Vietnamese distinction in question is, in order to gain deeper insight into the nature of the Ancient Chinese fan-qie doublets in question. While Arisaka and the majority of Chinese linguists proceeded to tackle the problem in connection with related phonological phenomena in Archaic Chinese[16], and while Hokuroo Kocno undertook further studies of Sino-Korean which also offered many hints in solving the problem[17], two prominent linguists, Li Wang and Tooru Mineya, undertook a systematic study of Sino-Vietnamese, although published only after World War II.

There are many different approaches to the study of foreign loan words -- Chinese loan words in particular -- in Vietnamese. The most popular one is after the fashion of Henri Maspero's 'Quelques mots annamites d'origine chinoise' (1916), Khac^5-kham^1 Nguyen^4's 'Foreign borrowings in Vietnamese' (1969), 'Influence of Old Chinese on the Vietnamese language' (1971), etc., in which Chinese loan words, among others, are examined in various aspects of their borrowings -- how and in which period a given loan word was borrowed, what kind of transformation it underwent due to the phonological/phonotactic characteristics of the host language, etc. In a sense, this is an etymological

study of some Vietnamese words whose origin happened to be Chinese. The second approach is to sort out Chinese loan words in Vietnamese according to the phonological categories of Chinese -- preferably the most detailed diasystem of all known variants of the Chinese language, modern or ancient, as exemplified by L. Wang's 'A study of Sino-Vietnamese' (1948). This kind of study does in fact treat Chinese loan words in Vietnamese as a sort of 'foreign dialect', and thus constitutes a part of Chinese linguistics undertaken in the hope that the results will eventually shed light on the phonological problems in the proto-language of China. The third approach is to examine systematically how the Vietnamese accepted Chinese words and through this examination establish the phonological characteristics of the Vietnamese language at various periods of the borrowings, as given in Mineya's monograph, Etsunan Kanjion no Kenkyuu [A Study of Sino-Vietnamese] (1972). Although this kind of study is focused on the problems of Vietnamese, it presupposes a systematic knowledge of Chinese historical phonology -- preferably dialectology too -- and is consequently demanding, but it can shed light on both Vietnamese and Chinese, and thus will remain valuable to both. Henri Maspero's lengthy article, 'Études sur la phonétique historique de la langue annamite: les initiales' (1912) was the first attempt at such studies. However, due to the level of knowledge of Chinese historical phonology at that time, his study is now outdated.

Below we shall begin our discussion of the current developments of Sino-Vietnamese studies by examining the second type of approach first.

2. SINO-VIETNAMESE AS A 'FOREIGN DIALECT' OF CHINESE. L. Wang, who was sent to Hanoi to study Sino-Vietnamese by Tsinghua University, published the first systematic study of Sino-Vietnamese, 'Han-yue-yu yan-jiu [A study of Sino-Vietnamese]', in the Ling-nan Xue-bao [Lingnan Journal] in Canton in 1948.

L. Wang recognized at least two distinct types of Chinese loan words in Vietnamese. One is the kind of loan words imported into Vietnamese as the reading of Chinese characters when the Vietnamese were forced to learn Chinese characters beginning in the Tang Dynasty -- a kind of 'literary' loan words which may one day die out after the Vietnamese cease using ideographic characters. The second

type is ordinary loan words not associated with the reading of the Chinese characters which the Vietnamese accepted from the Chinese as a result of direct contact with each other before our era. L. Wang called the former 'Sino-Vietnamese', which he regarded as reflecting Tang Chinese, and the latter 'Ancient Sino-Vietnamese', the phonological system of which can be inferred from the construction and the use of phonetic parts of the chy^{4}-nom^{1}, 'characters for the spoken language'. Sporadic loan words newer than these are almost negligible; the information we can obtain from them is too fragmentary to allow for any systematic study of Chinese.

For Sino-Vietnamese, L. Wang collected the literary reading from first-hand materials -- various dictionaries and romanized Vietnamese classic literature like Kim^{1} Vən^{1} Kieu^{2}, etc. He then sorted them out according to the phonological categories of Ancient Chinese, just as one characterizes the phonological system of modern Chinese dialects, using a kind of character tables based on the phonological system of Ancient Chinese, such as the Fang-yan Diao-cha Zi-biao [Character Tables for Dialect Survey] first compiled by Yuen Ren Chao[18] after the fashion of Karlgren's L'Ancien Chinois. The results show surprising similarities between the Sino-Vietnamese phonological system and that of the southern Chinese dialects -- particularly Yue and Min dialects spoken in the southwestern part of China proper. To mention some of the most conspicuous similarities with respect to the initial consonants:

1) The distinction 'aspirated' versus 'unaspirated' among labials and dentals/alveolars turns out to be implosive versus explosive, just as found in some Yue dialects, like Hua-xian of Guangdong, Cang-wu (Ji-yang-xiang) and Teng-xian of Guangxi[19], as well as many of the Min dialects spoken in Guangdong like Hai-kou[20], Qiong-shan, Wen-chang, Le-hui, Chang-jiang, Ding-an, and Lin-gao[21]. For example:

	Ancient Chinese	Sino-Vietnamese	Hua-xian	Teng-xian	Wen-chang
'cotton'	*po^{3}	bo^{5}	ɓou^{5}	ɓu^{5}	ɓou^{5}
'to spread'	*p'o^{1}	pho^{1}	p'ou^{1}	p'u	fou^{1}
'step'	*bo^{3}	bo^{6}	ɓou^{6}	ɓu^{6}	ɓou^{1}
'band'	*tai^{3}	dai^{5}	ɗai^{5}	ɗai^{5}	ɗai^{5}
'excessive'	*t'ai^{3}	thai^{5}	t'ai^{5}	t'ai^{5}	hai^{5}
'big'	*dai^{3}	dai^{6}	ɗai^{6}	ɗai^{6}	ɗai^{6}

The lack of such a distinction with respect to guttural initials is due to physiological cause of speech articulation and is universal[22] so that, incidentally, the International Phonetic Association prepared signs of implosives for labials and dental/alveolars only.

2) As a result of the implosivization of dental/alveolar stops, or because of this implosivization[23], most of the Ancient Chinese dental and palatal sibilants, unless aspirated (which will be discussed presently), appear as dental stops in Sino-Vietnamese, as in many Yue dialects, such as some varieties of Shun-de, Nan-hai Jiu-jiang (unless unaspirated), De-qing, Wu-chuan, Hua-xian, etc., and particularly the so-called Seiyap dialects of Guangdong; Cang-wu Ji-yang-xiang, Teng-xian, Chen-xi, etc. of Guangxi[24]; as well as all of the Min dialects of Guangdong mentioned above. For example:

	Ancient Chinese	Sino-Vietnamese	Tai-shan	Teng-xian	Wen-chang
'rent'	*tso^{1}	to^{1}	tu^{1}	tu^{1}	ɗou^{1}
'coarse'	*ts'o^{1}	tho^{1}	t'u^{1}	t'u^{1}	sou^{1}
'even'	*dzei^{1}	te^{2}	t'ai^{2}	ɬəi^{2}	tɔi^{2}
'west'	*sei^{1}	təy^{1}	ɬai^{1}	ɬəi^{1}	tai^{1}
'omen'	*ziɑŋ^{1}	tyɐŋ^{2}	t'iaŋ^{2}	ɬiaŋ^{2}	tiaŋ^{2}

3) Spirantization of Ancient Chinese aspirates is observed in Sino-Vietnamese, just as in some of the southwestern Chinese dialects mentioned above. For example:

	Ancient Chinese	Sino-Vietnamese	Kai-ping	Teng-xian	Wen-chang
'to spread'	*p'o^{1}	pho^{1}	hu^{1}	p'u^{1}	fou^{1}
'hare'	*t'o^{3}	thɔ^{3}	hu^{5}	t'u^{5}	hou^{5}
'to urge'	*t'uɑi^{1}	thoi^{1}	ts'ɔi^{1}	t'øy^{1}	sui^{1}
'place'	*tʃ'ü^{3}	xy^{5}	tʃ'ɔi^{4}	tʃ'ü^{5}	si^{5}
'guest'	*k'ag^{4}	khach^{5}	hak^{8}	hek^{7}	hɛʔ^{5}

The degree and the extent of spirantization varies in these dialects, just as in Sino-Vietnamese where a clear occlusion can be observed with respect to dentals (and in some northern dialects, velars), but the general tendency of Ancient Chinese aspirates going to spirants in Sino-Vietnamese is unmistakable.

For finals, we also observe many features that link Sino-Vietnamese with southern Chinese. To mention only a

few of them:

4) The curious loss of distinction among Divisions II, III and IV of the Geng rime-group in southern Chinese can also be observed in Sino-Vietnamese:[25]

Division		Sino-Vietnamese	Teng-xian	Hakka	Amoy
II	'cold'	lanh	leŋ	laŋ	liŋ
III	'voice'	thanh	seŋ	saŋ	siŋ
IV	'nail'	danh	deŋ	taŋ	tiŋ

5) The coalescence of the vowels of the Geng rime-group with those of the Dang rime-group, a characteristic of southern Chinese in contrast to the coalescence of the vowels of the Geng rime-group with those of the Zeng rime-group in northern Chinese[26]; to tabulate vowels of the 'kai-kou' Divisions I and II only:

	Sino-Vietnamese	Hakka	Amoy
Dang I/II	a	a/o	a/o
Geng (I)/II	a	a	ĭ/ĭã̃
Zeng I/(II)	ă	e	ɪ

6) The flip-flop merger of the Ancient 'rising' and 'departing' tones in Sino-Vietnamese is again one of the characteristics of southern Chinese dialects like Chao-zhou, Rao-ping, Mei-xian, Da-pu, and Wu-hua of Guangdong -- particularly the merger of 'ci-zhuo departing' tone with the 'rising' tone.[27]

3. THE ORIGIN OF SINO-VIETNAMESE. We enumerated the above six features that link Sino-Vietnamese with the southern Chinese dialects rather than with the northern or northwestern Chinese dialects, bearing in mind the dispute of the origin of Sino-Vietnamese. Henri Maspero concluded that Sino-Vietnamese was a kind of language taught at schools in Jiao-zhou around the end of Tang, primarily based on the Chang-an (present day Xian) dialect but more or less standardized.[28] L. Wang also came to a similar conclusion, as mentioned above.[29] Then how are we to understand the very distinct similarities between Sino-Vietnamese and the southern Chinese dialects, particularly those spoken near Vietnam, if Vietnam revolted against the Chinese rule in 938 A.D. and cut off direct ties with China after that?

As an example of how history and geography can explain a certain phonetic development, André G. Haudricourt asserts, in discussing the historical transformation of Vietnamese implosives, that the Vietnamese 'gave up their indigenous implosives under the Chinese rule: ʔb > m, ʔd > n; when they obtained independence they regained the indigenous features of pronunciation: p > ʔb, t > ʔd, as a result caused structural pressure for the change s > t'.[30] However, we think it highly unlikely that both Vietnamese and southern Chinese developed so many common features quite independently; nor do we believe that natural languages can change, depending upon the political situation, as freely as Haudricourt assumes.[31] Our conclusion from the above observations is that unless there had been continued contact and free migration between China and Vietnam since the end of the tenth century, the Chinese language taught at Vietnamese schools in Jiao-zhou must have been a kind of koine spoken in the southwestern part of China. The Sino-Vietnamese we nowadays observe is fundamentally the reading of Chinese characters based on such a koine but 'fossilized' in the romanization of Alexandro de Rhodes in his famous dictionary of what Maspero calls 'annamite moyen'[32], Dictionarivn Annamiticvm, Lusitanvm et Latinvm (1651), in the seventeenth century. This language thus underwent fewer transformations than the koine spoken on the Chinese side which had only an ideographic writing system even if one had tried to record their local language. One may wonder about the archaic features of Sino-Vietnamese, in comparison with any modern Chinese dialect spoken around the southwestern part of China. However, when we nowadays deal with Sino-Vietnamese, we are in fact talking about this 'fossilized' spelling of Sino-Vietnamese, not any specific modern dialect of Vietnamese (though most of the sound values of these spellings have to be inferred from correspondents in modern Vietnamese dialects, particularly that of Hanoi). To make a balanced comparison, therefore, we have to compare Sino-Vietnamese with the ancestors of the southern Chinese dialects of the seventeenth century at the latest, if there were records of any such dialects. The reason we state 'at the latest' is: it is not certain that the quoc^{5}-ngy^{4} established by Alexandro de Rhodes reflects faithfully the contemporary pronunciation of any specific dialect of Vietnamese, since we know from the introduction of Rhodes' dictionary that he compiled the work making good use of two older dictionaries -- Gaspar de Amaral's Vietnamese-Portugese dictionary and Antoine Barbosa's Portugese-Vietnamese dictionary -- though judging from the date of Western missionaries' entry into Vietnam these

dictionaries could not have been much older than Rhodes'.

One may also be puzzled by certain features of northern Chinese in Sino-Vietnamese, the most conspicuous of which is the palatalization of Ancient Chinese syllables having guttural initials and occurring in the second division of medieval Chinese rime tables -- a phonological phenomenon which was once regarded as the unique feature of northern Chinese in contrast to southern Chinese and which can be observed most systematically in the phonological documents of the hP'ags-pa and Persian transcriptions of Chinese during the fourteenth and fifteenth centuries.[33] However, when we pick up this feature as one of the clues for distinguishing northern Chinese from southern Chinese, we are in fact talking about the most fundamental stratum of these dialects, because the southern Chinese dialects escaped palatalization only with respect to their colloquial words. If we take the literary layer and the entire syllable inventory of these dialects into consideration, some of the southern Chinese dialects did not escape palatalization either. Since we are talking about the literary reading of Chinese characters in Vietnam established around the end of Tang and recorded not later than the seventeenth century, and since traces of the palatalization in question can be found already in the phonological documents of Tang Chinese, it is not surprising to find this palatalization in Sino-Vietnamese.

4. SINO-VIETNAMESE AS PHONOLOGICAL MATERIAL FOR ARCHAIC VIETNAMESE. The second monumental work in the history of Sino-Vietnamese is Tooru Mineya's monograph, Etsunan Kanjion no Kenkyuu [A Study of Sino-Vietnamese], which is, as we mentioned above, a study of Sino-Vietnamese as phonological material for Vietnamese -- Maspero's 'annamite archaïque' specifically. Despite the clear definition and delimitation of his study[34], however, Mineya, the author of 'Inkyoo no san-shitoo ni tsuite [On Divisions III and IV of the Mirror of Rimes]' (1953), 'Chuuko kango no imbo no taikei: setsuin no seikaku [The phonological system of Ancient Chinese: the nature of the Qie-yun]' (1956), and 'Inkyoo to estunan kanjion [Mirror of Rimes and Sino-Vietnamese]' (1965), devoted only one chapter to the phonological system of Ancient Chinese in this monograph. In this he sorted out the Vietnamese readings of Chinese characters in contrast with the corresponding Ancient Chinese forms he reconstructs, in order to have 'a general perspective on the fundamental system' of Sino-Vietnamese for further detailed

study of various 'waves of borrowings' and individual exceptional correspondences. Thus, no sizable observation on older loans (L. Wang's Ancient Sino-Vietnamese) is included in this monograph, although at the present stage of Sino-Tibetan linguistics and with the increased interest in the birth and development of tones in the Sinitic languages among contemporary Sino-Tibetan linguists, inclusion of a systematic study of Ancient Sino-Vietnamese by a linguist with Mineya's career and achievements would have been a most exciting event in this field.

Although, judging from the date of completion of his article, L. Wang must have been aware of the progress in the study of fan-qie doublets, he lists Vietnamese dental initials that correspond to Ancient Chinese labials as 'exceptions'.[35] In contrast, in Mineya's study one can see a thorough command of Chinese phonological data and find one of the most up-to-date reconstructions of Ancient Chinese, though one may be puzzled to find Ancient Chinese *iaŋ and *üaŋ (Karlgren's *iɐŋ and *i^{w}ɐŋ) indistinct from *iɛŋ and *üɛŋ (Karlgren's *iɛŋ and *i^{w}ɛŋ) respectively. Also following Karlgren or because of the merger in the fan-qie's of the Yu-pian[36], *iɛi (from Archaic Chinese *ed/*əd/*əb) is identified with *iʌ (from Archaic Chinese *əg). This is puzzling, particularly because a) the author asserts that the Qie-yun is not a description of any homogeneous phonological system of a contemporary spoken language but a rime dictionary presenting a standardized system of reading pronunciation of characters, and b) it has been the author's repeated argument since the early 1950's that the study of Ancient Chinese should not rely on the theory and phonotactic classification of Ancient Chinese syllables in the deng-yun-xue phonology -- it was the Yun-jing, the oldest known rime tables of the deng-yun-xue, which places part of the syllables having *iɛŋ and *üɛŋ together with those having *iaŋ and *üaŋ respectively in the same tables, therefore implying that what has been regarded as a distinction due to some element in the finals is in fact one between palatalized and unpalatalized initials, labial or guttural. Whether this Yun-jing's tabulation has anything to do with the merger of the two finals in question in the fan-qie's of the Yu-pian is open to further inquiry. Students of comparative linguistics will also be left uncertain about the exact intention of the author when they encounter such statements as: 'the distinction between the Chih 'of' rime *-iěi [our *iʌ] and the Chih 'fat' rime *-iei [our *iɛi] is not very clear, but for the time being [we

want to] express the difference of rime indices in the Ch'ieh-yün by representing [the former] as *-iěi'[38], or '-iěn and -iět...combine with retroflex initials only; in the phonological system of [Ancient Chinese] finals they are...included in *ien and *iet [respectively], but in order to express the difference of rime indices in the Ch'ieh-yün, [we] decided to write [the former] *-iěn and *-iět [and distinguish them from the latter]'.[39]

Now, about the sources of Sino-Vietnamese. What Mineya clarified in this respect is a hitherto neglected aspect of the nature of Sino-Vietnamese: the newness of the quoc^{5}-ngy^{4} materials. Besides Alexandro de Rhodes' dictionary and Cathechismus in Octo Dies of the seventeenth century, the majority of quoc^{5}-ngy^{4} materials date from the beginning of the nineteenth century. (Even the oldest extant chy^{4}-nom^{1}'s were made from the middle of the fourteenth century.[40]) This must always be kept in mind while using Sino-Vietnamese data for reconstructing Ancient Chinese. Mineya tabulated these data in 101 pages of tables which constitute the second part of his monograph, according to the Ancient Chinese phonological system he reconstructed. In characterizing Sino-Vietnamese in the main text of the monograph, he also followed the same practice, but at the very end of these discussions he gave a summary of correspondences between Sino-Vietnamese and Ancient Chinese finals in the traditional sixteen rime-group classification, thus making it easier for the students of traditional Chinese phonology to see problems in terms of phonological categories of Chinese familiar to them.

Transcription of Ancient Chinese *p and *b with quoc^{5}-ngy^{4} b [ʔɓ] and of Ancient Chinese *t and *d with d [ʔɗ] in Sino-Vietnamese can be understood only if we assume the Vietnamese distinction among labials and dento-alveolar stops to be voiced preglottalized implosive versus voiceless unglottalized explosive. Ancient Chinese *p and *t were accepted as implosive because of their glottalization which is widely observed among the modern descendants of these Ancient initials[41], while both *b and *d were identified as implosive because of their voicing. If the loan took place after the Chinese language lost the distinction between voiced and voiceless stops (as can be inferred from the fact that Vietnamese transcribed the spirantized descendants of both *p and *b with the same symbol ph-), the voiceless nonaspirates must have been identified with

Vietnamese implosives because of their glottalization or lack of aspiration. The presence of voiceless nonaspirates as descendants of Ancient Chinese voiced stops carrying the 'level' tone is known even among northern Mandarin dialects.[42] Both Maspero (explicitly) and Haudricourt (tacitly) assume that Vietnamese accepted Ancient Chinese *p, *b and *t, *d as voiceless stops, the modern implosives being a product of change in Vietnamese after the loan took place.[43] Maspero's basis for this argument consists in the fact that White Tai of the Tongkin Plateau borrowed the Sino-Vietnamese bilabial stop as p but the native Vietnamese bilabial stop as ɓ. Maspero's inference is, therefore, that White Tai borrowed Sino-Vietnamese words before the change from p to b [ʔb] took place in Vietnamese, while they borrowed Vietnamese words after the change took place -- an inference highly unlikely, because such filtering of vocabulary, Sino-Vietnamese and native Vietnamese, on the part of the borrower is greatly incredible. It seems to us that the very fact Maspero points out works in favor of our assumption. Since there were phonetic differences between Chinese and Vietnamese labial and dento-alveolar stops and since, perhaps, White Tai borrowed Chinese words directly from Chinese but Vietnamese words from Vietnamese, that is why one witnesses the distinction between p and ɓ in White Tai. Whatever the case may be, however, Vietnamese did not fail to distinguish Ancient Chinese *p and *t from *b and *d, assigning tone 1 to the former and tone 2 to the latter in the case of syllables having the 'level' tone, even though the same segmental symbols b and d were assigned to Ancient Chinese *p/*b and *t/*d respectively, as properly pointed out by Mineya.[44]

Mineya argues, against Maspero[45], that Vietnamese ph- need not have been a stop.[46] We want to emphasize this, regarding the spirantization of Ancient Chinese aspirates as one of the characteristics of the southwestern Chinese koine we assumed above. As Mineya notes on page 69, there is a piece of good evidence showing that the Sino-Vietnamese loan took place after Ancient Chinese underwent the so-called 'light-lip change'.[47]

The correspondence of Sino-Vietnamese t- and th- versus Ancient Chinese *p/*b and *p' does not seem to be limited to the Division IV counterpart of what we call 'Paired Division III/IV' syllables[48] (the fan-qie doublets); the words having this Division IV counterpart as listed on pages 70-72

of Mineya (1972) contain as many exceptions as in the case of 'Division IV' syllables. We thus assume that the loan took place after Ancient Chinese underwent the coalescence of Division IV syllables with the Division IV counterparts of 'Paired Division III/IV' syllables.[49]

For dento-alveolars, alternation between n and l, like noan^{4} for Ancient Chinese *luan 'egg', nai^{6} for Ancient Chinese *lɑn 'lazy', etc. reminds us of the widespread loss of distinction between n- and l- in the Yue dialects.

For retroflexes, Mineya notes that in Rhodes' dictionary, many native Vietnamese words which should have been listed under tr- are in fact listed under tl-, and what is listed under tr- is mostly Chinese loan words. Mineya thus deducts that when Rhodes compiled the dictionary the change from tl- to tr- was taking place. Thus, Ancient Chinese retroflex stops were first borrowed as either tl- or tr-. If they were borrowed as tl-, this medial (t)l- beautifully coincides with the medials of Division II syllables which Sergej E. Jaxontov tacitly assumed in his study of 1960. However, if the above assumption were correct, we fail to understand why only Chinese loan words having retroflex initials were left out and only native Vietnamese words having tr- initials were listed under tl-. We rather suspect that since there was significant phonetic difference between Chinese retroflex stops and Vietnamese tl-, and since Chinese retroflexes sounded closest to what quoc^{5}-ngy^{4} spelling tr- represented, Chinese loan words were listed under tr-, while native Vietnamese words were listed under tl- according to the etymological judgment of the compiler.

The correspondence of Ancient Chinese *dʐ- to Sino-Vietnamese s- should be understood in terms of the spirantization on the part of Chinese which is widespread among modern dialects as well as in Tang Chinese and Sino-Korean.[50] To Ancient Chinese *tʃ'- correspond both Sino-Vietnamese s- and x-. Mineya's reasoning[51] for s- (namely, transcription with s- due to the influence of the medial -u-), though hesitant, is very interesting, since it is, acoustically speaking, flatness that distinguishes s [ʂ] from x [ɕ].

Concerning finals, let us first of all examine Sino-Vietnamese correspondents to Ancient Chinese *ɑi and *ʌi. Both ai and ɐi correspond to these two. This irregular correspondence can be observed in many modern Chinese dialects, too, including Pekinese. We regard this as due to the irregular merger of *ɑi and *ʌi on the part of Chinese before the borrowing, because of structural pressure -- occurrence of *ɑi in Ancient Chinese is very much limited, in fact only with 'departing' tone, and *ɑi does not occur with many different initials.[52]

The loss of distinction between Ancient Chinese *ʌŋ/*ʌg and *iɛŋ/*iɛg (like dyc^{6} for 'virtue', versus tyc^{5} for 'breath'; bʌng^{1} for 'ice', versus tʌng^{1} for 'to increase') is something unique in the Min dialects. This may give some hint as to the original sound value of u barbu -- could it have been a front vowel perhaps before quoc^{5}-ngy^{4} was invented? Jerry Norman went as far as reconstructing a high-front vowel for correspondents to the Zeng rime-group in his reconstruction of Proto-Min.[53] In connection with Min, we encounter Sino-Vietnamese words which remind us of the Min correspondents, though sporadic: toa^{1} for 'to dance'[54], thoa^{1} for 'hairpin'[55], etc.

In discussing Sino-Vietnamese correspondents to the Ancient Chinese Zhi rime-group, Mineya often points out remnants of archaic pronunciation.[56] One will naturally ask why this is so in the case of the Zhi rime-group in particular? Students of Chinese linguistics will readily remember that it is the Min dialects that maintain traces of Archaic Chinese vocalism in the Zhi rime-group, like Fuzhou [tsie] for Mandarin zi 'purple', Amoy [tsai] for Mandarin zhi 'to know', Chaozhou [tsua] for Mandarin zhi 'paper', etc., to all of which most modern dialects give correspondents with high vowels as in Mandarin, but to which correspond syllables having low vowels in Archaic Chinese.

Our final remark on Mineya's work is that going through his meticulous examination of correspondences between Ancient Chinese and Sino-Vietnamese, one is struck by the numerous 'exceptions' due to analogy -- namely, exceptional 'readings' of Chinese characters because of spurious similarity of the phonetic parts of characters (or a kind of 'spelling pronunciation' as expressed in Hashimoto 1973a). We witness the same circumstance in an equally careful

survey of Sino-Korean[57] and in a recent historical-comparative study of modern Chinese dialects.[58] This is something linguists in the field have to suffer from as long as they deal with linguistic data recorded or transcribed with a semi-phonetic, semi-ideographic writing system.

The tonal system of Sino-Vietnamese is unique in that the 'level' tone carried by syllables having the so-called 'ci-zhuo' initials went to the 'yin' group whereas the 'rising', 'departing' and 'entering' tones carried by such syllables went to the 'yang' group -- a characteristic found in no known dialect of modern Chinese. This is certainly unique, but not surprising. In Mandarin, for instance, tones carried by syllables having 'ci-zhuo' initials went to the 'yang' group in the case of the 'level' tone, but to the 'yin' group in the case of the 'rising' tone; in the Kai-feng dialect, the 'entering' tone went to the 'yin' group while the 'level' tone went to the 'yang' group, when carried by such syllables.[59] (Jerry Norman sorted out old Chinese loan words in Vietnamese, in which he recognized two distinct layers of tones which underwent bifurcation conditioned by the voicing of initials only.[60])

5. ANCIENT SINO-VIETNAMESE. Not much information can be derived from the construction of chy^{4}-nom^{1} and the use of phonetic parts of Chinese characters in Vietnamese. There are, however, a couple of very suggestive phenomena. Among the seventeen words which L. Wang regards as an indication of the bilabial origin of Sino-Vietnamese labio-dentals, thirteen have the medial -u-, like buon^{1} 'to sell' (Sino-Vietnamese phien^{5}), etc.[61] It can be speculated that the spirantization or labiodentalization was then a matter of dissimilation, just like in Hakka where bilabial initials unanimously went to labiodentals only when followed by bilabial endings.[62]

As for finals, L. Wang demonstrates quite convincingly that the syllabic vowel of Division II syllables was Ɛ in Ancient Sino-Vietnamese[63], such as chƐ^{2} for 'tea' (Sino-Vietnamese tra^{2}), etc. This reminds us of the Go-on of Sino-Japanese in which e is assigned to all the Division II syllables except those of the Geng rime-group. If we succeed in tracing the origin of this Ɛ vowel, Ancient Sino-Vietnamese will give an important clue as to the phonological nature of Division II syllables in Archaic

Chinese.

It is well known that both the Ancient Chinese Yu 'fish' rime and the Yu 'vigilant' rime are derived from Archaic Chinese rimes having the syllabic vowel a, the difference being the former had an unlabialized ending but the latter had a labialized ending.[64] What L. Wang discovered in Ancient Sino-Vietnamese is interesting: the former has a high central medial -ya [ɨa] and the latter a high back vowel -ua [ua]. If the case were the other way around, namely, -ua for the Yu 'fish' rime and -ya for the Yu 'vigilant' rime, then it could be a matter of dissimilation. Or is the above a matter of metathesis?

L. Wang argues that the palatal endings of the Geng rime-group are from velar endings in Ancient Sino-Vietnamese, like mang^{6} for 'life' (Sino-Vietnamese menh^{6}), etc. However, he does not pay equal attention to the fact that the character for kuang^{1} 'light, glory' is used as the phonetic part of the chy^{4}-nom^{1} for quanh^{1} 'to circle'. It can then be argued too that the case is the other way around: namely some of the -ng endings are from -nh endings.[65] Modern Sino-Vietnamese -nh occurs after the vowels a, e, and i only, and the distribution is pretty much limited. However, Laurence C. Thompson had established through comparison with Muong that it had once occurred after other vowels too.[66]

L. Wang interprets nom of chy^{4}-nom^{1} as representing 'south' (nam^{1} in Sino-Vietnamese). This may not be convincing -- Mineya argues that it simply means 'vulgar, colloquial'. On the other hand, other instances listed by L. Wang convincingly show that the syllabic vowel of the Tan 'vast' rime was ɔ/o/ɐ.[67] This beautifully coincides with what Aleksandr A. Dragunov asserted more than forty years ago.[68] For contributing towards the reconstruction of Archaic Chinese, however, reconstruction of the sound value of these quoc^{5}-ngy^{4} symbols has to be undertaken independently of the Chinese information. In this connection, further comparative study of Vietnamese with Muong is much desired.

6. EPILOGUE. The survey of phonological documents of Sino-Vietnamese is still in process. Jing-he Chen transcribed in quoc^{5}-ngy^{4} the Ty^{6}-đyc^{5} Thanh^{5}-che^{5} Ty^{6}-hɔc^{6}

Giai^{3}-nghia^{4}-ca^{1} [Songs for Exposition of Character Study by the Emperor Ty-đyc] (1898) for phonological use. Dinh-hoa Nguyen recently introduced three versions of The Book of Three Thousand Characters, one of which definitely reflects the Phat Diem dialect.[69] However, none of these documents are older than the eighteenth century, and it seems that one cannot expect any drastic development in this field in the near future.

A new light might be expected from quite a different corner. While Tatjjana T. Mxitarjan's experimental study of Vietnamese phonetics with X-rays (1959) clearly showed the more or less similar articulation of initial and final palatal consonants, Eugénie J. A. Henderson's experiment with palatograms demonstrated that there is a significant difference in point of articulation between initial and ending palatal consonants.[70] On the other hand, as we briefly mentioned above, Laurence C. Thompson argued that Vietnamese palatal endings once occurred after vowels other than a also. To all of these studies, students of Sino-Vietnamese cannot be indifferent. Reinterpretations of Vietnamese vowel and syllable structures by Henderson (1966), Edwin G. Pulleyblank (1969, 1972), and of Middle Vietnamese by Kenneth J. Gregerson (1969) will all affect our study of Sino-Vietnamese. However, this is obviously not the place to review these works. Finally, it is pleasant to see Chen continue his study of An-nan Yi-yu, thoroughly revising Chen (1953-4) in Chen (1966).

FOOTNOTES

* For convenience of printing, the Vietnamese quoc^{5}-ngy^{4} romanization will be given in Li Wang's transliteration in this article. Reconstruction of Ancient Chinese is, unless otherwise specified, the present author's (Hashimoto 1965, 1973b). That of Archaic Chinese is largely based on Tong-he Dong (1944) and Tsutomu Rai (1955). Despite his disagreement with part of the present author's arguments in this paper, Professor Tooru Mineya kindly went through the draft of this article and corrected several mistakes.

[1] See Koono (1969) for a general view on the nature and problems of these loans through Chinese characters.

[2] Martin (1953:4).

[3] See for instance Raximov (1970).

[4] Li (1945).

[5] Annen's Shittanzoo, for example. See Mei (1970:98-100)

for the English translation of its fragment.
[6] Maspero (1912).
[7] Maspero (1920).
[8] Karlgren (1915-26:711).
[9] Ibid., p.625.
[10] Arisaka (1937-9; 1957:340-341).
[11] J.R. Wang (1941).
[12] J.R. Wang (1948).
[13] Nagel (1941:125-128).
[14] Koono (1944), Tsujimoto (1954), etc.
[15] Ooya (1924:189).
[16] Arisaka (1955, a posthumous publication, written in the 1930's), Dong (1944, 1948), F. G. Zhou (1945), etc.
[17] Koono (1939).
[18] Titled Fang-yan Diao-cha Biao-ge (1930).
[19] Surveyed by Oi-kan Y. Hashimoto from 1969 to 1973. See A.Y. Hashimoto (1970, 1971). For Chao's Cang-wu data, see A.Y. Hashimoto (1972:34 ff 68).
[20] Liang (1958).
[21] For Wen-chang, see M.J. Hashimoto (1959, 1960a, 1960b, 1960c, 1960d, 1961b) and Liang (1964). Qiong-shan, Le-hui, Chang-jiang and Lin-gao were surveyed by M.J. Hashimoto in 1973. For Ding-an, see M.J. Hashimoto and Norman (1971).
[22] M.J. Hashimoto (1961a).
[23] Haudricourt (1959) and M.J. Hashimoto (1961c).
[24] Information on all of the Guangdong and Guangxi Yue dialects (except Chen-xi, which is due to Nobuhisa Tsuji's report) is due to O.Y. Hashimoto. Lateral fricatives are regarded as representing an intermediate stage of the change from s to t. See M.J. Hashimoto (1962).
[25] M.J. Hashimoto (1970a:361). The Teng-xian data are from A.Y. Hashimoto (1971), Hakka from M.J. Hashimoto (1972a, 1973a), Amoy from Peking University (1962).
[26] See Chao et al. (1940:60), or Norman (1970:25).
[27] Yuan et al. (1960:166), Wang and Cheng (1971), and M.J. Hashimoto (1972b).
[28] Maspero (1920:21). See also Mineya (1965).
[29] L. Wang (1948; 1958:299-300).
[30] Haudricourt (1959:84-86).
[31] M.J. Hashimoto (1962a:335-336).
[32] Maspero (1912:10).
[33] Dragunov (1930, 1931), M.J. Hashimoto (1971a, 1971b).
[34] Mineya (1972, Introduction and p.8).
[35] L. Wang (1948; 1958:319 ff 321).
[36] Koono (1944:35).
[37] Z. M. Zhou (1966, Part I, 357-358, 388-390).
[38] Mineya (1972:138).
[39] Ibid., p.139.

[40] Maspero (1912:7).
[41] Chao (1928:22-26, 82, 85-86), M.J. Hashimoto (1960b: 131-134).
[42] L.D. Wang (1958:29). In colloquial words of even the 'level' tone, Yue dialects like Gao-yao, Gao-ming, and Shun-de Yue-bu have voiceless nonaspirates as reflexes of Ancient Chinese *b and *d, while three other varieties of Shun-de as well as Si-he, Teng-xian (for Teng-xian and Si-he it is a general rule and not limited to colloquial words), etc., have voiceless nonaspirates as reflexes of all Ancient voiced stop and affricate initials, according to recent surveys by O. Y. Hashimoto (Si-he is investigated by N. Tsuji). Hashimoto is currently working on a hypothesis for a general characteristic of the southern Chinese dialects -- especially Yue, Min, and Xiang -- having nonaspirates as the oldest or native correspondent to the Ancient voiced stops and affricates in all tones, closely in relation with the same phenomenon in the majority of Zhuang dialects in southwestern China. The Sino-Vietnamese correspondence just discussed may be viewed in the light of this interpretation as another affinity to the southern Chinese dialects.
[43] Maspero (1912:36).
[44] Mineya (1972:67).
[45] Maspero (1912:42).
[46] Mineya (1972:69).
[47] A change from bilabials *p, *p' and *b into the labiodental fricative f.
[48] M.J. Hashimoto (1965:Vol.I:39).
[49] Note that the same coalescence had already taken place in Tang Chinese as reflected in the fan-qie's of the Yi-qie-jing Yin-yi by Hui-lin. The change took place with finals having any ending consonant, but not between *iaŋ/*üaŋ and *iɛŋ/*üɛŋ, to be sure. Barnabas M. Csongor is preparing a thorough study of the Tang Chinese phonological system, comparing Hui-lin's fan-qie's and the transcription of northwestern Chinese since the Tang Dynasty in the alphabets of various Central Asian languages, sponsored by the Chinese Linguistics Project at Princeton.
[50] Koono (1968:99).
[51] Mineya (1972:94).
[52] M.J. Hashimoto (1970:346).
[53] Norman (1970b).
[54] Mineya (1972:115).
[55] Ibid., p.124.
[56] Ibid., pp.136, 137, etc.
[57] Koono (1968).
[58] M.J. Hashimoto (1973a).
[59] F.S. Wang (1956:22).

[60] Norman (1970c).
[61] L. Wang (1948; 1958:361-363).
[62] M.J. Hashimoto (1973a:234).
[63] L. Wang (1948; 1958:363-367).
[64] T. Rai (1953), M.J. Hashimoto (1973b).
[65] M.J. Hashimoto (1970a:360, fn.68).
[66] Thompson (1967), Mineya (1972:41).
[67] L. Wang (1948; 1958:370-371).
[68] Dragunov (1928-9).
[69] D.H. Nguyen (1973).
[70] Henderson (1964).

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