

The Numerals of the Hsi-hsia Language

— Their Reconstructions and Comparative Studies —

By Tatsuo NISHIDA

Introduction

Since Berthold Laufer proposed to set up a new language group "Si-lo-mo" in 1916⁽¹⁾, the Hsi-hsia language has been considered as belonging to the Sino-Tibetan family of languages or more narrowly to its Tibeto-Burman branch in linguistic kinship and to show close resemblances to the Lolo-Moso languages. Whether we may adopt such an inclusive name as the "Si-lo-mo" language group which contains the Hsi-hsia language as well as the Lolo and the Moso languages will await a careful and detailed examination of the characteristics of the Hsi-hsia language. The conclusion, however, that this language is Tibeto-Burman will still be accepted, though we have not satisfactorily studied by the comparative method what correspondences it has with all other Tibeto-Burman languages.

In comparative linguistics numerals are regarded as the most basic words in a language. Yet even these have not been worked on in a unified way in the comparative studies of the Hsi-hsia language and the Tibeto-Burman languages. Wang Ching-ju 王靜如, a Chinese scholar, once compared the numerals of these languages in vain to establish regular correspondences among them.⁽²⁾

Including the case of numerals, the reason why past comparative studies of the Hsi-hsia language has failed to achieve some reliable conclusion is primarily due to the inaccuracy of its reconstruction. Several linguists have attempted to infer or reconstruct Hsi-hsia sounds through various stages but they all have had a common fundamental weakness in their methods. The way they inferred Hsi-hsia sounds has always been fragmentary, since they had not yet synthesized various materials to be made available at any time for close reference to each other in inference. There was a second fatal weakness in their comparative

(1) B. LAUFER, "The Si-hia Language, A Study in Indo-Chinese Phonology," *TP.*, XVII (1916), pp. 1-126.

(2) WANG Ching-ju, "中台藏緬數目字及人稱代名詞語源試探" (A Comparative Study of the Numerals and the Personal Pronouns in Chinese, Thai, Burmese and Tibetan), 國立中央研究院歷史語言研究所集刊 (*Academia Sinica*), III:1 (1931), p. 61, ff.

studies. That is, the comparative studies of the Tibeto-Burman languages with which the Hsi-hsia language is to be compared are not complete enough, though some scholars have made various attempts for years in them. For that matter their concerns were chiefly the comparison of words and hence the results of their investigations barely afford even such correspondences as to make a systematic use of their comparison with the reconstructed Hsi-hsia forms.

In studying the Hsi-hsia language, we ought to take into account the reconstruction of its entire structure as well as its sound-forms and semantic forms and also its comparative studies with the other Tibeto-Burman languages. The author aims in this paper first to reconstruct Hsi-hsia numeral forms from a new approach on a reliable uniform basis, improving on the deficient studies hitherto presented, next, he will undertake to make out where to place those reconstructed forms among the Tibeto-Burman language group with chief regard to the determination of the correspondences of the language under consideration with the Tibeto-Burman and the Lolo languages.

Accordingly, this paper consists of two parts. The first half shows how the forms of the Hsi-hsia numerals can be postulated in the light of a new method. The deciphering of an unknown language requires the reconstruction of its sound forms and simultaneously their identification with the semantic forms. The latter procedure usually involves greater difficulty.

There seems to be not a few peculiarities in the Hsi-hsia people's way of thinking which is reflected in the structure of their language. Further inquiries into the way of thinking of the Hsi-hsia people who devised their own characters with a complicated ideographic element as the nucleus ought to offer us very interesting problems in the deciphering of the characters bequeathed by them as well. As for the semantic forms the Hsi-hsia numerals, the study of which the present paper is dedicated to, are rather less controversial. Nevertheless, the Hsi-hsia language has more than two forms for "one" and "ten". Strangely enough, "ten" has two forms with little difference in meaning, but any one of the five different forms for "one" is coupled with a correspondingly different semantic form.

The rest of this paper presents the comparison of the Hsi-hsia forms reconstructed in the first part with some common ancestral forms of some Tibeto-Burman languages.

The reconstructions of the sound forms of a dead language on a unified basis should be used for the comparison of that language with some other related ones and then for the discovery of regular correspondences among them. Such correspondences, if we find any, will certainly give strong support to the reliability of our reconstruction. In addition the comparative method may make it possible for us to fill up the gaps in our reconstruction due to lack

of materials.

I. The Reconstruction of the Hsi-hsia Numeral Forms

A. Outline of Past Hsi-hsia Studies, mainly concerned with numerals.

It was in 1870 that Hsi-hsia characters were for the first time introduced to the linguistic circles of Europe by A. Wylie.⁽¹⁾ However, Wylie believed then that they were 'Jurchen' 女真 characters.

Twenty eight years had elapsed before these characters, thanks to M. Devéria, came to be decisively recognized as the national characters of Hsi-hsia.

Wylie and Ed. Chavannes, working on the Dhāraṇī inscription in Hsi-hsia of Chü-yung-kuan in reference to Sanskrit, assumed as representing its Hsi-hsia sound form, one or more Sanskrit sounds that appeared to correspond roughly to one of the Hsi-hsia characters on it. The result was nothing but a mere reference and was far from throwing light on the fundamental problem of the principles of the Hsi-hsia writing system or what sound forms its characters really had, to say nothing about their meanings.

The studies of the Hsi-hsia language in the beginning were mostly dedicated to its characters. They were based on the assumptions that every ideograph was a phonetic character composed of several phonetic units and that each character, or each constituent of a character represented a certain sound regardless of its meaning.

Working along the lines of Wylie and Chavannes, but independent of their studies, Bushall was doing research into the semantic side of Hsi-hsia characters in reference to Chinese. In 1895 the fruits of their researches both made in a different view were brought out. Bushell's paper "The Hsi-hsia Dynasty of Tangut, their money and peculiar script" appeared in *Journal of the North China Branch of the R. A. S.*, XXX, in which he enumerated thirty-seven Hsi-hsia characters with their meanings. In those characters were included eleven numerals:

𠄎 "two", 𠄏 "three", 𠄐 "four", 𠄑 "five", 𠄒 "six", 𠄓 "seven",
𠄔 "eight", 𠄕 "ten", 𠄖 "hundred", 𠄗 "thousand", 𠄘 "ten
thousand"⁽²⁾.

(1) For the part ensuing, see Tatsuo NISHIDA 西田龍雄, "居庸關西夏大字刻文" (Dhāraṇī Inscription in Hsi-hsia of Chü-yung-kuan), 居庸關 (*Chü-yung-kuan*), I, edit. by Jiro MURATA, Publication of the Faculty of Engineering at Kyoto University, 1957.

(2) In addition to this, he remarks also about 𠄙 as the Hsi-hsia character for "nine". As G. Morisse rightly commented, Bushell made a mistake here. Its meaning is not "nine" but "beginning". Cf. MORISSE, *Contribution préliminaire à l'étude de l'écriture et la langue Si-Hia*, Paris, 1904, p. 40.

Unfortunately Bushell was unable to infer the phonetic forms of these numerals. Hereupon G. Morisse, succeeding both Wylie-Chavannes's attempt and Bushell's study, started off further to inquire into dimensions, both phonetic and semantic, of Hsi-hsia characters. In his *Contribution préliminaire à l'étude de l'écriture et la langue Si-Hia*, submitted in 1904, Morisse added tens of semantically deciphered characters to the list of those supplied by Bushell. Morisse obtained them by giving each Hsi-hsia character a corresponding Chinese word, collating fragments of the Hsi-hsia *Saddharma pundarika-nāma-mahāyāna-sūtra* 法華經 with its Chinese translation. We can hardly say that the number of the Hsi-hsia characters for which he could discover the semantic form was large, but most of these still hold good. His addition involved three Hsi-hsia numerals: 一 "one", 九 "nine", 纒 "one hundred million". All the Hsi-hsia characters for the cardinal numbers were thus brought to light.

Paralleling Bushell's failure, however, Morisse was unable to learn anything about the second forms of those characters whose meanings he could draw out in spite of his efforts to infer them. The method he applied to the reconstructions of those sound forms was based on the fact that certain correspondences were found to recur where he compared the Hsi-hsia transcriptions, including the 'Chü-yung-kuan' inscription, of Sanskrit with its originals. The result was unfortunately the inferences of the sound forms of other Hsi-hsia characters than those he attained the semantic decoding of. The fact behind this is that when the Hsi-hsia people transcribed foreign sounds by their own characters, they usually used special ones used in writing the names of clans and the like, not common ones. The reason for this was to avoid the meaning the latter ideographic would necessarily carry. Accordingly the sound forms of the basic words of the Hsi-hsia language scarcely occurred in 'Chü-yung-kuan' inscription nor in any other transcriptions of Sanskrit and Chinese texts. The above fact made them unable to postulate the sound forms of the Hsi-hsia basic words through their comparison with Sanskrit alone.

A step forward was made when the *Fan-han-hê-shi-chang-chung-chu* 蕃漢合時掌中珠 (= *Chang-chung-chu* or *CCC.*) was discovered among the acquisitions the Kozlov expedition brought back. This book is written by a Hsi-hsia man Ku-lê mou ts'ai 骨勒茂戈 and is a book in which the Hsi-hsia text and its Chinese translation are put side by side. This form is the main feature of the book and is accompanied by the transcription of the sounds of the former by the characters of the latter and vice versa. Therefore, it makes the finest material we can get hold of for deciphering the Hsi-hsia language and its characters.

It was in 1909 that academic circles first became acquainted with *Chang-*

chung-chu by A. Ivanov.⁽¹⁾ He also presented a part of his study about it, but his study was of course not a thorough-going treatment. It was nothing more than the sorting out from the book of those words which he thought rather easy to decipher and the reconstructions of their Hsi-hsia sound and semantic forms with the aid of the Chinese transcription and translation, respectively. Strictly speaking, almost all his inferences of the sound forms of the Hsi-hsia characters are incorrect from the present standards of such studies. Yet no small merit must be ascribed to him for the discovery of the book, without which no clue would have been gained to the inferences of the sound forms of the Hsi-hsia basic words. His inferences of the Hsi-hsia numerals are as follows: (the Chinese characters below are their Chinese transcriptions found in the same book)

“one” 阿 nga, “two” 能 nêng, “four” 勒 lê, “five” 骨魚 ku-yü, “eight” 耶 yeh, “ten” 奄 yen, “hundred” 易 yih, “ten thousand” 刻 k'è.

Though Ivanov did not offer the numerals for “three”, “six”, “seven”, “nine” and “thousand”, we find them in the same text: “three” 穀桑 (6. bl, etc.), “six” 鷓抽 (20. al), “seven” 蕪折 (35. al), “nine” 鴛吃 (4. bl). His inferred sound forms are mere transcriptions for these individual Hsi-hsia characters in *Chang-chung-chu* in the Mandarin of his own time. Noting that the book in question was written as early as 1190 and transcribed in the Northwestern Chinese dialect of that time, Ivanov's mistakes are not surprising but his paper happened to give us the starting point for the next stage of the studies, that is, the comparative studies of the Hsi-hsia language.

Here B. Laufer, selecting two-hundred-two basic words among those of the Hsi-hsia words provided by Ivanov, adopted them for the comparative studies of the Hsi-hsia language with the Tibeto-Burman languages⁽²⁾. His studies can hardly be said to be sufficient but we may say that his conclusion in recognizing the fact that the Hsi-hsia language bears a close connection with the Lolo and the Moso languages solved, though tentatively, the problem of its linguistic kinship. His long paper was not a comparative study based on the consistent principles of correspondences, even though he attempted in it to establish sets of correspondences between Written Tibetan and Chinese by comparing forms of every representative Sino-Tibetan language each with one or another Hsi-hsia reconstructed form. Consequently, his comparison of these languages was not such as would point to a new direction for the reconstruction of the Hsi-hsia language. In spite of the fundamental defects of his own methodology and

(1) A. IVANOV, “Zur Kenntniss der Hsi-hsia Sprache,” *Извѣстія Императорской Академіи Наукъ*, 1909, pp. 1221-1233.

(2) B. LAUFER, op. cit., p. 11, ff. Laufer changed the sound forms of numerals inferred by Ivanov as follows: “one” ä, “two” nōñ, nō, noñ, “four” le, “five” ku-yü, “eight” ye, “ten” an, en, “hundred” i, yi, “thousand” k'o.

those inherited from Ivanov in his inferences of Hsi-hsia sounds, his work is worthy of high praise.

Further progress was made by Nicolas Nevsky in the field of Hsi-hsia studies. Nevsky's basic attitude toward the reconstructions of Hsi-hsia sounds was observed in his stress on the transcriptions by Tibetan characters. In his work *A Brief Manual of the Si-Hia Characters with Tibetan Transcriptions*, Osaka, 1926, he collected three hundred and thirty-four Hsi-hsia characters and each of these was found with its inferred sound form and Chinese translation. (Among these 334 items those from No. 307 to No. 334 are dubious characters.) The numerals which are here under discussion were reconstructed as follows:

“one” *li (ði), “two” *ni, “three” *so (swo, swō), “four” *li (ði), “five” *ñu (ñü), “six” *č'i, “seven” *ša, “nine” *gi, “ten” *ga (ga), “thousand” *tu.

Numerals for “eight” and “hundred” were not included. The Hsi-hsia characters for these numerals had already been firmly settled through the works of his predecessors, Morisse and Ivanov. It was Nevsky's stubborn attachment to the Tibetan transcriptions which caused him to reject the inclusion of these numerals, which had no examples of their Tibetan transcriptions and thus were not included in his work. He also referred to a phonetic work *T'ung-yin* (同音) (=TY.) “homophones” which was written by a Hsi-hsia man and in fact took it up only to fail to make full use of the system of classification in the book as the bases for inference.

Together with his ensuing studies, Nevsky's work contributed strikingly to the progress of the Hsi-hsia language studies. To our regret, linguistic methods had not been firmly established yet in his attitude towards the reconstructions of Hsi-hsia sounds.

In his paper *A Comparative Study of the Numerals and the Personal Pronouns in Chinese, Tai, Burmese and Tibetan* (cited in p. 123, fn. (2)) Wang Ching-ju also postulated the phonetic forms of the Hsi-hsia numerals:

“one” *li, “two” ?, “three” *so, “four” *le, “five” *ñu, “six” *č'ü, “seven” *šo, “eight” *ye, “nine” *gi, “ten” *gha.

Like Nevsky he was aided by the use of both Chinese and Tibetan transcriptions, but his inferences were made ad hoc for each individual character and did not follow the general principles of reconstruction. This can be easily seen in his sudden change of the reconstructed forms of the Hsi-hsia numerals without explanation in his paper presented in 1933⁽¹⁾:

(1) WANG, “論四川羌語及弭藥語與西夏語” (On the Ch'iang and Menia Languages of Ssü-ch'uan and the Hsi-hsia Language), 西夏研究 (*Hsi-hsia Studies*) II, Academia Sinica, Monographs 11, (1933), pp. 275-288.

“one” *a, ʔo, “two” *no, “three” *so, “four” *lö, “five” *ŋgo, “six” *chü, “seven” *šö, “eight” *(s)-ie, “nine” *gö, “ten” *a, “hundred” *yi.

B. The Author's Own Method.

Generally speaking, we can base the reconstructions of Hsi-hsia sounds on reference not merely to their Tibetan and Chinese transcriptions mentioned above but also to Sanskrit sounds. Besides the 'Chü-yung-kuan' inscription the Dhāraṇīs of other sūtras can be referred to for the use of the latter purpose. In order to make effective use of these data of diverse characters on one and the same level to render them mutually complementary we need a certain reliable standard of synthesis.

For that purpose, the author adopted the phonetic work *T'ung yin* written by a Hsi-hsia man as the basic datum for the reconstructions of Hsi-hsia sounds.⁽¹⁾ The Hsi-hsia people wrote a number of phonetic books of their language under the influence of Chinese phonetics.⁽²⁾ This fact means that the Hsi-hsia people had already secured a considerably accurate standard for the differentiations and the arrangements of their speech sounds. Therefore their own standard demands our primary consideration.

The *T'ung-yin* among all those Hsi-hsia phonetic works is still preserved perfectly and is the only work we can utilize at the present stage. The author

- (1) Concerning the author's methodology, see his *op. cit.* and also "The Method of the Reconstruction of the Hsi-hsia Language", *Gengo Kenkyu*, 31 (1956), pp. 67-71.
- (2) For the phonetic works of the Hsi-hsia language, there are these five texts known so far (, all of which are now properties of the Institute of the Orientology of USSR):
 1. *T'ung-yin* (同音), a phonetic work in which characters are classified according to their syllable forms with primary regard to their initial consonants. But for a short part missing, the text is completely preserved.
 2. *Wên-hai* (文海), a text written after the system of classification initiated by the Chinese phonetic book *Kuang-yün* (廣韻). Each Hsi-hsia character is arranged in terms of its tone and rhyme, with an account of its signification. Only the section for 'p'ing-shêng' (平聲) is left complete.
 3. *Wên-hai-tsa-lei* (文海雜類), based on the same principles of arrangements with *T'ung-yin*; characters are referred to in terms of their initials. The composition and meaning of each character are also given there.
 4. *Wên-hai-pao-yün* (文海寶韻), in which the same system with *Wên-hai* is observed, though, for some characters, only the analysis of their composition is afforded.
 5. *Wu-shêng-yün-piao* (五聲韻表), written on the model of *Yün-ching* (韻鏡). Cf. NEVSKY, "蘇俄研究院亞州博物館藏西夏文書籍目錄二則" (List of Hsi-hsia works in the Asiatic Museum of the Academy of Sciences, Leningrad), 国立北平図書館館刊 (*Bulletin of the National Library of Peiping*), IV: 3 (1930), p. 370, ff. Cf. З. И. Горбачева, "Тангутские Рукописи и Ксилографы Института Востоковедения Академии Наук СССР", УЗИВ. IX, Москва, 1954; however, for the photograph (p. 83) that is inserted as Рис. 2. Фонетические Таблицы, the author believes that it is not a classificatory table of sounds but the transliteration of some Chinese poems in Hsi-hsia sounds.

concluded that Hsi-hsia characters are, roughly speaking, arranged in that text according to the following system of classification. First 6133 Hsi-hsia characters were divided into nine major classes in terms of their distinctive features which occurred in syllable-initial positions:

1. 'Heavy lip sounds' (重唇音類) (=bilabials),
2. 'Light lip sounds' (輕唇音類) (=labiodentals),
3. 'Tongue-tip sounds' (舌頭音類) (=dentals),
4. 'Over-tongue sounds' (舌上音類) (=palatals),
5. 'Tooth sounds' (牙音類) (=velars),
6. 'Teeth-tip sounds' (齒頭音類) (=alveolars),
7. 'Real-dental sounds' (正齒音類) (=alveopalatals),
8. 'Throat sounds' (喉音類) (=velar fricatives),
9. 'Aspirated sounds' (獨風音類) (=retroflex and liquids).

(The names of these classes are all literally translated from their Hsi-hsia terms by the author.)

Each character within this or that class was then assigned to a certain subclass according to which consonant, vowel or toneme appeared initially in it⁽¹⁾. A small point was laid between subclasses for distinction. From this it is obvious that the characters found between one small point and the other possessed the same syllable. Each character is subscribed with another character either on the right or on the left side. The subscript on the right is read up from the subscript to the main character, while that on the left is read in the reverse manner. If we reconstruct Hsi-hsia sounds, following this system, we can easily determine whether the character under our examination has the same syllable form with all the other Hsi-hsia characters in question, provided that we are informed where the same character is placed in the text. A text following such system is what is needed most in the reconstructions of Hsi-hsia sounds.

The author is not the first to utilize *T'ung-yin* as material. Nevsky and Wang had, as I have already remarked, made use of it though it was only the major classes that they both made occasional reference to, ignoring its internal system as a principal standard.

In using a phonetic text like *T'ung-yin*, its value will be extremely lessened if we neglect to first make its internal system clear, on which next we bestow some adequate consideration. Take, for example, the ensuing words for which Nevsky set up *gu:⁽²⁾

(1) Immediately following the subclasses of the nine major classes there occurs a group of characters under the heading of 'Tu-tzü' (獨字). The characters of this group are not further broken up into small classes. The understanding of the relation between the characters under the 'Tu-tzü' and the others has not been reached yet. In the present paper the former characters are added with 'II' after them for distinction.

(2) Cf. NEVSKY, *op. cit.*

- 解 *gu “middle (*noun*)”: Tib. bgu (56),
 徽 *gu “to be firm”: Tib. bgu (83),
 齏 *gu “head”: Tib. dgu’, bgu: CCC. 吳 局 (110),
 齏 *gu “beginning”: Tib. dgu’, bgu (111).

Among these only the first two words belong to *TY*. ‘Throat sounds’, the rest belonging to *TY*. ‘Tooth sounds’. This indicates clearly that it may be improper to postulate *g- for all of them. Even if the Tibetan transcription gives a g-sound to all those words the standard of the *T’ung-yin* system is to receive our prime consideration. By doing so we have to infer a fricative *y- for the first two, which are put in ‘Throat sounds’, and a stop *g- for the rest, which are members of ‘Tooth sounds’. That they were both voiced is learned from the evidence furnished by their Tibetan transcriptions. Our postulation of y* could not be made only through our reference to their Tibetan transcriptions, since there was no Tibetan character to represent a fricative *y.

Similarly, Nevsky postulated *ga (ga) (145), as the sound forms of 𪛗 “ten” in the light of its Tibetan transcription, dgha’, dga’, kha, which also induced Wang’s inference of *gha for the same word. Seeing that this character is attached to *TY*. ‘Throat sounds’, the author will not accept their inferences. The author assumes that its initial was a voiced fricative *y-.

The like defects of their results can be pointed out in regard to the subclasses in *T’ung-yin*. From the close similarity of their Tibetan transcriptions Nevsky gave *li (ḍi) for all the following characters:

- “one” 𪛗 *li (ḍi): Tib. gli’, gli, kli: CCC. 婁 (1),
 “land” 𪛗 *li (ḍi): Tib. ldi: CCC. 勒 (189),
 “easy” 𪛗 *li (ḍi): Tib. zli’, ldi (127),
 “must (*affix*)” 𪛗 *li (ḍi): Tib. lde’, ldi’, ldi: CCC. 勒 (133).

However, whether each of these characters represented a different syllable in the Hsi-hsia language is not to be decided on simply from the likeness to its Tibetan transcription. With the help of the *T’ung-yin* system, we will realize that they consist each of a different syllable in a strict sense. Although they all are members of ‘Aspirated sounds’, the first character belongs to ‘Subclass (147)’, the second to ‘Subclass (142)’, the third to II (see p. 130, fn. (1)), and the last to ‘Subclass (31)’. The author’s inferences are *xlü~lü for “one”, *t₄ for “land”, *t_{II} for “to be easy” and *t_I for “must” on the ground that they must have been distinctive at least by their own toneme.

Nevsky refrained from making the inference of 𪛗 “eight” since there were practically no examples of its Tibetan transcription. So long as the *T’ung-yin* system is adopted the postulation of its sound form will be warranted by sufficient

evidences. In concrete details this maintenance points to the following steps. Provided that the character at issue pertains to *TY*. ‘Throat sounds’ and turns out to be written with 耶 in *Chang-chung-chu*, it is possible for us to expect and infer a certain Tibetan transcription. On this point attention must be paid to the fact that the Chinese transcription of a given text, for example, of *Chang-chung-chu*, was based on the phonological system of the Chinese language of a given district in a given stabilized period. Among the sound forms of Chinese characters of one district and period exists regular correlation. And hence we are enabled to substitute phonetic symbols for Chinese characters with just the same exactitude as for phonetic characters in general, e.g. Tibetan scripts only if the phonological system of the Chinese language behind the characters under consideration is drawn out.

Suppose the correlation is found between Chinese 喻母 (i.e. initial of 耶) and a Tibetan character *y-* or *g-y-*, as well as between Chinese 麻韻 (i.e. final or rhyme of 耶) and a Tibetan script *e* in the light of a Hsi-hsia character α (e.g. a Hsi-hsia character 孺 “genitive or locative suffix”, *TY*. ‘Throat sounds (4)’: *CCC*. 耶: Tib. *ye* or *g-ye*; similarly, 羸 “to carry”, *TY*. ‘Subclass (57)’: *CCC*. 耶: Tib. *ye*), we may postulate **y-* with ‘clear beginning’ for the Hsi-hsia character in *TY*. ‘Throat sounds’ represented by 喻母 in *Chang-chung-chu*, and **e* for another Hsi-hsia character transcribed by 麻韻 in *Chang-chung-chu*.

The above inference will be supported by the correspondence which exists between Sanskrit *ye* and some Hsi-hsia characters with the same syllable form as these. The Hsi-hsia character 𪛗, which has the same syllable as 孺 corresponds to Sanskrit *ye* (in the twenty-seventh line on the east wall of the ‘Chü-yung-kuan’ inscription). In the same way 𪛘, which is of the same syllable form with 羸 (**ye* “sheep”: *CCC*. 野, ‘*B*’ (cf. p. 134, l. 7) 夜, 野) is to be compared with Sanskrit *ye* (in the twenty-fifth line on the east wall of the same inscription). In this manner ample grounds are afforded for our postulation of **ye* for the Hsi-hsia word for “eight” only if the *T’ung-yin* system is applied.

The author, considering this system as standard in case of the reconstructions of the Hsi-hsia sounds and synthesizing diverse data, postulated the most adequate sounds. The greatest advantage of that system is the adaptability of one and the same syllable form to a number of all those Hsi-hsia characters which occur between two small points in the text, provided that only one of their sound forms is revealed. For example the following seven characters all appear in *TY*. ‘Tongue-tip sounds (83)’ (from here on the word subclass will be omitted wherever its omission does not bring about any confusion):

𪛗 𪛘 𪛙 𪛚 𪛛 𪛜 𪛝

The first character “an article” is, on the one hand, written with Chinese 頂 in

Chang-chung-chu and the fifth “light”, on the other, represented by 丁 in the same text. These Chinese transcriptions in turn correlate both to Tibetan characters *te* and *gte*, respectively (解 “navel”: CCC. 丁: Tib. *te* (II_d) and 臧 “rule”: CCC. 頂: Tib. *gte* (VIII_e)). Seeing that 頂 and 丁 (with 端母 and 青韻) were both **tie*~ in the Northwestern Chinese dialect of the twelfth century, we take **te* as the syllable form of this subclass. Likewise we postulate **te* for the second script “if” even though no example of its Chinese and Tibetan transcriptions can be found; similarly, we may postulate **te* for the third “to arrange”, for the fourth “?”, for the sixth “to be good” and for the seventh “?”. By this method the Hsi-hsia words, whose sound forms we can reconstruct with confidence, proved to increase markedly in number. The Hsi-hsia sound thus reconstructed are, accordingly, grounded on their inter-correlation that reflects in the *T'ung-yin* system. Therefore, the defects of our inferences of Hsi-hsia sounds which will be brought forth, owing to the future discovery of new material of a varied nature or to the development of the comparative studies of its related languages, may rarely be found separately, but if any, throughout one or more series of correlated sounds. Nothing this, the manipulation as presented above is termed the ‘reconstructions’ of Hsi-hsia sounds by the author. In the succeeding part, the reconstructions of Hsi-hsia numeral forms will be done by the author’s own method.

C. The Reconstructions of Hsi-hsia Numeral Forms.

In the Hsi-hsia language five characters were used where the Chinese language does with a single character — “one”. 玃, 刻, 椽, 翫, 駘 were those employed to represent the Hsi-hsia words differing from each other in both the sound and semantic forms.

The first character for “one”, *TY*. ‘Aspirated sounds’ (p. 53 b1), has a subscript 玃 “single” on the right. Hence it reads 玃一 “only one”. The same character is written with Chinese 婁 in *Chang-chung-chu* and with Tibetan characters *gli*’, *gli* (VI_a) or *kli* (IX_a) in the fragments of Tibetan transcriptions. A Hsi-hsia character 翫, which is of the same syllable form with this, is coupled with 婁 in the ‘*B*’ transcriptions of *Chang-chung-chu* (the Hsi-hsia transcriptions of Chinese sounds in *Chang-chung-chu*, e.g. p. 5 b12, 婁宿 翫翫). The character 婁 consisted of 來母 and 虞韻 and was supposedly read *lü* in the Northwestern Chinese dialect of the twelfth century. With this some other Hsi-hsia characters for which the characters with 虞韻 are spelled prove to be represented with Tib. *i*, e.g. 翫 “to go towards” *TY*. ‘Teeth-tip sound (67)’: CCC. 婁婁合: Tib. *ts’wa* (= *ts’wi*), 翫 “Buddhist mass” *TY*. ‘Teeth-tip sounds (67)’: CCC. 滌合 (質韻): Tib. *ts’wi*, *bts’i* (V_h), and 翫 “worship” *TY*. ‘Teeth-tip sounds (67)’: Tib. *ts’wi*

(XVIIb); all of which are understood to have intended to represent *ts'fũ. Consequently *ũ is postulated for the vowel of the Hsi-hsia word under discussion. For this inference the author gives a formula, which will be termed an 'Inference Formula'. 'Inference Formula 1' CCC. 虞韻: Tib. i≡SH *ũ. (Cf. 'Inference Formulae 5 and 9', both standing in contrast with 'Inference Formula 1'.) There is, in addition, another supporting source of our inference. The 'B' transcriptions of *Chang-chung-chu* (abbreviated as 'B') serve generally as the most trustworthy materials for our determining the phonological system of the Chinese language this work was based on. In a number of cases 虞韻 is there supplied with one and the same character as 魚韻 in its Hsi-hsia transcription, e.g. 𪛗 (TY. 'Real-dental sounds' II (p. 40 b3)) for 𪛗, 𪛗, 住, 柱 (虞韻) as well as for 助, 鋤, 杵, 處 (魚韻), and 𪛗 (TY. 'Tooth sounds' (p. 26 b4)) for 雨, 愚 (虞韻) as well as for 於, 魚, 御 (魚韻). A few more cases may be added to them. This confirmation is further witnessed by some other materials pointing out the same conclusion that these 韻 were both ũ in the Chinese dialect in question⁽¹⁾.

Apart from the 韻 for this Hsi-hsia word, its initial consonant, which is also attached to TY. 'Aspirated sounds', is afforded with a Chinese character 斐 (來母) and Tib. gl or kl. In consequence we may temporarily assume that its nuclear consonant was l. Unfortunately, however, its Chinese transcription suggests nothing about the elements referring to Tib. g- or k-. For this lack of agreement with either kind of transcription the following assumptions may be set forth.

1) A certain peripheral constituent preceded the nuclear l (written with Tib. g- or k-) in the Hsi-hsia language at the time when it was recorded by Tibetans. But the same constituent had already been lost from the Hsi-hsia language in *Chang-chung-chu*. The difference between the former and the latter Hsi-hsia languages may be explained from the point of view of either their historical (diachronic) or dialectal (synchronic) relations.

2) Nothing, in fact, occurred before the nuclear consonant. In spite of that since its toneme also needed to be transcribed in Tibetan g- or k- did exist.

3) The sounds represented with gl- or kl- were freely alternated with l-. The alternation in their Tibetan transcriptions between themselves implies that the peripheral constituent was, if any, neither g- or k-. (The fact that it belonged to one of them classifies it with TY. 'Tooth sounds'. Let the constituent at issue be a fricative the initial cluster of the first word is to be postulated as voiceless velar *xl-. In sum there used to be free alternation between xl- and l- in the Hsi-hsia language at the time when *Chang-chung-chu* came out.

(1) Lo Ch'ang-p'ei 羅常培, 唐五代西北方音 (*The Northwestern Dialects of T'ang and the Five Dynasties*), Academia Sinica, Monographs Series A, No. 12 (1933). Concerning the sounds of the T'ang and the five dynasties, this book will be made reference to.

The author will favor the last among all the above possibilities, the reasons being as follows:

1) The exact circumscriptions concerning when and where the fragments of Tibetan transcriptions was brought out are still almost beyond our knowledge.

2) With our assumption that Tib. g- and k- both indicated a toneme it will become more difficult to understand why l- appeared in one case and gl- in another for the same Hsi-hsia character even in one and the same fragment of Tibetan transcription, e.g. 𣎵 “to prosper” (90): Tib. le (IIc), gle (IIb) and 𣎵 “one” (38): Tib. gli', gli, li.

3) Cases of free alternation are found in *Chang-chung-chu* between 來母 and 泥母 and so forth, with or without a small subscribed circle on the left: ㄨㄟ~ㄨㄟ, ㄨㄟ~ㄨㄟ, etc. The characters with a circle ㄨㄟ and ㄨㄟ were probably used for xl- and xn-, respectively. Accordingly although we have nowhere in actual practice examples of ㄨㄟ for the Hsi-hsia character signifying “one” we may assume both Chinese transcriptions, aided by its correspondence to Tib. gl- and l- and then postulate xlü~lü for this word. For that matter we may consider *xlü as the basic form and *lü as its alternant. That the reconstructed sound *x traces back to *g- can easily be inferred if we only make our inquiry in the light of the development of the Tibetan language.

‘Inference Formula 2’ TY. ‘Aspirated sounds’: CCC. ㄨㄟ來母~來母: Tib. gl~kl~l≡SH *xl~l.

The second character 𣎵 “one”, TY. ‘Tongue-tip sound’ (p. 18 a7), is glossed with 𣎵 (a scribal error of 𣎵) *te “if”. We come across this character (, which is also found placed in the reverse manner of 𣎵_𣎵 (p. 15 b3),) in the example 𣎵𣎵𣎵𣎵𣎵能 𣎵得能 “all day today” in *Chang-chung-chu*, being in pair with 𣎵得. The latter character 得 is 端母 and 德韻. The correspondence between Chinese 端母 and the Tibetan transcription t- in terms of a Hsi-hsia character will be evident from the example below:

𣎵 “*affix denoting the subject*” (‘Tongue-tip sounds (28)’): CCC. 𣎵 (端母): Tib. ta (IIa);

𣎵 “to go out” (‘Tongue-tip sounds (18)’): CCC. 𣎵 (端母): Tib. tu (XII);

𣎵 “navel” (‘Tongue-tip sounds (82)’): CCC. 𣎵 (端母): Tib. te (IIc);

𣎵 “place” (‘Tongue-tip sounds (126)’): CCC. 𣎵 (端母): Tib. tu (XIIc); etc.

Supposed with these examples the above correspondence enables to postulate *t- for the initial nuclear consonant of the second character.

‘Inference Formula 3’ TY. ‘Tongue-tip sounds’: CCC. 端母: Tib. t≡SH *t.

As in the case of the small circle subscribed to 來母 and 泥母 a square put before a Chinese character is also assumed as for a velar fricative x-.

‘Inference Formula 4’ TY. ‘Tongue-tip sounds’: CCC. ㄐ端母: Tib. *t≡SH *xt-.

Through their references to Hsi-hsia characters Chinese 德韻 is often one capable of being correlated to the Tibetan i-, e.g.

籟 “this” (‘Tongue-tip sounds (11)’): CCC. 特: Tib. t’i (IIa),

脣 “to collect” (‘Teeth-tip sounds (103)’): CCC. 尼則: Tib. rdzi (IXe),

齶 “ordinal indicator” (‘Teeth-tip sounds (31)’): CCC. 則: Tib. gdzi’,
gdzi (VIc),

穢 “water” (‘Aspirated sounds (158)’): CCC. ㄐ移則: Tib. gzi (XVIIc), etc.

In the dialect revealed in *Chang-chung-chu*, 德韻 was ʌ and thus presumably distinct from 質韻 or 緝韻. Therefore in spite of the fact that both kinds of 韻 correspond to Tib. i in reference to their Hsi-hsia transcriptions we prefer to postulate a central high vowel *i for the Hsi-hsia vowel corresponding to Chinese 德韻.

‘Inference Formula 5’ CCC. 德韻: Tib. i≡SH *i.

A syllable with this central vowel i was often applied to the initial of a cluster of two Sanskrit consonants: 𑖀𑖄, *xtile for Skr. trai and 𑖀𑖄𑖅, *xtira for Skr. tra in the ‘Chü-yung-kuan’ inscription. In *Chang-chung-chu* this Hsi-hsia syllable xtī had probably been reduced to tī as early as the fourteenth century in that language.

Third word 𑖀, TY. ‘Throat sounds’ (p. 44 a2), is furnished with Chinese 阿 and Tib. a (IIe, IXe), e.g. 𑖀𑖄 “one day” and 𑖀𑖄𑖅 “one year” (p. 11 a2). Hence doubtlessly we may interpret it as *a.

‘Inference Formula 6’ TY. ‘Throat sounds’: CCC. 影母: Tib. zero≡SH *.-.

‘Inference Formula 7’ CCC. 歌韻: Tib. a≡SH *a.

The fourth word 𑖀, TY. ‘Tooth sounds’, is accompanied by a gloss 𑖀 (p. 22 a3). As for this character, no first-hand example of its transcription is to be seen but we have other Hsi-hsia characters such as 𑖀 “valley” and 𑖀 “night” of the same syllable form and, for the latter of these, a Chinese transcription 𑖀 in *Chang-chung-chu*. The same one is also given for a Hsi-hsia character 𑖀 “nine”: Tib. dgi’ (VIb), ’gi which guides us to the postulation of the sound form of the fourth word as *ngi₂ (, *ngi₁ for “nine” and *ngi₂ for “night”). In contrast with Tib. dg- and ’g- (∩ng-), ㄐ疑母 was utilized for *ng-.

‘Inference Formula 8’ TY. ‘Tooth sounds’: CCC. ㄐ疑母: Tib. dg-, ’g≡SH *ng-.

Like 質韻 or 緝韻, 迄韻 corresponds to the Tibetan script -i by way of its comparison of Hsi-hsia characters, thus being considered as a transcription of the Hsi-hsia sound *i.

'Inference Formula 9' CCC. 迄韻, 質韻, 緝韻: Tib. $i \equiv SH *i$.

The fifth word 𧄂, TY. 'Aspiraten sounds' (p. 48 b3), is written with Tib. gli', gli, li. It happens that its Chinese transcription does not appear in *Chang-chung-chu*. Fortunately here again its fellow characters of the same syllable form, e.g. 𧄂 "wind": CCC. 勒: Tib li (IIh), 𧄂 "pine-tree": CCC. 勒, 𧄂 "amber": CCC. 勒, etc., come to help with our inference. Considering that 勒 consists of 來母 and 德韻, for this word, *xl̥i is postulated, following the 'Inference Formulae 1 and 5'.

It is now evident that any of these five forms bore a different meaning from the other four. For an ordinal and at the same time a cardinal numeral 𧄂 *xl̥ü~l̥ü was made use of. A character *xl̥ü~l̥ü was particularly employed when they made enumerations, in the Buddhist canons, for example. Its gloss 獨一 "only one" in *T'ung-yin* also suggests that "single" was to be another representation for the word. The central meaning of the second word 刻 *xt̥i was, on the other hand, for the *ichi* "one" in a Japanese idiomatic phrase *man ga ichi ni* "in one case out of ten thousand", which usage is quite the same to that of Tib. *či-te*. Such a meaning would possibly be involved in an expression for 今日一日 "all day today" in *Chang-chung-chu* also. The third one 𧄂 *a is likely to have stood for singularity as against plurality. Take, for example, the expressions for 一日 "one day", 一年 "one year", 一個月 "one month" in *Chang-chung-chu*. The point they all make is emphasizing the contrast with their corresponding plural ones, 二日 "two days", 三日 "three days" or the like, for example. The fourth one 𧄂 *ngi signified indefinite "one". For that word, a meaning "a certain" will probably fit, which meaning is in correspondence with Chinese 有 and Thai *mii*. The meaning of the fifth word *xl̥i, unlike all the others, still remains unexplored. As examples of its use phrases like 𧄂 𧄂 "once and for all" or 𧄂 𧄂 "one by one" may be given. Consequently we will tentatively take this form as an alternate form of the second word *xl̥ü~l̥ü. The words *xl̥ü~l̥ü, xt̥i and xl̥i were all free words, while *a and *ngi were preceded by one or more qualifying free words. Particularly *a would be one of the so-called syllabic prefixes, a very few of which are, in the author's opinion, known in the Hsi-hsia language.

The numeral 𧄂 "two", TY. 'Tongue-tip sound' (p. 19 a2), is spelled with 能~能 (with 泥母 and 登韻) in *Chang-chung-chu* and with Tib. gni or gni' in the *fragments of Tibetan transcriptions*. The initial 泥母 corresponds to Tib. gn- by reference to Hsi-hsia characters, e.g. 𧄂 "mind": CCC. 寧: Tib. gne (IIa, VIIIa). The fact that this Hsi-hsia character meaning "mind" is found with 𧄂 as well *Changin chung-chu* shows that subscribing a small circle to its Chinese transcription was not strictly observed in general practice. With similar

inconsistency Tibetans applied both gn- and n- to it (IIj). An inference thus follows that the Hsi-hsia characters for “mind”, “two”, etc. were originally with the initial *xn- alone, but later also with *n- in free alternation with the former.

‘Inference Formula 10’ TY. ‘Tongue-tip sounds’: CCC. 泥母: Tib. gn-, n- ≡ SH *xn-.

As for the vowel of this numeral, 登韻 (which is assumed as əŋ in the Northwestern Chinese of the twelfth century) is given for it and was used chiefly for the transcription of nasals in syllable-initial position of Hsi-hsia words; being in complementation with 德韻, it corresponds to Tib. i. We postulate therefore, *i for this 韻 as well as for 德韻.

‘Inference Formula 11’ CCC. 登韻: Tib. i ≡ SH *i.

In consequence we are led to the postulation of a form *xni~ni for this Hsi-hsia numeral. We also have 儻 “thou” *ni: Tib. ne (XIIb), ni’ (VIe) as its derived character. (Cf. Tib. “two” gñis<*gñids and “thou” ñid.)

The numeral 該 “three”, TY. ‘Teeth-tip sound’ (p. 33 b7), is found in *Chang-chung-chu* with a transcription 桑 and in Tibetan transcriptions with gso (IIb). In parallel to the cases of “one” and “two” this numeral as well may be considered to have originally corresponded to both Chinese transcriptions 桑 and 桑. This view will be further ensured by the discovery of Hsi-hsia characters 穀 “millet” 桑 and 鶯 “sparrow” 鬼桑, all of which appear in TY. ‘Teeth-tip sounds (18)’. 桑 represents 心母 and 唐韻, whose 母 and 韻 in *Chang-chung-chu* correspond to Tib. gs- or g- and o, respectively. For example,

心母: Tib. gs-: 該 “to know” TY. ‘Teeth-tip sounds’: CCC. 寫: Tib. gse (IIh, IIi)

— *xse~se. (The character 寫 “to write” represents the same syllable form, and hence *xse~se.)

鶯 “knowledge” TY. ‘Teeth-tip sounds’: CCC. 斜: Tib. gse’ (VIIIb) gse, ze (IIe)

— *xse~se. (The character 鶯 “tortoise” belongs to the subclass of the same syllable form and hence its sound form was assumed as *xse~se.)

‘Inference Formula 12’ TY. ‘Teeth-tip sounds’, CCC. 心母~心母: Tib. gs~s- ≡ SH *xs~s-. For example,

唐韻: Tib. o: 窳 “to go out”: CCC. 黨: Tib. to (XII); 窳 “to be hollow”: CCC. 蒼: Tib. ts’o’ (IXb), ts’o; 窳 “throat”: CCC. 光: Tib. rgō (IIj).

‘Inference Formula 13’ CCC. 唐韻: Tib. o ≡ SH *o.

From these formulae follows our inference of this numeral *xso~so.

The numeral 𧯛 “four”, *TY*. ‘Aspirated sound’ (p. 52 b7), is transcribed with 勒 in *Chang-chung-chu* and with ldi (Vd), zla’ (=zli’) (VIb) in the *fragments of Tibetan transcriptions*. The 韻 of this Chinese character was the same with 德韻 and hence corresponds to Tib. i. According to ‘Inference Formula 5’ we may postulate a vowel ɪ for this 韻 too. Within *TY* ‘Aspirated sounds’ there is a group of Hsi-hsia characters, of which some stand in correspondence with Chinese 來母 and Tib. ld-. The others of this group are found in correspondence with Chinese 來母: Tib. gl-, kl- (for which we have postulated the Hsi-hsia form *xl-) and with Chinese 來母: Tib. l- (for which *l- has been assumed) in ‘Inference Formula 1’. For the former set we postulate ɪ. ‘Inference Formula 14’ *TY*. ‘Aspirated sounds’: CCC. 來母: Tib. ld- ≡ SH *ɪ. This numeral is then reconstructed as *ɪ₃. However, owing to the tonemic correspondences seen in examples:

ɪ₁ 𧯛 “must (*affix*)”: CCC. 勒: Tib. ldi (Ve, VIb), ldi’ (IXc), etc.,

ɪ₂ 𧯛 “and”: CCC. 勒: Tib. ldi (IXc, IId), etc.,

ɪ₃ 𧯛 “four”: CCC. 勒: Tib. ldi (Ic, IVc), lda (XVIIe), etc.,

ɪ₄ 𧯛 “land”: CCC. 勒: Tib. ldi (Vd), ldt’i (XIIIn), etc.

we should, strictly speaking, offer *ɪ₃ for it. By this set which is represented by *ɪ contrast is afforded with those *li (li₁ 𧯛 “dust”, li₂ 𧯛 “wolf”, li₃ 𧯛 “tiger”, li₄~lü 𧯛 “same”) and *xli (the forms for “wind”, “pine”, “amber”, etc. given above).

The numeral 𧯛 “five”, *TY*. ‘Tooth sound’ (p. 26 a7), is written with 魚骨 in *Chang-chung-chu* and with Tib. zɲu, ɲu (IVa), bɲi’ (VIa, VIId, e). Among all the Hsi-hsia characters of the same syllable form with this numeral we only mention 𧯛 “heaven”: Tib. rɲwi (XIII), rɲo (XIII) as an example. In *Chang-chung-chu* it is sometimes seen that a single Hsi-hsia character is supplied with two Chinese characters. Furthermore, the combinations of the latter two observe a certain regularity. Take for example some such from all the similar one’s, which follow:

- 1) 魚骨 “five”, 𧯛 “heaven” *TY*. (12): CCC. 魚骨: Tib. rɲwa (XVIIb), 魚各 𧯛 “mystical verse, spell” *TY*. (173): CCC. 魚各: Tib. bɲu (VIIIIf), ɲu (XIIc), bɲe (IIe),
- 2) 宜會 𧯛 “to harmonize”, 𧯛 “knee” *TY*. (136): CCC. 宜會,
- 3) 宜則 𧯛 “number” *TY*. (34): CCC. 宜則: Tib. rɲi (II), rɲi’ (XIII), 𧯛 “mountain” *TY*. (145): CCC. 宜則: Tib. rɲi (Vh),
- 4) 宜刮 𧯛 “a kind of sheep” *TY*. (162): CCC. 宜刮.

The author prefers the interpretation that each of such combinations represented one of the consonant clusters peculiar to the Hsi-hsia language. Both 魚 and 宜, each of which precedes another character in all the above examples possessed 疑母 (ŋü and ŋi can be postulated for the respective characters 魚 and 宜 in the Northwestern Chinese of twelfth century.) Seeing that these characters correspond to the Hsi-hsia characters in TY. 'Tooth sounds' and were transcribed by Tib. ɲɳ-, bɳ- or ɳ-, we assume that their nuclear consonant was *ɳ-. The characters 骨, 各, 刮 (見母) and 會 (匣母), succeeding *ɳ-, were probably used to represent the Hsi-hsia sounds *ɣV, and the character 則 (精母) to represent *zV (whose vowel is assumed to have been i according to 'Inference Formula 5'). The numeral in question is, therefore, postulated as *ɳɣV.

'Inference Formula 15' TY. 'Tooth sounds': CCC. 疑母+見母 or 匣母: Tib. bɳ-, ɲɳ-, ɳ- ≡ SH *ɳɣ-.

'Inference Formula 16' TY. 'Tooth sounds': CCC. 疑母+精母: Tib. ɲɳ- ≡ SH *ɳɣz-.

The character 骨 contains 沒韻. Lo Ch'ang-p'ei assumed the value of 沒韻 the nin- and tenth centuries as oɪ after scrutinizing various documents in the time of the T'ang dynasty. However, the actual examples of its Tibetan transcription are limited to only 骨 kur and 沒 ma both found in *Mahāyāna-Mādhyamika-Darśana* 大乘中宗見解 (in the ninth century?)⁽¹⁾. Among the modern Chinese dialects, it represents u in the dialects of Lan-chou 蘭州, P'ing-liang 平涼, Hsi-an 西安 and San-shui 三水, as uo in the Wen-shui 文水 dialect and as uə in the Hsing-hsien 興縣 dialect. These evidences lead us to the postulation of *u for the 沒韻 under consideration but it must be also noted that Tibetans used u, i and o inconsistently in the *fragments of Tibetan transcriptions* for the Hsi-hsia characters [which were transcribed by the Chinese characters with 沒韻 in *Chang-chung-chu*.

In addition to the cases of "to be" and "five" we can also name such as 𪛗 "to be various" CCC. 沒: Tib. dmu (Ib) mu (Ie), mi (Vh), 𪛗 "person"

CCC. 𪛗卒: Tib. bdzo (VI f), etc. Consequently, we may conclude that this Hsi-hsia sound must have been one incapable of being transcribed properly with any Tibetan character. The author assumes this sound as *u.

'Inference Formula 17' CCC. 沒韻: Tib. u, i, o ≡ SH *u. (Hence, we postulate *ɳye for 魚各, *ɳɣwa for 宜刮, and *ɳɣæ for 宜會.)

Our inference that 魚骨, for example, was not ɳkɯ but was ɳɣɯ is based on the fact that those Hsi-hsia characters transcribed by 魚骨 together with those possessing the same syllable with them are found in some cases to be also written with 兀 in *Chang-chung-chu*. For example, such is the case with the

(1) Lo Ch'ang-p'ei, *ibid.*

Hsi-hsia character 𪛗 “enclosure”, *TY*. ‘Tooth sounds’ (1), which was spelled with both 魚骨 and 兀, or also with some other ones with the same syllable form with it, such as 籒 “writing brush” 兀 and 𪛗 “to be” 兀: Tib. ŋu (IIa), bŋu (Vg), bŋi’ (VIe). Therefore, the postulation of *ŋyʷ rather than *ŋkuʷ for this syllable will better agree with the fact that it was also transcribed with 兀, and hence *ŋyʷ is given to the Hsi-hsia numeral for “five”.

The numeral 𪛗 “six”, *TY*. ‘Real-dental sounds’ (p. 41 a3), is subscribed with 𪛗 “number”. This character is given a Chinese transcription 抽 (徹母 and 尤韻) in *Chang-chung-chu* and is transcribed with Tib. č’i (IIa) in the *fragments of Tibetan transcriptions*. In the Chinese transcriptions of Hsi-hsia characters in *Chang-chung-chu* no distinction was usually made between the characters of the ‘知’ group and those of the ‘照₃’ group. Thus both 抽 (徹母) and 醜 (穿母) were used to transcribe 𪛗 “woman”. The lack of their distinction alone is enough to indicate that both group by that time had been brought together in the dialect on which *Chang-chung-chu* was based. Such coincidence had been a common feature of the Northwestern Chinese of the twelfth century since the time of the T’ang dynasty. For the Tibetan transcriptions of the Hsi-hsia characters written by the Chinese characters with either 徹母 or 穿母, examples are: 𪛗 “flesh” CCC. 直 (徹母), B. 赤 (穿母): Tib. č’i; 𪛗 “root” CCC. 赤 (穿母): Tib. č’i (VIIc). Accordingly, we postulate *tš’- for the initial of these Hsi-hsia characters.

‘Inference Formula 18’ *TY*. ‘Real-dental sounds’: CCC. 徹母, 穿母: Tib. č’- ≡ SH *tš’-.

Because of the correspondence between 尤韻 in *Chang-chung-chu* and Tib. u by reference to Hsi-hsia characters (e.g. 𪛗 “by means of” CCC. 謀 (尤韻), 暮 (暮韻): Tib. ’bu’ (IIh), dbu). We may set up

‘Inference Formula 19’ CCC. 尤韻: Tib. u ≡ SH *u.

We now reconstruct that Hsi-hsia form for “six” as *tš’u on the basis of its Chinese transcription rather than its Tibetan one i.

The numeral 𪛗 “seven” does not occur in *T’ung-yin* but is transcribed with 折 (審母 and 薛韻) in *Chang-chung-chu* and with ša or gša in the *fragments of Tibetan transcriptions*. This character then ought to have been originally found in the part *TY*. ‘Real-dental sounds’ (pp. 37b-38a) which has been lost from the text left to us.

In *TY*. ‘Real-dental sounds (14)’, we find such characters as 𪛗 “to appear”: CCC. 設, 𪛗 “incense”: CCC. 折 and 𪛗 “rope”: CCC. 折. Since the character 𪛗 “Buddha’s bones” accompanied by the same syllable form is seen in correspondence with Sanskrit ša, part of the word šaṭ, in the eighth line of the

east wall inscription in large letters of Chü-yung-kuan, we may set up 'Inference Formula 20' TY. 'Real-dental sounds': CCC. 審母: Tib. š-, gš- ≡ SH *š-.

It seems to be probable that 薛韻 underwent a change from iæɪ in the tenth century to iæ in the twelfth century. Accordingly we postulate a phonetic form *šæ for this numeral. If it had been *ša, either 歌韻 or 麻韻 might be used for its transcription instead of 薛韻. Its Tibetan transcription 'a' was probably intended to represent æ, e.g. 胤 "virtue" CCC. 徹 (薛韻): Tib. č'a (XII, IXc).

'Inference Formula 21' CCC. 薛韻: Tib. a ≡ SH *æ.

The numeral 八 "eight", TY. 'Throat sounds' (p. 43 a4), is transcribed with 耶 in *Chang-chung-chu* but no Tibetan transcription of this character is found.

'Inference Formula 22' TY. 'Throat sounds': CCC. 喻母: Tib. g-y-, y- ≡ SH *y-.

'Inference Formula 23' CCC. 麻韻: Tib. e ≡ SH *e.

These formulae have been both already mentioned before. Hence we postulate *ye for this numeral.

The numeral 九 "nine", TY. 'Tooth sounds' (p. 22 a2), is transcribed with 屹 (疑母 and 迄韻) in *Chang-chung-chu* and with dgi' (VIb) or 'gi in the *fragments of Tibetan Transcriptions*. According to the 'Inference Formulae 8 and 9', we reconstruct *ngi for its phonetic form.

The Hsi-hsia language had two different characters signifying "ten" 後 and 𩇛, each of which represented a different phonetic form. The former character belonged to TY. 'Throat sounds' (p. 42 b6) with a subscript 𩇛, while the latter is written in TY. 'Real-dental sounds' (p. 35 b2) with a subscript 後. The subscript for the former is perhaps a scribal error of 𩇛 because no such character as 𩇛 is contained in *T'ung-yin*. The Chinese transcription in *Chang-chung-chu* of the character 後 is 𩇛 (影母 and 琰韻) and its Tibetan transcriptions are dga, 'ga (XIIa), bgha (IXa) or gha (Vg). The initial sound here is to be postulated as a voiced fricative *ɣ, the reason for which has been already mentioned.

'Inference Formula 24' TY. 'Throat sounds' CCC. 影母: Tib. dg-, 'g-, gh- ≡ SH *ɣ-.

On the evidence of the materials of the T'ang and five dynasties 鹽韻 underwent the changes paralleling those of 薛韻, which were:

	A.D. 9th (Century)	10th	11th
鹽韻	iæm	iæm	iæ~
薛韻	iæɪ	iæɪ	iæ

Consequently we may postulate *æ for this 韻 in parallel with 'Inference Formula 24'.

'Inference Formula 25' CCC. 鹽韻: Tib. a ≡ SH *æ.

For the character 鞞 "body" CCC. 鞞: Tib. dga, dga', and 鞞 "to be tight": CCC. 鞞: Tib. dga' (VI f) as well as for this numeral, *yæ is postulated on the basis of the 'Inference Formulae 24 and 25'. As for the character 羸, no direct evidence for the reconstruction of its sound form can be found. However, we assume it as *tš'i from its comparison with the corresponding forms of the related languages.

The numeral 羸 "hundred", TY. 'Throat sounds' (p. 43 b6), is represented with a Chinese transcription 易 (喻母 and 眞韻). Though its Tibetan transcription can be nowhere encountered we can postulate *i for the vowel of its phonetic form, considering that 支-, 脂- and 止韻 (which were all i in the Northwestern Chinese of the twelfth century) correspond all to Tib. i by reference to Hsi-hsia characters. Similar examples are:

胤 "to make someone do something" CCC. 皮 (支韻): Tib. p'i (IIa)
(TY. 'Heavy-lip sounds') *p'i,

鞞 "to be painful" CCC. 知 (支韻): Tib. či (XIIg) (TY. 'Real-dental
sounds') *tš'i,

翫 "to tell" CCC. 易 (眞韻): Tib. g-yi (Vd) *y'i,

羸 "again" CCC. 已 (止韻): Tib. yi *y'i.

'Inference Formula 26' CCC. 支-, 脂- and 止韻: Tib. i ≡ SH *i (cf. 'Inference Formula 9').

Following the 'Inference Formula 22', *y- will be assumed for its initial sound and hence the Hsi-hsia numeral for "hundred" is reconstructed as *y'i. Strictly speaking, however, its sound form had a toneme 5 by which contrast is formed with the forms such as 羸 "to learn" *y'i₁, 羸 "last (year)" *y'i₂, 羸 "crowd of people" *y'i₃ and 羸 "saddle" *y'i₄, and hence was *y'i₅.

The numeral 羸 "thousand", TY. 'Tongue-tip sounds' (p. 17 a3), is transcribed with 都 (端母 and 模韻) and with Tib. tu (XVIIa). From the 'Inference Formula 3' its initial sound is assumed as *t-. In connection with the case of 尤韻, we have already learned that the Hsi-hsia characters to be transcribed with the Chinese characters with 模韻 correspond to Tib. u. (Cf. 'Inference Formula 19'.) The following are the examples showing this correspondence:

峯 "tree" CCC. 普 (姥韻): Tib. p'u (Vn) (TY. 'Heavy lip sounds'),

羸 "to respect" CCC. 哺 (暮韻): Tib. bu (XIIIk, XIIId) (TY. 'Heavy lip
sounds'),

羸 "middle (noun)" CCC. 悟 (暮韻): Tib. 'gu, bgu (II d) (TY. 'Tooth

sounds),

羶 “head” CCC. 吳 (模韻): Tib. dgu’ (VIId), bgu (IIc).

‘Inference Formula 27’ CCC. 模韻: Tib. u \equiv SH *u.

*tu is postulated for the Hsi-hsia word signifying “hundred”.

The numeral 覓 “ten thousand”, TY. ‘Tooth sounds’ (p. 24 b3), is transcribed with 刻 and 尅 (溪母 and 德韻). Although this numeral is not furnished with any Tibetan transcription, 溪母 (k’-) enters into correspondence with Tib. k’- in the light of their corresponding Hsi-hsia characters, e.g. 繡 “interval” CCC. 渴 (溪母): Tib. k’a (XIIId), dk’a (Nevsky).

‘Inference Formula 28’. TY. ‘Tooth sounds’: CCC. 溪母: Tib. k’- \equiv SH *k’-.

In addition to this, since 德韻 can be thought to have represented the Hsi-hsia sound ɨ (‘Inference Formula 5’), the Hsi-hsia word for “ten thousand” is assumed to have been *k’i.

II. Further Considerations of Hsi-hsia Numeral Forms in the Light of the Comparative Method

A. The Numeral Forms of the Tibeto-Jyarung Languages, the Burmese-Lolo Languages, and the Moso Language.

Before we proceed to the comparison of the so far reconstructed Hsi-hsia numeral forms with those of its related languages, one preliminary step must be taken. At first the languages to be compared with the Hsi-hsia language must be arranged in a certain way. In his earlier paper⁽¹⁾ the author argued that grave methodological errors will be committed in the comparative studies of the Sino-Tibetan family if we begin the comparison of all the languages of this family left arranged on the same historical level and in terms of their written forms alone. One reason is that the comparative method leads us to the knowledge that the words of each language may, from the historical point of view, date from a different stage from those of some or all the other languages of the same family in the development of their common ancestral language. Another is that the written forms of each language may oftentimes not be the common ancestral forms of its modern dialects. Consequently, through inquiries into the earliest attested stages of each language, we must first reconstruct the immediate ancestral forms of those languages which are most closely related. Only in this way may we arrive at such formulae sufficient to answer the question of how the varied forms have come about in each language.

(1) Tatsuo NISHIDA, “チベット語・ビルマ語彙比較における問題” (Tibetan and Burmese), 東方學 *Tōhōgaku*, 15 (1957).

In view of the Sino-Tibetan comparative studies it may be convenient and completely adequate for us to inspect separately the Sino-Thai and the Tibeto-Burman languages, which constitute as a whole the Eastern and the Western groups, respectively, of the Sino-Tibetan family, exhibiting a sharp contrast with one another in many respects. For the comparative studies of the Hsi-hsia language we will be concerned with only the latter group of languages, of which our discussion here will be limited to 1) the Tibeto-Jyarung languages, 2) the Burmese-Lolo languages and 3) the Moso language.

The results of the ensuing comparisons do not in the least claim to be final but will have to be modified in part after the future integration of the materials in general, including the reports from new surveys of these languages at issue.

The following comparison will concern only the numerals from "one" to "ten" and "hundred".

1. The Tibetan and the Jyarung Languages.

a. The Tibetan Language.

From each of the four branches of the Tibetan languages thought of in a narrow sense the following dialects are selected as representative:

- i) Central Tibetan (=CT.): the Lhasa dialect⁽¹⁾,
- ii) Western Tibetan: the dialects of Balti⁽²⁾, Purik⁽³⁾ and Lahul⁽⁴⁾,
- iii) Southern Tibetan: the dialects of Sharpa, Spiti⁽⁵⁾ and Denjong⁽⁶⁾,
- iv) Northeastern Tibetan: the Amdo dialect⁽⁷⁾,
- v) Northeastern Tibetan of the sixteenth century: the Hsi-fan language⁽⁸⁾.

In the following table the forms of these chosen dialects are compared with those of the Written Tibetan (=Wr. T.).

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- (1) Cf. Yü Tao-ch'üan 于道泉 & CHAO Yüan-jên 趙元任, 第六代達賴喇嘛倉洋嘉錯情歌 (*Love Songs of the Sixth Dalailama Tshangs-dbyangs-rgya-mtsho*), Academia Sinica, Monographs Series A, No. 5, (1930); Hajime KITAMURA 北村甫, "チベット語: III. 音韻, IV. 文字" (The Tibetan Language: III. Phonology, IV. Script), 世界言語概説 (*An Introduction to the Languages of the World*), II, edit. by S. ICHIKAWA & S. HATTORI, Tokyo, 1955, p. 966-; Roy A. MILLER, "The Independent Status of the Lhasa Dialect within Central Tibetan", *Orbis*, IV: 1 (1955), pp. 49-55.
 - (2) A. F. C. READ, *Balti Grammar*. The Royal Asiatic Society, London, 1934.
 - (3) G. BAILEY, *Linguistic Studies from the Himalayas*, The Royal Asiatic Society, London, 1915.
 - (4) G. ROERICH, *The Tibetan Dialect of Lahul*, Tibelica I: Dialects of Tibet, Urusvati Himalayan Research Institute of Roerich Museum, 1933.
 - (5) G. GRIERSON, *Linguistic Survey of India*, vol. III, part 3; B. H. HODGSON, *Essays on the Languages, Literature, and Religion of Nepal and Tibet*, London, 1874.
 - (6) G. SANDBERG, *Manual of the Sikkim Bhutia Language or Denjong ke*, Westminster, 1895.
 - (7) The Amdo forms here adopted are based on the information recorded by my informant, sTag-tser Nor-bu from Ch'ing-hai 青海 in 1954.
 - (8) The forms used in this paper are taken from *Hsi-fan-kuan i-yü* 西番館譯語 (Text of the Asiatic Society, Paris).

	Wr. T.	CT.	Balti	Purik	Lahul	Shrpa	Spiti	Denjong	Amdo	Hsi-fan
"one"	gčig	tɕi ₅₃	čik	cik'	či~čig	čik	čig	či	xtʃi	〔tʃiʔ〕
"two"	gñis	ŋi ₅₃	ŋis	nyis	ñi	ñi	ñi	ñi	xñi	〔ñis〕
"three"	gsum	sum ₅₃	xsum	sùm	sum	sum	sum	sum	xsum	〔sum〕
"four"	bži	ɕi ₁₃	bji	zbzhi	ži	ši	ši	ži	bži	〔bži〕
"five"	lɲa	ɲa ₅₃	ɣā	ɲā	ɲa	ɲa	ɲa	ɲa	ɲa	〔lɲa〕
"six"	drug	tʃ'uk ₁₃	truk	trūk'	d'ug	ʃuk	duk	ʃuk	tʃ'üq	〔duʔ〕
"seven"	bdun	t'yn ₁₃	bdun	rdün	dün~dū	dun	dun	dün	bdün	〔bdun〕
"eight"	brgyad	ʃ'ε ₁₃	bgyad	rgyāt	g'ad	gye	gye	gye	bdzεʔ	〔bɕgjaʔ〕
"nine"	dgu	k'u ₁₃	rgu	rgū	gū	gu	gu	gu	ɕgu	〔ɕgu〕
"ten"	bču	tɕu ₅₃	p'čū	shcū	ču	ču	ču	ču-	btʃu-	〔btʃu〕
								t'am-	t'am-	
								pa	pa	
"hundred"	brgya	ʃ'a ₁₃	bgya	rgyā	g'a-	gya	gya	gya	bdz'a-	〔bɕgja-
					t'am-pa				t'am-pa	t'am-pa〕

Although the forms of the modern Tibetan dialects are frequently in direct correspondence with the Written Tibetan forms it is not possible to replace the later forms as such for the common forms of the modern Tibetan dialects. This is evident in the examples such as the forms for "mouse", "knee" etc., as the author has already mentioned in his earlier paper. In particular the comparison of the Written Tibetan forms with the Western Tibetan or the Northeastern Tibetan forms will present a number of cases of this kind. Even if our concerns are restricted to the correspondences between so small a number of forms as have been treated in the above, several questions arise.

For "one", no problem will be brought about by postulating the Common Tibetan form (=Com. T.) gčig, noting that the form for "one" of each modern dialect shows clear correspondence with its Written Tibetan form. In Ancient Tibetan (=Anc. T.), however gč'ig also was in general use along with gčig. The former appears not frequently in the seventh and eighth century Tunhaung literature⁽¹⁾ and in Turkester literature⁽²⁾, and hence č and č' seem to have often alternated (cf. the form for "ten"). (The aspiration following č' will prove to be relevant when the Tibetan languages are compared with the Burmese-Lolo languages.) Therefore *gčig~gč'ig is reconstructed for the Common Tibetan form for "one".

For "two", here again there is a definite correspondence between Written Tibetan gñis and any of the modern dialect forms for this numeral. Hence the

(1) W. THOMAS, *Ancient Folk-literature from North Eastern Tibet*, Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin, Klasse für Sprachen Literatur und Kunst, Jahrgang, 1952, Nr. 3, Akademie-Verlag Berlin, 1957.

(2) W. THOMAS, *Tibetan Literary Texts and Documents concerning Chinese Turkester*, Part III, London, 1955.

former may be taken for the Common Tibetan form for "two". For all that, certain evidence compels us to assume that Wr. T. -Vs (V='a vowel') is the later and changed form of -gs or -ds and hence that gñids came from *gñids. On this evidence we postulate Common Tibetan *gñids⁽¹⁾.

For "three", the recognition of the Written Tibetan form gsum as the Common Tibetan form will arouse no dissenting opinion.

For "four", Purik *zbzhi* (=zbži) claims to be unique among all the modern dialect forms. Purik ž regularly agrees with Wr. T. ž, for example, "field" Purik žiŋ : Wr. T. žiŋ; "day" Purik žăq : Wr. T. žag; "to ride" Purik žöncäs : Wr. T. žon-pa. It follows that Purik zb- will possibly be an older prefix occurring before the initial ž and corresponding to Wr. T. b-. On the basis of this Purik form Common Tibetan *zbži is assumed.

For "five", Wr. T. *lha* is duly adopted as the Common Tibetan form.

For "six", Common Tibetan *drug is postulated.

For "seven" Purik *rdün* that is in correspondence with Wr. T. *bdun* indicates that the Common Tibetan was *brdun, which inference is further confirmed by the like correspondences, Wr. T. *brgyad* : Purik *rgyät* "eight" and Wr. T. *brgya* : Purik *rgyā* "hundred".

For "eight", no question will arise if we offer Common Tibetan *brgyad.

For "nine", Written Tibetan *dgu* as such will be given as the Common Tibetan form⁽²⁾.

For "ten", Purik *shcū* (=ščū) suggests a certain lineage with the Jyarung languages. In both Tun-huang and Turkestan literatures the form *bč'u* occurs for Wr. T. *bču*. This alternation is on a par with that in the case of "one" and is naturally expected even from comparison with the Burmese-Lolo languages. Therefore Common Tibetan *bšč'u~bšču is assumed.

For "hundred", *brgya is offered as Common Tibetan; and this will probably not be subject to debates.

In sum, the Common Tibetan forms thus postulated are:

"one" *gčig~gč'ig, "two" *gñids, "three" *gsum, "four" *zbži, "five" *lha, "six" *drug, "seven" *brdun, "eight" *brgyad, "nine" *dgu, "ten" *bšču~bšč'u, "hundred" *brgya*.

b. The Jyarung Languages.

To the author's knowledge, the dialects of a) Tsa-ku-nao 雜古腦 (in Ssü-ch'uan 四川, China)⁽³⁾ and b) K'am-to (in Eastern Tibet)⁽⁴⁾ are the only ones

(1) T. NISHIDA, *op. cit.*, *Tōhōgaku*, 15, p. 52ff.

(2) Concerning this prefixal form, (which the author terms a 'prefix of the B class') see T. NISHIDA, "チベット語動詞構造の研究" (A Study of the Tibetan Verbal Structure), *Gengo Kenkyū*, 33 (1957), p. 46ff. (§ 15.3-).

(3) CHIN P'êng 金鵬, "Études sur le Jyarung, dialecte de Tsa-ku-nao," *漢學 (Han hui)*, III: 3.4 (1949), Peking, pp. 211-310.

(4) S. WOLFENDEN, "Notes on the Jyarung dialect of Eastern Tibet," *TP.*, XXXII: 2,3 (1936), pp. 167-204.

about which linguistic reports have been issued up to the present. The numerals of these dialects are compared in the following.

	Tsa-ku-nao	K'am-to		Tsa-ku-nao	K'am-to
"one"	kətiag	kě-tiāk	"seven"	kəʂnəs	kě-šnəs
"two"	kənəs	kě-nəs	"eight"	wuaryed	wō-ryä ^t
"three"	kəsom	kě-süm	"nine"	kəŋgu	kün-gû
"four"	kəwudə	kǒ-üdi	"ten"	ʂtʂi	sči
"five"	kəmŋo	kǒ-mñô	"hundred"	porje	pǒ-ryâ
"six"	ketʂuo	kû-tök			

In the Jyarung language the cardinal numerals from "one" to "nine" excluding "eight" are all affixed with a) kə- or with b) kě-, kǒ-, kû-. It may be thus that the form for "eight" also was formerly prefixed. And yet a difficulty lies in determining whether or not these prefixes corresponded to Wr. T. g- which occurred in the Written Tibetan forms for "one", "two" and "three"⁽¹⁾.

The stems of these numerals of both dialects can be easily identified once those from "eleven" to "nineteen" are drawn for comparison.

	Tsa-ku-nao	K'am-to
"eleven"	ʂatig < *ʂtʂi-a-tiag	sči-ō tik < *tiäk
"twelve"	ʂtʂanəs < *ʂtʂi-a-nəs	sči-ō nəs
"thirteen"	ʂtʂasom < *ʂtʂi-a-som	sči-ō süm
"fourteen"	ʂtʂawudə < *ʂtʂi-a-wudə	sči-ō di
"fifteen"	ʂtʂamŋo < *ʂtʂi-a-mŋo	sči-ō ñô
"sixteen"	ʂtʂabtʂuo < *ʂtʂi-a-b-tʂuo	sči-ō tök
"seventeen"	ʂtʂaŋʂnəs < *ʂtʂi-a-ŋ-ʂnəs	sči-ō šnəs
"eighteen"	ʂtʂaŋryed < *ʂtʂi-a-ŋ-ryed	sči-ō ryä ^t
"nineteen"	ʂtʂaŋgu < *ʂtʂi-aŋ-gu	sči-ō gû

Each of the numerals for "eleven" to "nineteen" is composed of Tsa-ku-nao ʂtʂi or K'am-to sči "ten" plus one of those for "one" to "nine" with an intercalary vowel Tsa-ku-nao a or K'am-to o. In the Tsa-ku-nao dialect the form for "ten" ʂtʂi was changed to a secondary form ʂtʂa under the influence of the preceding intercalary vowel a. Accordingly, it may be possible to assume

(1) Similarly, for Wr. T. gnas-pa : Jya. ka-nə "to sit"; Wr. T. gsod-pa : Jya. ka-sied "to kill", Wr. T. g- corresponds to Jya. ka-. From such examples as Wr. T. ši-ba : Jya. ka-ʂl "to die"; Wr. T. šes-pa : Jya. ka-ʂl "to know"; Wr. T. zu-ba : Jya. ka-zl "to say", etc., where Jyarung ka also appears, we might conclude that g- can be traced back to the earliest stage of the Tibetan language. However the occurrences of examples like Wr. T. gnod-pa : Jya. kə-gnod "damage"; Wr. T. dman : Jya. kə-dman "to be low" make it difficult for us to determine if Wr. T. g- corresponds to Jya. kə-. (Jyarung kə- is affixed to numerals and adjectives, while Jyarung ka- to the infinitive forms of verbs.)

from their parallel composition with that of the one concerned that the prefix *kə* or others which appear in the forms for "one" to "nine" were also originally *k-a-* or *k-o-* and that their initial *k-* thus construed, standing in contrast with *ʃtʃa*, signified that the numbers were not larger than "ten".

The reconstruction of the Common Jyarung form (=Com. Jya.) done on the evidence of these two dialects alone would probably still lack preciseness. It is difficult for us to decide which of these two dialects preserves older forms if our evidence is confined to them alone. *Tsa-ku-nao tʃuo* "six", for example, may be said to retain an earlier form in regard to its initial, which corresponds to the *K'am-to* form for "six". But so far as its remaining sounds are concerned, the latter form *tok* may be the older form. For their numerals for "hundred", *K'am-to pō-ryā* is evidently older than *Tsa-ku-nao porje*. (Cf. the Common Tibetan and Common Burmese forms for the same number.)

In order to reconstruct the Common Jyarung forms by abstracting the constituent parts (trace to an earlier stage), we will need many more corresponding forms of other dialects. For the sake of convenience we will hereafter regard the *Tsa-ku-nao* forms as the Common Jyarung forms.

Several facts in the forms of this dialect catch our interest. All the numerals from "eleven" to "fifteen" of this dialect consist of *ʃtʃa* plus one of the forms from "one" to "five", their prefix *kə-* being excluded. In analogy to this, *btʃuo* for "sixteen", *ŋ-ʃnəs* for "seventeen", *ŋ-ryed* for "eighteen" and *ŋ-gu* for "nineteen", all of which follow *ʃtʃa*, can be considered as older stems. This assumption will be further confirmed by the forms of its related languages, e.g. Common Burmese (=Com. B.) **k'u hnæts* "seven", Com. T. **brgyad* "eight" and Com. T. *dgu* "nine". On this assumption the author will modify the *Tsa-ku-nao* forms as follows.

"one" *kə-tiag*, "two" *kə-nəs*; "three" *kə-som*, "four" *kə-wudə*, "five" *kə-mŋo*, "six" **kə-btʃuo*, "seven" **kə-ŋ-ʃnəs*, "eight" **kə-ŋ-ryed*, "nine" **kə-ŋ-gu*, "ten" *ʃtʃi*, "hundred" *po-rje*.

2. The Burmese-Lolo Languages.⁽¹⁾

a. The Burmese Language.

The surveys of the modern Burmese dialects so far conducted is by no means sufficient. In the following chart, forms of the dialects of i) Arakan⁽²⁾, ii) Taungjo, iii) Danu, iv) Intha, v) Tavoy and vi) Rangoon besides Written

(1) The data the author used here are based on his paper, "ロロ語とビルマ語の比較言語學的研究" (A Comparative Study of the Burmese and the Lolo Languages) (unpublished). Besides, the paper so far presented for the comparative studies of the Burmese-Lolo languages is: R. SHAFER, "Phonétique historique des langues lolo," *TP.*, XLI (1952), pp. 191-229.

(2) B. HOUGHTON, "The Arakanese Dialects of the Burman language," *JRAS.* (1897), pp. 453-461. G. GRIERSON, *op. cit.*, I-2.

Burmese forms as a frame of reference are arranged for comparison. To them, further, are appended the Burmese language of the sixteenth century (=M.I.), which is recorded in *Mien-tien-kuan i-yü* 緬甸館譯語, and Ancient Burmese (=Anc. B.), which is reconstructed on the evidence, chiefly, of the Myazedi inscription⁽¹⁾.

	Wr. B.	Arakan	Taungjo	Danu	Intha	Tavoy	Rangoon	M.I.	Anc. B.
"one"	tatš	tai-ku	ti ^t	ti ^t	t ^a -ku	tei ² ꠄꠄ	ti [?]	「tɛ」	「tætš」
"two"	hnatš	hnai-ku	ne	ni ^t	ni-ku	hnei ² ꠄꠄ	hni [?]	「hnɛ」	「hnætš」
"three"	sum ₁	θōn-ku	θon	θon	soŋ-ku	θau [~] ₄₄₂	θouŋ ₁	「sum」	「sum ₁ 」
"four"	le ₂	le-ku	le	le	le-ku	le ₁₄₄₂	lei ₂	「lei」	「liy ₂ 」
"five"	ŋaa ₂	ŋā-ku	ŋā	ŋā	ŋā-ku	ŋa ₄₄₂	ŋa ₂	「ŋaa」	「yaa ₂ 」
"six"	k'ράk	krauk	tʃək	tʃok	tʃauk	t ₂ ,o ₂ ꠄꠄ	chau [?]	「k'rau [?] 」	「k'r'ok」
		-ku			-ku				
"seven"	k'uhnətš	kō-naik	ku-ni ^t	ko-ni ^t	ko- nek ku	k'u- nei ² ꠄꠄ	k'un- ni [?]	「k'u-nɛ」	「k'u- hnætš」
"eight"	hratš	ʃàn	ʃi ^t	si ^t	tʃit-ku	ʃei ² ꠄꠄ	ʃi [?]	「ʃɛ」	「hræt」
"nine"	ko ₂	ko-ku	kō	ko	ko	kow ₄₄₂	kow ₂	「kow」	「kuw ₂ 」
"ten"	tš'ay ₁	ta-sei	tš'a	tš-sā	tā-sā	ta-s' _{ε22}	təs' _{ε1}	「tš'ai」	「tš'aay ₁ 」
"hundred"	ta-raa ₁	tà-rā	t ^a -rā	t ^a -yā	tà-rā	ta-yaa ₂₂	təyaa ₁	「ta-yaa」	「ryaa ₁ 」

Without entering into any particular demonstration it is obvious that the above modern dialect forms can be represented generally by their corresponding written forms. The fact is also seen from this chart that correspondences between written forms and modern Rangoon forms are paralleled by the forms of the other modern dialects.⁽²⁾ Again, these written forms which are thus representative of modern dialect forms date back to Ancient Burmese forms given in the last column of the chart. Considering the literary character of Written Burmese that was gradually integrated in the process of its development from Ancient Burmese the adoption of the forms of Ancient Burmese as such for Common Burmese forms seems to be most adequate.

b. The Lolo Languages.

Besides the dialects, Nyi⁽³⁾, Ahi⁽⁴⁾, Lolop'o⁽⁵⁾ in the Lolo language (in the

- (1) T. NISHIDA, "Myazedi 碑文における中古ビルマ語の研究" (A Study of the Ancient Burmese in the Myazedi Inscription), 古代學 (*Palaeologia*), IV:1, (1955), V:1 (1956).
- (2) In the dialects of Arakan and Intha the suffix -ku is affixed to the forms from "one" to "nine". In the Rangoon dialect where -k'u corresponding to this suffix is used, however, one does not add this suffix to them in counting up.
- (3) MA Hsüeh-liang 馬學良, 撒尼彝語研究 (*A Study of the Sa-ni I Language*), Shanghai, 1951.
- (4) Yüan Chia-hua 袁家驊, 阿細民歌及其語言 (*A-hi Folk-songs and its Language*), Peking, 1953.
- (5) A. Liétard, "Notes sur les dialectes lo-lo," *BEFEO.*, IX (1909). pp. 549-572.

narrow sense), the Lisu⁽¹⁾ and Hani⁽²⁾ languages will be here taken into consideration. Numerals of these languages and dialects are listed below for comparison.

	Nyi	Ahi	Lolop'o	Lisu	Hani
"one"	t'111	t'i21	t'i4	t'i11	t'o21
"two"	ŋ11	ni21	n'4	ŋi11	ni21
"three"	sʋ55	s144	so3	sə33	ʃu21
"four"	ʃz55	li44	li2	li33	li21
"five"	ŋa55	ŋo44	ngo4	ŋua11	ŋo21
"six"	k'u22	tʃ'u44	č'o2	ts'o11	k'u21
"seven"	sʒ11	ʃ121	ʃo4	sʌ11	ʃl21
"eight"	he22	xi44	hè2	hi11	xæ21
"nine"	ku55	kʋ44	ko3	ku55	kə21
"ten"	ts'133	ts'122	ts'ɔ3	tɔ'i12	tɔ'i33
"hundred"	ha33	xo22	t'i4hyo3	t'i11hia12	ts'i21xɔ55

In correspondences among the Lolo languages extreme regularity is observed. This is easily understood from the existence of a number of such words in similar correspondence with each other as illustrated by the following:

1) for the case of "two"—

"red" Nyi ŋ44: Ahi ni44: Lolop'o ni1: Lisu ŋi33: Hani -ni55 (cf. Anc. B. ni),

2) for the case of "four"—

"grand-child" Nyi ʃz55: Ahi li44: Lolop'o li5: Lisu li55: Hani li21 (cf. Anc. B. mli2),

3) for the case of "five"—

"I" Nyi ŋa33: Ahi ŋo22: Lolop'o ngo3: Lisu ŋua12: Hani ŋo55 (cf. Anc. B. ŋaa),

"fish" Nyi ŋa55: Ahi ŋo22: Lolop'o ngo4: Lisu ŋua55: Hani ŋo21 (cf. Anc. B. ŋaa2),

4) for the case of "seven"—

"to die" Nyi sʒ33: Ahi ʃ122: Lolop'o ʃo3: Lisu ? : Hani ʃl55 (cf. Anc. B. siy),

5) for the case of "nine"—

"body" Nyi ku55: Ahi kʋ22: Lolop'o gɔ4: Lisu ? : Hani kə55 (cf. Anc. B. ku).

In spite of such apparent regularity of their correspondences, the postulation of a common formula for each set of correspondences among vowels creates no

(1) JUI I-fu 芮逸夫, "記粟語音彙所謂粟文" (On the Sounds of the Lisu Language with Remarks on the Lisu Script), *Academia Sinica*, 17 (1948), pp. 303-326.

(2) KAO Hua-nien 高華年, 揚武哈尼語初探 (An Introduction to the Ha-ni Language, Yang-Wu dialect), 中山大學學報·社會科學 (*Sunyatsenia*, Social Sciences Edition), 1955: 2.

small difficulty. For example, Ahi i is found in any of the sets of correspondences for "one", "two", "four" and "eight", and each of these sets constitutes a different one. In the same way, Ahi ɿ also belongs to each of the different sets of correspondences for "three", "seven" and "ten".

Let i_1 be given tentatively for "one", i_2 for "two", i_3 for "four" and i_4 for "eight" and similarly, ι_1 for "three", ι_2 for "seven", ι_3 for "ten". This kind of treatment is also useful for the treatment of tonemic correspondences. Among the tonemes of these numerals the following sets of correspondences are noted:

- 1) for "one", "two" and "seven"—
Nyi 11: Ahi 21: Lolop'o 4: Lisu 11: Hani 21;
- 2) for "six" and "eight"—
Nyi 22: Ani 44: Lolop'o 2: Lisu 11: Hani 21;
- 3) for "three" and "four"—
Nyi 55: Ahi 44: Lolop'o 3: Lisu 33: Hani 21;
- 4) for "nine"—
Nyi 55: Ahi 44: Lolop'o 3: Lisu 55: Hani 21;
- 5) for "five"—
Nyi 55: Ahi 21: Lolop'o 4: Lisu 11: Hani 21;
- 6) for "ten" and "hundred"—
Nyi 33: Ahi 22: Lolop'o 3: Lisu 21: Hani 33, 55.

On the evidence of other parallel correspondences each of these sets of correspondences can be furnished with the following interim formulae:

"one", "two", "seven" → 4B; "six", "eight" → 5; "three", "four", "nine" → 3IA; "five" → 3IB; "ten", "hundred" → 1.

It is also feasible to replace each of these formulae thus postulated by a more concrete form, which will come to light if these formulae are compared with Common Burmese forms. By such comparison it will be seen that the 'toneme class 5' represented formerly a consonantal constituent corresponding to a syllable-final stop. One of the characteristics of the Lolo languages is that their syllable structure is not CVC but is always CV (C='a consonant'). The fact seems to be that the earlier syllable type CVC must have been changed in all cases to CV in the Lolo languages. Each syllable with a final stop thus became a syllable with one of the tonemes occurring in the set of correspondences represented by the 'toneme class 5'; Nyi 22: Ahi 44: Lolop'o 2: Lisu 21: Hani 21 (e.g. the cases of "six" and "eight"). These dismissed final stops can easily be reconstructed by comparison of the Lolo language with Common Burmese (or Common Tibetan), e.g. "six" Com. B. *k'r^wok (Tib. drug) and "eight" Com. B. *hræt (Tib. brgyad). For this set of tonemic correspondences only a few examples can be given.

	Nyi	Ahi	Lolop'ο	Lisu	Hani	Bur.	Tib.
"pig"	ve 22	vie 44	vè 2	a 55 -via 11	βa 21	wak	p'ag
"hand"	le 22	lie 44	lé 2	lia 11	la 21	a-lak	lag, etc.

The group of tonemes referred to by the 'formula 5B' can be regarded as contrasting with the one represented by the 'formula 5' and as representing an older syllable-final fricative. Bur. tətš (Com. T. *gcig), Bur. hnətš (Com. T. *gñids) and Bur. k'u-hnətš correspond to the sets of correspondences for "one", "two" and "seven" respectively. However, the large portion of the words ascribed to the "toneme class 4" correspond to the 'toneme class 2' of Burmese.

	Nyi	Ahi	Lolop'ο	Lisu	Hani	Bur.	(Tib.)
"son"	za 11	zo 11	zo 4	ra 11	zɔ 21	saa 2	(sras)
"urine"	ẓ 11	ze 11	šé 4	?	ʃu 21	se 2 < siy 2	(gči-ba)
"bone"	yux 11	ỵ 11	ho 4	?	sə 21	ro 2 < ruu 2	(rus)
"fire"	ṃ 11	ṃ 44	?	?	mi 21	mii 2	(me)

From this it follows that the tonemes for "one", "two" and "seven" do not have the implosive nature recognized in those for "six" and "eight"⁽¹⁾. In short tš in syllable-final position formerly belonged to a different tonemic category from the stops corresponding to the 'toneme class 5' in the Burmese-Lolo languages.

The 'toneme class 3IA' to which the forms for "three", "four" and "nine" are assigned corresponds to the Burmese 'toneme class 2' (in the syllables CV and CVC (-C=-ŋ, -m, -n)). We can compare Bur. sum 2 (Tib. gsum), Bur. liy 2 (Tib. bži) and Bur. kur 2 (Tib. dgu) with the Lolo forms for "three", "four" and "nine" respectively, it is clear that the 'toneme class 3IA' can be divided into '3IAi' and '3IAii' on the basis of the Lisu language, in which the toneme for "three" and "four" is 33 while that for "nine" is 55. But the condition of this split has not been made clear. The following are the examples of the correspondences which show such a split.

	Nyi	Ahi	Lolop'ο	Lisu	Hani	Anc. B.	Tib.
"right"	ẓa 55	ẓo 44	?	dza 33	?	lakyaa < lakyaa2?	g-ya-s
"ear"	na 55	no 44	-no 2-	na 55	nɔ 21	naa 2	rna
"grand-child"	łẓ 55	li 44	li 1	li 55	li 21	mliy 2	

The 'toneme class 3IB' is used for the sets of tonemic correspondences represented by that for "five". This 'toneme class' like '3IA' is in correspondence with the Burmese 'toneme class 2'. The set of correspondences among

(1) This fact is warranted by the other evidences on which we can assume a final fricative for each of the forms for "son", "urine", "bone", "fire", etc. Cf. T. NISHIDA, *op. cit.* *Tōhōgaku*, 15, p. 52ff.

the forms for "five" is to be compared with Bur. *ɲaa* 2 (Tib. *lɲa*). In addition there are also parallel examples such as "blood" Nyi *sʒ* 55: Ahi *sɿ* 21: Lolop'ó *se* 4: Hani *ʂl* 21: Bur. *suy* 2, etc.

The tonemes for "ten" and "hundred" both belong to the 'toneme class 1'. This group of tonemes corresponds to the Burmese 'toneme class 1' (in the syllables CV and CVC (-C=-ŋ, -m, -n)). Since this 'toneme class' corresponds to both 33 and 55 in Hani it is further divisible into 'IA' and 'IB'. With 'IA' for "ten" Bur. *tš'ay* agrees. The examples below indicate the set of correspondence for 'IA'.

	Nyi	Ahi	Lolop'ó	Lisu	Hani	Wr. B.
"person"	tš'ó 33	ts'u 22	ts'a 3	tš'i 12	tš'ó 33	suu
"to buy"	væ 33	va 22	?	?	βu 33	way
"cleanness"	tʂe 33	tʂε 22	?	?	ʂu 33	krañ

With 'IB' for "hundred" Bur. *ryaa* 1 (Tib. *brgya*) does stand in correspondence, which is seen in the following examples as well as in the case of "I" Bur. *ɲaa* 1.

	Nyi	Ahi	Lolop'ó	Lisu	Hani	Wr. B.	(Tib.)
"wine"	tsʒ 33	tʂi 22	?	dzɿ 12	tsi 55	se<siy	(č'an)
"rain"	-ha 33	-xo 22	-ho 3	-ha 12	-xo 55	rwa	(č'u)
"oil"	ts'z 33	ts'a 22	ts'è 3	ts'ɿ 12	tš'ɿ 55	tš'ii	(ts'il-ba)

The result of the preceding comparison with Burmese (and also Tibetan in some cases) enables us to represent our tentative postulation for Common Lolo vowels by more concrete forms. Thus it is evident that *i*₁, *i*₂, *i*₄ and *i*₅ each correspond to Bur. -ætš (Tib. -ig), Bur. -ætš (Tib. -is<-ids), Bur. -iy (Tib. -i) and Bur. -æt (Tib. -ad), respectively. Similarly *ɿ*₁ corresponds to Bur. -um (Tib. -um), *ɿ*₂ to Bur. -nætš and *ɿ*₃ to Bur. -ay (Tib. -u).

Each of these correspondences have some more examples. It would be rather convenient to make use of the more concretely reconstructed forms on the basis of comparison with Burmese forms than those complicated formulae as Common Lolo forms. The author will adopt as such those enclosed by brackets in the following table.

"one" t'i ₁ (≡t'ætš)	"two" ni ₂ (≡nætš ₂)	"three" s ₁ (≡sum)
"four" t'i ₃ (≡ti)	"five" ɲa (≡ɲaa)	"six" k'ru ₂ (≡k'r'wok)
"seven" s ₂ ɿ ₃ (≡sɿnætšə)	"eight" hi ₄ (≡hæt)	"nine" ku (≡ku)
"ten" ts'ɿ ₃ (≡ts'ay)	"hundred" hja (≡rya).	

3. The Moso Language.

At the present stage of the study of this language trustworthy reports on

the Moso language are few. In the part ensuing, the Wei-hsi 維西 dialect forms⁽¹⁾ and the reading forms⁽²⁾ are shown for comparison, the former being used to represent the Moso language.

“one” dɿ 35, ²ddü, “two” ni 35, ²nyi, “three” sɿ 33, ¹ssu, “four” lo 33, ³lu, “five” ŋua 33, ²wuà, “six” tʂʷuən 55, ³chʷua, “seven” ʂəʔ 33, ²shër, “eight” xo 55, ³ho, “nine” ŋku, ²NGV, “ten” tsʰe 21, ¹tsʰä, “hundred” çɿ 33, ²khi.

B. The Tibeto-Burman Languages and the Hsi-hsia Language.

An attempt of the comparison of the Hsi-hsia language and the Ch'iang 羌 language was made by Wang Ching-Ju 王靜如在 his paper “論四川羌語及弭藥語與西夏語” (cf. p. 128 l. 36). This attempt can hardly be said to have been successful due to the lack of material. However, the important role played by the Ch'iang language in the comparative studies of Hsi-hsia is at the present time sufficiently appreciated. A close relationship between them is easily understood when the above reconstructed Hsi-hsia numeral forms are compared with those of the Lopusai dialect of the Ch'iang language⁽³⁾.

“one” a 21 (↔SH *a), “two” nɿ 21 (↔SH *xni~ni), “three” sie 21 (↔SH *xso~so), “four” dʒɿ 21 (↔SH *i), “five” ŋue 21 (↔SH *ŋyɿ), “six” ʂtʂu 21 (↔SH *tʂʷu), “seven” ?, “eight” tʂʷu 21 (↔SH *ʷe), “nine” zɿ 21 (↔SH *ŋgi), “ten” sye 21 (↔SH *tʂʷi~tʂʷi), fia 21 (↔SH*ʷæ), “hundred” ?, “thousand” ʂtʂ 55 (↔SH *tu 3) (The forms for “seven” and “hundred” are supplied from the Wasu dialect, and hence “seven” zne 55 (↔SH *ʂæ), “hundred” tʂʷi 15 (↔SH *ʷi).)

Still more examples of correspondence of this kind can be enumerated:

“tree” Lifan p'o 33, Wasu p'o 33 ↔SH *p'u; “excrement” Lifan çpi 33, Lopo. çpi 55, Wasu ʂpi 55 ↔SH *p'i; “clothing” Lifan p'u 33, Lopo. p'it 55, Wasu p'u 33 ↔SH *p'u; “plough” Wasu po 33- ↔SH *po; “pig” Lifan pæ 33, Wasu pia 31 ↔SH *va2; “flower” Lifan pa 33-, Lopo. pi 55- ↔SH *va; “year” Lifan pə 55, Wasu pu 31 ↔SH *wi; “castle” Wasu

- (1) FU Mao-chi 傅懋勳, “維西麼些語彙” (A Moso Vocabulary (Wei-hsi dialect)), 金陵, 齊魯, 華西三大學中國文化研究所叢刊 (*Bull. Ch. St.*), III (1943), pp. 245-292.
- (2) J. F. ROCK, *The Na-khi Nāga Cult and Related Ceremonies*, I-II, Serie Orientale Roma IV, Roma, 1952.
- (3) The data here adopted for the Ch'iang language are based on the following papers: WEN Yu 聞宥 and FU Mao-chi, “汝川蘿蔔寨羌語音系” (Phonology of the Ch'iang Language, Group II, Lo-po-chai dialect), *Studia Serica*, III (1943); WEN Yu, “汝川瓦寺組羌語音系” (Phonology of the Ch'iang Language, Group I, Wa-gsod dialect), *Bull. Ch. St.* III (1943); WEN Yu, “理番後二枯羌語音系” (Phonology of the Ch'iang Language, Goup III, Wa Szü Tsu dialect), *Studia Serica* IV (1945).

we 33 ↔SH *wa; "leek" Lopo. ʃkr 31, Wasu ke- ↔SH *kü; "gold"
 Lifan ʒka 33, Lopo ʃka 31, Wasu ʒka 55 ↔SH *ke_{II}; "throat" Lopo. ʃko
 55, Wasu ʒke 33 ↔SH *q^wo_{II}; "to be large" Lifan b.ɹa 33, Lopo. b.ɹa 55,
 Wasu b.ɹa 31 ↔SH *le₂; "wolf" Lifan la 33, Lopo. la 31 ↔SH *li, etc.

The possibility that certain regular correspondences can be detected between these two languages is fully realized but the data collected up to the present on both of them is unfortunately by no means sufficient. Consequently, the only thing that the word comparison presented in the immediately preceding table can tell us is nothing more than similarities of parts of words in the same set of correspondences. Such is also the case with the relationship between the Hsi-hsia and the Tibetan or Burmese vocabulary.

"body"	Tib. sku ↔SH *ku	"pillar"	Tib. ka-ba ↔SH *ka
"to steal"	rku-ba ↔SH *ku ₃	"to be bitter"	k'a-ba ↔SH *k'a ₂
"silver"	dɲul ↔SH *ɲo	"gate"	sgo ↔SH *ɣu
"head"	mgo ↔SH *ɣu	"heat"	ts'a-ba ↔SH *ts'wa ₂
"pig"	p'ag ↔SH *va	"salt"	ts'wa ↔SH *ts'i ₂ -u
"hand"	lag ↔SH *xla	"body"	lus ↔SH *lü
"bone"	rus ↔SH *re ₂ , etc.		
"horse"	Bur. mraŋ ↔SH *xre	"tiger"	Bur. kla ↔SH *li ₃
"stone"	klák ↔SH *lu ₂	"bow"	liy ↔SH *li ₄
"to be red"	nii ↔SH *ne, etc.		

By comparison of words such as we have made in the above, the affinities among them become doubtless. For all that, the regularity of correspondences must first be attested through the addition of some forms from both languages among which are the same kinds of correspondences with those found in the above table before any discussion whatever is begun about the linguistic kinship between the Hsi-hsia language and the Tibeto-Burman languages. It is, of course, not merely because of similarities either among individual words or among parts of words that the comparison of languages can give an explanation to their linguistic affinities. It is, rather, because of the parallelism among the details of the systems of signs which unawaredly have control over the verbal activities (language) of man. On detecting among languages close resemblances in their ways to break up reality into areas, we can demonstrate their linguistic kinship providing regular correspondences can be then established among parts of their forms or their forms as a whole corresponding each to this or that area of the divided reality in each language.

At the present stage the Hsi-hsia language has been little investigated, so little in fact that a satisfactory conclusion cannot be drawn yet about its linguistic

kinship. The author's attempt to compare words on the basis of the so far reconstructed numeral forms is intended to see whether his new method of the reconstruction of the Hsi-hsia language will remain still adequate after its comparison with the neighboring languages.

1. "one" Com. T. gčig~gč'ig: Jya. kə-tiag: Com. B. tətš: Com. Lolo t'ætš:
Moso dʒ.

The correspondence, Wr. T. gč-: Wr. B. t-, is seen in a few cases. It may be said that t- became Tib. č-, due to the affrication caused by the influence of a following vowel æ. On the other hand, Jya. -tiag seems to preserve the original initial stop t- by changing the vowel æ to ia for compensation. Unlike the initials of the Common Jyarung and the Common Burmese forms a voiceless aspirated stop t'- in Common Lolo probably corresponds to č'-<*t'-, representatively, in the Ancient Tibetan form. Moso d- is, however, not the voiced descendant of a sound which is to correspond to either t'- or t-. This phenomenon may be explained by assuming that these multi-correspondences reflect the occurrence of the alternative forms for "one" on the synchronic level. (Cf. Lolo t: Moso t — "thousand" Nyi -ty 55, Ahi to 44, Hani to 33 (Bur. t'āŋ: Tib. ston) →Moso ti 21; Lolo t': Moso t' — "to rise or to come out" Nyi t'y 22, Ahi t'ʒ 44, Hani t'u 55 (Bur. t'wak)→Moso t'i 33.) We must, therefore, postulate three variants t~t'~d for the initial of the common form of the languages concerned.

An appreciable number of examples can be obtained for the correspondence, Wr. T. ig: Wr. B. atš<Anc. B. ætš: Lolo ætš, among the nuclear vowels of the forms of these languages:

"joint" Wr. T. ts'igs: Wr. B. a-tš'atš: Lolo *tsætš; "leopard" Wr. T. gzig: Wr. B. satš: Lolo *zætš; "bamboo" Wr. T. smyig-ma: Wr. B. hmyatš, etc.

(For the corresponding Moso form ʒ, see the example of "leopard" below.) Accordingly we tentatively assume Com. TB. *g-tæg, g-t'æg and g-dæg for "one"⁽¹⁾.

Among the Hsi-hsia forms for "one" *xlü~lü, *xti, *a, *ngi, *xli, the second named *xli is supposed to be the corresponding form of this Common Tibeto-Burman form. (The correspondence between 'a and Ch'iang a has been already touched upon.) Hence we can set up the following sets of correspondences between the Common Tibeto-Burman form and this Hsi-hsia form xti.

I) Com. TB. *gt-, gt'-, gd-: SH *xt-; II) Com. TB. *-æg: SH *-i.

Examples of I) are:

(1) Strictly speaking, we cannot call them the Common Tibeto-Burman forms (=Com. TB.). For the sake of convenience we will use this term for them.

“thousand” Com. TB. *tʷoŋ, s-tʷoŋ, Com. T. stoŋ, Bur. -tʷoŋ, Lolo *tʷoŋ, Moso ti 21→SH *tu3; “to put” Com. TB. *tʰa, ta, (Bur. tʰaa2, Nyi ta 55, Ahi to 55, Hani tʰo 55)→SH *ti; “Don’t be...” Com. TB. *tʰa, ta (Nyi tʰa 55, Ahi tʰa 55, Hani tʰo 21)→SH *ti3; “navel” Wr. T. lte-ba→SH *te4; “if” Ahi tʰa 44→SH *te.

Examples of II) are:

“leopard” Com. TB. *g-zæg, Com. T. gzig, Bur. sæts, Com. Lolo zæts (Nyi z 22, Ahi z1 44), Moso ɳtʂɿ 33→SH *ʒzi; “joint” Com. TB. *tsʰæg, Wr. T. tsʰigs, Anc. B. a-tʂʰætʂ, Lolo *tsætʂ (Nyi tsz 55, Ahi ts1 55, Hani tsʰo 21→SH *dzi.

2. “two” Com. T. g-ñids: Jya. kə-nəs: Com. B. hnætʂ: Com. Lolo næts: Moso ɲi 15.

ñ in the Common Tibetan form is probably the development of Com. TB. n through the palatalization of the latter due to a following front vowel (cf. the example of “day”). The correspondence, Wr. T. gn-: Wr. B. hn-, is seen in the examples: “to give” Wr. T. gnaŋ-ba: Wr. B. hnaŋ 2, etc. For the correspondence, Com. T. ids>Wr. T. is: Com. B. æts: Com. Lolo æts, we can refer to the case of “one”. Let then *g-næds be assumed for the Common Tibeto-Burman form. The Hsi-hsia form *xni~ni shows the following correspondence with Com. TB. *g-næds.

III) Com. TB. *g-n-: SH *xn-~n-; IV) Com. TB. *æds: SH *i.

Examples of III) are:

“day” Com. TB. *g-ni, Anc. T. gñi-ma>Wr. T. ñi-ma, Anc. B. niy 3>Wr. B. ne, Jya. ʂnə, Lolo *ni (Nyi ɲ 22, Ahi ni 44; Lisu ɲi 13, Hani no 33), Moso ɲi 33→SH *xni~ni; “to be black” Com. TB. *g-nag, Anc. T. gnag-pa>Wr. T. nag-po, Com. B. nak, Lolo *nak (Nyi ne 44, Ahi nie 44; Lisu nia 33, Hani na 55), Moso ni 21→SH *xɳi.

The correspondence IIIb), Com. TB. *sn-: SH *xn-~n-, is also evident from the examples:

“mind” Com. TB. *s-næŋ, snæg, Wr. T. sñiŋ, Wr. B. hnætʂ, Lolo *nætʂ (Nyi ɲ 44, Ahi ni 44; Hani nu 33), Moso nɛ 55→SH *xne~ne; “nose” Com. TB. *sna, Wr. T. sna, Wr. B. hnaa, Jya. ʂne, Lolo na (Nyi na 44, Ahi no 22; Lisu na 55-, Hani nə 55-), Moso ɲi 55→SH *ni.

The set IV) goes in parallel with II).

3. “three” Com. T. gsum: Jya. kəsom: Com. B. sum 2: Com. Lolo sum: Moso s1 33.

The correspondences, Wr. T. gs-: Wr. B. s- and Wr. T. -um: Wr. B. -um, are both regular (e.g. “to be clear” Wr. T. gsal-ba: Wr. B. saa, “to divide” Wr.

T. *gsil-ba*: Wr. B. *sii* 2, “to be round” Wr. T. *zluṃ-pa*: Wr. B. *luṃ* 2, “to smile” Wr. T. *’dzum*: Wr. B. *prum* 2⁽¹⁾). Consequently, the postulation of Com. TB. **g-sum* for “three” will not be subject to debates. The relation of Hsi-hsia **xso~so* and Com. TB. **g-sum* is:

V) Com. TB. **gs-*: SH **xs~s-*; VI) Com. TB. **-um*: SH **-o*.

Examples of V):

“to kill” Com. TB. **g-sad*, Wr. T. *gsod-pa* < *g-o-sad-pa*, Wr. B. *sat*, Lolo **xat* (Nyi *xa* 11, Ahi *xo* 11; Hani *ḡe* 33), Moso *sy* 55 → SH **sa*; “blood” Com. TB. **g-sul*, Wr. B. *swe* 2 < Anc. B. *suy* 2, Lolo **si* (Nyi *sḡ* 55, Ahi *si* 11; Hani *ḡ* 21), Moso *ḡē* 4 → SH **se*; “to be bright” Com. TB. **g-sal*, Wr. T. *gsal-ba*, Wr. B. *saa* → SH **sæ*.

Examples of VI):

“snake” Com. TB. **sbrul~mrul*, Wr. T. *sbrul*, Anc. B. *mruy*, Lolo **hlu* (Lisu *ḡu* 33, Hani *ḡu* 33) → SH **mo*; “wife” Wr. T. *btsun-mo* → SH **tso*.

4. “four” Com. T. *zbži*: Jya. *kəwudə* < *kə-bdə*: Com. B. *liy* 2: Com. Lolo *fi*: Moso *lo* 33.

For the set of correspondences, Wr. T. *ž*: Wr. B. *l*, there are examples such as “bow” Wr. T. *gžū*: Wr. B. *le* < Anc. B. *liy*, “earth, clay” Wr. T. *žal-ba*: Wr. B. *lay* “rice-field”, etc. Another set of Wr. T. *i*: Wr. B. *e* < Anc. B. *iy* also has numerous examples: “to die” Wr. T. *č’i-ba*: Anc. B. *siy*; “to borrow” Wr. T. *skyi-ba*: Anc. B. *k’iy*, etc. Jya. *wu* probably came from **b-*. As *K’am-to ūđi* “four” corresponds to Wr. T. *bži*, *K’am-to k’á-ūrī* “snake”, *kā-ūdī* “good” and *ūtūñ* “to beat” are each found in correspondence with Wr. T. *sbrul*, *dga’-bde* and *bduṃ-ba*, respectively. Accordingly, *Tsa-ku-nao wudə* which corresponds to *K’am-to ūđi* was supposedly developed from *bdə*. (Concerning the correspondences Wr. T. *i*: Jya. (*Tsa-ku-nao* dialect) *ə*, see the example of “day”.) Though this *b-* was an old prefix we must set up Com. TB. **zbdli*, since there again occurred a constituent *z-* before the *b-* in the Common Tibetan forms. Now the Hsi-hsia words **li* has the following relation with Com. TB. **z-bdli*:

VII) Com. TB. **z-bdli*: SH **l*; VIII) Com. TB. **i*: SH **i*.

Examples of VII) are:

“land” Com. TB. **g-bdli*, *mli*, Wr. T. *gži-ma*, Wr. B. *mre* < Anc. B. *mliy*, Lolo **mi* (Nyi *mi* 44, Ahi *mi* 44), Moso *eḡ* 41 → SH **li*; “to be sweet” Wr. T. *žim-pa* “deliciousness” → SH **le* 2; “to receive” Wr. T. *bžes-pa* → SH **le*.

Examples of VIII) are: including those of “day” and “land” given above,

(1) This set forms contrast with the one, Wr. T. *om*: Wr. B. *um*. For example, “to meet” Wr. T. *’dzom(s)-pa*: Wr. B. *tšum*, “to be finished” Wr. T. *c’om-pa*: Wr. B. *tš’um* 2, etc.

“a species of goat” Com. TB. *tš'it, Wr. B. tš'it, Lolo tš'i (Nyi tš'i 22, Ahi tš'i 44; Lisu a-ts'a 11, Hani ts'i 21), Moso ts'i 55→SH *ts'i 2; “mountain” Com. TB. *gri, Wr. T. ri→SH *ŋzi; “this” Wr. T. 'di→SH *t'i.

5. “five” Com. T. ŋa: Jya. mŋo: Com. B. ŋaa 2: Lolo ŋa: Moso ŋua 33.

In all these languages the initial nuclear consonant of the numeral for “five” is ŋ-. (Cf. the examples above of “fish” and “I”.) The problem, however, of how to interpret the preceding elements, Com. T. l- and Jya. m- of this nuclear consonant will be highly disputable. On this problem the author makes the following assumption: Tib. l was not originally an independent prefix but was merely a peripheral element of the initial consonant cluster of Com. TB. *ŋl-, but a change of the order then took place and hence Anc. T. lŋ-. On the other hand, Jya. mŋ- was brought forth by assimilation of another prefixal form b- in Com. TB. to the initial consonant ŋ-. In short the presumed changes in the course of the development of Common Tibetan and Jyaring from Common Tibeto-Burman were: Com. TB. *bŋl->Tib. lŋ- ('Metathesis') and Com. TB. *bŋl->Jya. mŋ- ('Assimilation'). On this assumption the author holds that the form for “five” was *bŋl- in Com. TB. Therefore we can set up the sets of correspondence on the basis of this form and the Hsi-hsia word *ðyur:

IX) Com. TB. *bŋl-: SH *ŋy-; X) Com. TB. *a: SH *u.

Examples of IX):

“to be” Com. TB. *bŋla, Wr. T. mŋa'<*lŋa, Lolo *ŋa (Nyi ŋæ 3, Ahi ŋø 44, Lisu ŋa 13, Hani ŋø 55)←SH *ŋyur; “to be blue” Wr. T. ŋo-ba→SH *ŋyur.

SH *ŋ- generally corresponds to Com. TB. *ŋ- or *n- (, e.g. “silver” SH *ŋo →Com. TB. *dŋul, Wr. T. dŋul, Wr. B. ŋwe<Anc. B. ŋuy, Moso ŋu 31; “I” SH *ŋa~ŋa→Com. TB. *ŋa (cf. p. 151); “cow” SH *ŋu→Com. TB. *no-r, ŋa, Wr. T. nor, Wr. B. nwa<Anc. B. n'o, Lolo ni (Ahi ni 11, Hani nu 21, Lisu ni 11, Nyi ŋ 11, Lisu ŋa 11 “buffalo”); “illness” SH *ŋo→Com. TB. na, Wr. T. na-ba, Wr. B. naa, Lolo na (Nyi na 33, Ahi no 22; Hani nɔ 55), Moso ŋko 21).

Examples of X) are hardly found but the one given above of “to be”⁽¹⁾. It occurs frequently that Com. TB. *a corresponds to the Hsi-hsia vowel a or i.

XB) Com. TB. *a: SH *a.

“father” Com. TB. *p'a, *ba, Wr. T. a-p'a, Wr. B. a-p'e (*I-yü* a-p'a), Lolo -ba (Nyi -ba 11, Ahi -ba 11; Lisu -pa 11, Hani -pɔ 21), Moso -mpa 31→SH *pa; “mother” Com. TB. *ma, Wr. T. ma, Wr. B. a-me (*I-yü* a-ma), Lolo ma (Nyi -ma 33, Ahi -mo 44; Lisu -ma 33, Hani -mɔ 21), Moso -mɛ 33→SH *ma; “to be bitter” Com. TB. *k'a, Wr. T. k'a-ba, Wr. B. k'a 2, Lolo *q'a (Nyi q'a

(1) According to the author's surmise the Hsi-hsia form corresponding to the Common Tibeto-Burman form *ŋla “fish” is *ńzū~ńzu. However, he is not sure whether or not to give the same vowel with *ńzu to the Hsi-hsia form.

11, Ahi k'a 21; Lisu k'a 11, Hani xɔ 21), Moso k'a 31→SH *k'a, etc.

Xc) Com. TB. *ag: SH *a:

"hand" Com. TB. *lag (cf. p. 153)→SH *xla; "pig" Com. TB. *bag (cf. p. 153)→SH *va, etc.

For the correspondence, Com. TB. *a: SH *i, see the case of "hundred".

6. "six" Com. TB. drug: Jya. tʂuo: Com. B. k'rʷok: Lolo *k'rʷok: Moso tʂ'uen 55.

In his other paper, the author, distinguishing between the sets of correspondence, Wr. T. dr-: Wr. B. k'r- and Wr. T. dr-: Wr. B. hr-, r-, offered the formulae, Com. TB. *dr- and *dr2- to the former and to the latter sets, respectively.⁽¹⁾ That the Lolo languages, for the most part, display features of the Burmese language is now clear. Here also, however, a striking contrast is formed by the difference in the reflexes of the cluster *k'r- between the dialects of Nyi and Ahi. *k'r- became k'- in Nyi but became tʂ'- in Ahi, e.g.

"to burn" Com. TB. sdrug, sdrug, Com. Lolo k'ruu, Nyi k'y 33, Ahi tʂ'o 22 (cf. Wr. T. sreḡpa); "tin" Com. TB. *dra-, Com. Lolo *k'ra, Nyi k'a 44, Ahi tʂ'a 22 (cf. Wr. B. k'ay 2 < *k'ra, Wr. T. ra-ñe ža-ñe); "street" Com. TB. *sdran, Com. Lolo *k'ruu, Nyi k'ur 44, Ahi tʂɿ 21 (Wr. B. k'arii 2 < k'rii (*I-yü*), Wr. T. sran).

In this respect the Jyarung language corresponds to Common Tibeto-Burman with features of the Tibetan language, but each dialect has its own features. In the Tsa-ku-nao dialect, tʂ- always corresponds to Wr. T. dr-, e.g.

"to sew" Wr. T. 'drub-pa: Jya. ka-tʂup; "to slide" Wr. T. 'dred-pa: Jya. ka-tʂep; "house-bug" Wr. T. 'dre-šig: Jya. tʂl-š'lg; "bell" Wr. T. dril-ma: Jya. tʂ'll-po.

In spite of the scarcity of recorded examples it may be conceivable that t- corresponds to Wr. T. dr- in the K'am-to dialect on the basis of the Common Tibeto-Burman form corresponding to -tök "six". In this way Com. TB. *dr- may be set up.

Similarly, the correspondence, Wr. T. ug: Wr. B. âk is also regular, e.g.

Com. TB. -ug —Wr. T. p'ug-pa "cave": Wr. B. a-pâk "hollowness"; Wr. T. p'rug-pa: Wr. B. p'râk "to scratch", etc.

The author will adopt a formula *drug for the Common Tibeto-Burman form for "six". The relationship between this form and the Hsi-hsia form *tʂ'u is:

(1) T. Nishida, *op. cit.*, *Tōhōgaku* 15 (1957), p. 55ff.

(2) In contrast with this correspondence, Wr. T. og: Wr. B. âk can be given. Examples are: "to consider" rtoḡ-pa: Wr. B. t'âk; "man-servant" Wr. T. g-yog: "man (male)" Wr. B. yâk-yaa 2; "bottom" Wr. T. 'og: Wr. B. âk; "helmet" Wr. T. rmoḡ: "hat" Wr. B. māk.

XI) Com. TB. *dr-: SH *tš'-; XII) Com. TB. *-ug: SH *-u.

For XI) the only example is: "strong, violent" Wr. T. drag-po→SH *tš'a.

Examples of XII) are:

"stone" Com. TB. *glug, *dlog, Anc. B. kl^wok, Wr. B. kyāk, Com. Lolo *hlu, Nyi lu 44, Ahi lu 44, Hani ŋu 21 (Wr. T. rdo)→SH *lu2; "back (*noun*)" Com. TB. *grug~gra, Wr. B. krāk, Com. Lolo -qo, Nyi -qo 44, Ahi -ko 21, Lisu -ko 33 (cf. Wr. T. rgyab)→SH *ku.

7. "seven" Com. T. brdun: Jya. ŋ-šnəs: Com. B. k'u-hnəts̄: Lolo šəts̄: Moso ʂə 33.

The occurrence of the reflexes of Com. T. brdun does not extend farther than the area where the Tibetan language in the narrow sense is used. Throughout the rest of the Tibeto-Burman area are the reflexes of Jyarung, Burmese form šnəts̄ or of Com. Lolo šəts̄, for which we tentatively set up the common form šnəts̄. Unlike the case of Com. TB. *g-nəds "two" the initial of this word reveals the correspondence, Jya. šn-: Com. B. hn-: Com. Lolo š-: Moso š-. This correspondence directs us to postulate *šn- for it. Consequently, *g-šnəds̄ and *b-rdun are presumed for the Common Tibeto-Burman form for "seven". Jya. ŋ- and Com. B. k'u- is represented here by a prefix g-. Now the following correspondences can be established between Hsi-hsia *šə and Com. TB. *g-šnəds̄:

XIII) Com. TB. *šn-: SH *š-; XIV) Com. TB. *-əds: SH *-ə. For these sets of correspondences we fail to find any adequate example. Hsi-hsia *š- shows divergent correspondences, which are seen in the examples below:

"to seek for" SH *še_{II}→Com. TB. *t'ral, Wr. T. 'ts'ol-ba, Wr. B. hraa, Nyi ʂa 44, Ahi ʂo 44, Hani so 55, Moso ʂo 55;
 "grass" SH *ši→Com. TB. *r-tš'a, Wr. T. rtswa<*r-ts'a-ba, Nyi sž 55, Ahi ʂi 55, Lisu sʂ 55, Hani tʂ'i 55-;
 "tooth" SH *šwi→Com. TB. *so, si, Wr. T. so, Wr. B. swaa<Anc. B. s^wo, Lisu sʂ 11, Hani ʂʂ 21;
 "barley or wheat" SH *še→Com. TB. *so, Wr. T. *so, Hani so 55;
 "louse" SH *šwi→Wr. T. šig, Hani ʂi 33; "incense" SH *šə→Wr. T. spos;
 "wolf" SH *šwi 3→Wr. T. spyan-ki.

For the correspondence, Wr. T. əC: SH *ə, we can give the following examples:

"rope" Wr. T. t'ag↔SH *šə (cf. Nyi tʂe 44, Ahi tʂe 44, Hani ts'a 55);
 "mouth" Wr. T. žal↔SH *ʂə; "eye" Wr. T. mig<*myəg↔SH *mə (cf. Wr. B. myak, Nyi ne 44, Ahi nie 44-, Lisu mia 33, Hani ma 55-, Moso mir 15); "to respect" Wr. T. p'yag (original meaning "hand")→SH *šə (Wr. T. p'yag- 'ts'al-ba↔SH *šə ts'fū) (On the evidence afforded by the correspondences seen in the cases of "wolf" and "incense", it may be that

the change *s-p'yag < s-p'lag (< s-p'a-lag) took place in Wr. T. p'yag "to respect".)

8. "eight" Com. T. brgyad: Jya. a-ryed: Com. B. hræt: Com. Lolo hæ:t: Moso xo 55.

For this numeral we may rightly take Com. T. brgyad as the Common Tibeto-Burman form. The old initial cluster rgy-, losing -g-, became ry- among all the languages concerned except the Tibetan language. The same change can be observed in the case of "hundred", rgy->ry-. This leads to our surmise that hræt in the Burmese-Lolo language followed such process of development as *hryat > hryæt > hræt. Between Hsi-hsia *ye and Com. TB. brgyad we can detect the following correspondence:

XV) Com. TB. *b-rgy-: SH *y-; XVI) Com. TB. *ad: SH *e.

For XV), see the case of "hundred". Another example is: Wr. T. rygu "cause" ↔ SH *yu.

For XVI) in addition to the example, Wr. T. 'č'ad-pa ↔ SH *ts'e, the following may be named for the correspondence, Com. TB. *aC: SH *e.

"to be dirty" Com. TB. *nyag, Wr. T. ñag, Wr. B. ñatš < Anc. B. nætš, Moso ŋeə ↔ SH *ñe; "frog" Com. TB. s-bal, Wr. T. sbal-pa, Wr. B. p'aa 2, Nyi pa 55, Ahi pa 55, Hani -p'ɔ 21, Moso pa ↔ SH *pe; "horse" Com. TB. *mraŋ, Wr. B. mraŋ, Nyi ŋ 55, Ahi mo 11, Lisu -mo 11, Hani mu 21 ↔ SH *xre2 ~ re2; "to grow fat" Wr. T. 'da'-ba ↔ SH *ɖdze. (For the correspondence, Wr. T. d: SH *ɖdz, we find: "time" Wr. T. dus ↔ SH *ɖdze, "to collect" Wr. T. 'du-ba ↔ SH *ɖdzi, etc.)

9. "nine" Com. T. dgu: Jya. ŋgu: Com. B. ku: Com. Lolo ku: Moso ŋku 33. The Common Tibetan form dgu can be used as the Common Tibeto-Burman numeral for "nine". Both Jya. ŋg- and Moso ŋk- seems to date from *ɖvg->*yvg > ŋg->ŋk-. The correspondence, Wr. T. u: Wr. B. u: Com. Lolo u is regular. (For example, "to cry" Com. TB. *ŋu: Wr. T. ŋu-ba: Wr. B. ŋu: Com. Lolo ŋu (Nyi ŋ 44, Ahi ŋy 44): Moso ŋu 41. Cf. examples of "to steal" and "body" listed below.) Hsi-hsia *ŋgi thus have the correspondence with. Com. TB. *dgu such as

XVII) Com. TB. *dg-: SH *ŋg-; XVIII) Com. TB. *-u: SH *-i.

Only a very limited number of examples are found for these sets. For XVII) we may give:

"night" Anc. T. dguŋ ↔ SH *ŋgi; "village" Wr. T. groŋ < dgroŋ ? ↔ SH *ŋge2.

For XVIII) examples are:

"to drink" Com. TB. *t'uŋ, Wr. T. 't'uŋ-ba, Nyi to 33, Ahi tu 22, Moso t'ɿ 21 ↔ SH *t'i; "to put in" Wr. T. 'jug-pa ↔ SH *ši; "bone" Com. TB. *ruds,

Wr. T. rus, Wr. B. ro < Anc. B. ruu, Nyi yur 11, Ahi yŕ 11, Hani zu 33 ↔ SH *ri~re.

To Common. TB. *u Hsi-hsia *ur corresponds in most cases.

“insect” Com. TB. *bu, Wr. T. bu, Anc. B. puu, Nyi by 11, Ahi bu 44, Moso bu 33 ↔ SH *muu3; “heaven” Com. TB. *mu, Wr. B. muu2, Nyi m 11, Ahi m 11, Moso mü 41 ↔ SH *muu2; “to steal” Com. TB. *k'u, Wr. T. rku-ba, Wr. B. k'o 2 < Anc. B. k'ur, Nyi k'ur 11, Ahi k'ŕ 21, Hani xə 13, Moso k'u 41 ↔ SH *kuu 3; “body” Com. TB. *ku, Wr. T. sku, Anc. B. kuu, Nyi kuu 33, Ahi kŕ 22, Hani kə 55, Moso gu 21 ↔ SH *kuu.

10. “ten” Com. TB. bšču~bšč'u: Jya. štji: Com. B. tš'ay: Com. Lolo ts'ay: Moso ts'ey 21.

The nuclear consonant tj- of the Jyarung language regularly corresponds to Com. T. č-, e.g. “iron” Wr. T. lčag: Jya. tʃog; “all” Wr. T. t'ams čad: Jya. tam tʃie. Wr. T. s- which stands before the initial nuclear consonant č- are in correspondence with both Jya. s- and š-.

Wr. T. s-: Jya. š- —“medecine” Wr. T. sman-pa: Jya. sman piə; “to be sour” Wr. T. skyur: Jya. sʃyr; “speech” Wr. T. skad: Jya. ske.

Wr. T. s-: Jya. š- —“nose” Wr. T. sna: Jya. šne; “heart” Wr. T. šiŋ: Jya. šni; “leek” Wr. T. sgog: Jya. škuti.

Similarly, between Wr. T. u, and both of the Jyarung vowels u and i correspondences can be established.

Wr. T. u: Jya. u—“pearl” Wr. T. mu tig: Jya. mu ti; “to speak” Wr. T. žu-ba: Jya. ka-rju.

Wr. T. u: Jya. i—“water” Wr. T. č'u: Jya. tʃi; “coin” Wr. T. rgyu: Jya. rtʃi.

From this an influence is drawn that the formulae *s2cu2 and s2c'u2 can possibly be given for the Common Tibeto-Jyarung form for “ten”. In regard to the correspondences between s2c' and either Com. B. tš'- or Lolo, Moso ts'- no special mention will be needed. On the other hand, the difficulty lies in setting up a correspondence between Com. Burmese-Lolo -ay and Com. TB. *u2 for it is iy that corresponds to Com. TB. *u2 in the Burmese-Lolo languages like in the Jyarung language.

“water” Com. TB. *t'ru2, Wr. T. č'u, Wr. B. re < Anc. B. riy, Nyi -ž, Ahi ji (Moso jji); “boat” Com. TB. *gru2, glu2, Wr. T. gru, Wr. B. hle < Anc. B. hliy, Nyi łz, Ahi li (Moso eł 21); “bow” Com. TB. *g-dlu2, Wr. T. gžu, Wr. B. le (Moso eł 33)

Besides we cannot find any example of the correspondences, Com. TB. *u2:

Burmese-Lolo -ay. Accordingly, we tentatively postulate the Common Tibeto-Burman form *s2cu2, s2c'u2 and c'ay for "ten".

As for the Hsi-hsia form thought to correspond to these forms no evidence has been offered on which we can base our postulation of the details except that it might have been a member of *TY*. 'Real-dental sounds'. However, we will assume its initial as *tš' in analogy to the corresponding Common Tibeto-Burman form. Further, the examples ensuing informs that the Hsi-hsia sound corresponding to Com. B. -ay is *i* or *i*:

"to be easy" SH *i↔Wr. B. lway; "star" SH *ngi↔Wr. B. kray. (Bur.-ay exhibits a regular correspondence with Nyi æ and Ahi a, and the correspondences of "ten", Nyi ts'ɪ 33: Ahi ts'ɪ or ts'e makes an exception.)

Noting the correspondence Com. TB. *u2: SH *i or i, the author will postulate **tš'i or **tš'i for the Hsi-hsia for "ten".

"water" Com. TB. *t'ru2↔SH *ɸzi; "wind" Com. TB. *rlu2<*rplu2↔SH *xli; "bow" Com. TB. *g-dlu2↔SH *li4.

Along with *tš'i, *yæ is more frequently used. Though this form cannot be related to any of the above reconstructed Common Tibeto-Burman forms, it is by no means isolated within the Tibeto-Burman family. It may be possible to consider ha-, sgā, and ho in the respective languages, Ch'iang, Hōrpa and Munia. However, the data for setting up correspondences among them are not sufficient.

11. "hundred" Com. T. brgya: Jya. porje: Com. B. rya: Com. Lolo rya: Moso çɪ 33.

As in the case of "eight" we may adopt Com. T. brgya for the Common Tibeto-Burman form for this number. Evidently, Jya.-Bur.-Lolo ry- was originally rgy-. The following correspondences can be established between Hsi-hsia *yi5 and Com. TB. *brgya;

XXI) Com. TB. *brgy-: SH *y-; XXII) Com. TB. *-a: SH *-i. The correspondence XXI) is in parallel with that of "eight". The examples of XXII) can be abundantly furnished as follows:

"nose" Com. TB. *s-na→SH *ni (cf. p. 158, 164); "flesh" Com. TB. *ša, Wr. T. ša, Wr. B. a-saa 2, Nyi xa 11, Ahi xo 21, Lisu hwa 11, Hani so 21, Moso šɾ 41→SH *tš'i; "star" Com. TB. *s-krar, Wr. T. skar-ma, Wr. B. kray, Nyi tɹæ 33, Ahi tša 44, Lisu gu 33, Hani kə 33, Moso kuɪ 21→SH *ngi; "moon" Com. TB. *zla, Wr. T. zla, Wr. B. la, Nyi ʃo 44, Ahi ʃa, Lisu ʃa 13, Hani ʃo 55, Moso ʃɛ 33→SH *xli; "to get" Com. TB. *gra, Wr. B. ra, Nyi ya 33, Ahi o 44, Hani zɔ 13→SH *ri; "root" Com. TB. *ts'a, Wr. T. rtsa-ba→SH *tš'i, etc.

Conclusion

In the foregoing we have made an attempt to compare some Hsi-hsia words with some from certain Tibeto-Burman languages and the result has been that certain correspondences among them have come to light. Nevertheless, the sum of these correspondences now within our ken forms only a small portion of the whole and most are yet to be discovered. Furthermore, some of the established correspondences may in the near future be identified and be seen as actually constituting others after further investigations of new materials.

Above all, uncertainties are still hanging over the author's handling of vowels, due to his inaccessibility to *Wên-hai-pao-yün* 文海宝韻 for reference. At any rate, our present study almost justifies the inclusion of the Hsi-hsia language in the Tibeto-Burman group. However, before we establish such a comprehensive language group composed of the Hsi-hsia language and the Lolo-Moso languages, we must investigate the said languages further. We cannot rely merely on the resemblances of their syllable forms or on the occurrence of some common words throughout.

Among the Hsi-hsia languages and the Tibeto-Burman languages we will encounter the following remarkable fact. For some of its reconstructed sounds, or sound sequences the Hsi-hsia language reveals a very close relation to the Lolo language while for others it shows much the same degree of relationship to the Tibetan language. Hsi-hsia *ɸz, for example, is seen in correspondence with certain sounds or sequences of sounds in Lolo language:

	SH	Nyi	Ahi	Moso	Hani
"dew"	*ɸzi 2	tsʒ 55	tçi 55	ɲtʃo 41	tʂ'o 21
"leopard"	*ɸzi 6	z 22	zi 44	ɲtʃɔ 33	
"water"	*ɸzi 7	ʒ 33	ji 21	ji 21	-tʂ'u 21
"south"	*ɸzi 4	-tsʒ 55			
"man's span of life"	*ɸzo	z 33			

The same is true with Hsi-hsia *y-:

	SH	Nyi	Ahi	Lisu	Hani	Moso
"hundred"	*yi	ha 33	xo 22	fi'a 13	xæ 21	çi 33
"eight"	*ye	he 22	xi 44	fi 11	xo 55	xo 55
"house"	*yü	hæ 33	xε 22	fi 13	-xo 55	çi 55
"to see"	*yü		xue 55			

On the contrary, the Hsi-hsia words with an initial ɸ- are rather vaguely related to the Lolo languages and the Moso language. Their relationship to the Tibetan language is, however, quite obvious:

“very much” SH **bi*2→Tib. lhag-pa; “all” SH **bi*2→Tib. lhan-ba “together”; “shoe” SH **bi*4→Tib. lham; “wisdom” SH **ɸzi*→Tib. sñam-pa “to think”; “sinew” SH **ɸzi*→Tib. ña.

Among languages with extremely simple stems such as the Tibeto-Burman languages it is natural that we should expect the possibility of setting up a considerable number of correspondences, regular though still unraveled.

Though the Hsi-hsia language is certainly closely skin to the Ch'iang language and the Burmese-Lolo-Moso languages it is in no way subject to any of them. It is thought that the similarities of this language to the Tibetan might have been due to the earlier borrowing of the former from the latter. Therefore we must refrain from reaching any rash conclusions about the natures of the Hsi-hsia languages until future examinations of its over-all structure have been conducted.

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