

NOTES ON THE STUDY OF THE SHIH MING MARGINALIA TO N. C. BODMAN'S "A LINGUISTIC STUDY OF THE SHIH MING"¹

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Mr. Bodman's work has already been reviewed in other journals (*Language*, 21, 1955, p. 153-5, by Fang-kui Li; *The Far Eastern Quarterly*, 14, 1955, p. 408, by Tung T'ung-ho; *T'ung Pao*, 44, 1956, p. 266-87, by Roy A. Miller and *Bulletin of the School of Oriental and African Studies*, 19, 1957, p. 396, by G. B. Downer), where its content and importance, and its convenient presentation of the SM² material, have been rightly praised. More, in our opinion, too severe a review was that by W. A. Grootaers in the *Journal of Oriental Studies* (University of Hongkong), 3, 1956, 138-140. The present study is a discussion of some specific problems for which Bodman did not propose a satisfactory solution.

¹ Full title: *A Linguistic Study of the Shih ming. Initials and Consonant Clusters*, by Nicholas Cleaveland Bodman. Harvard-Yenching Institute Studies, xi, 1954. Harvard University Press, Cambridge, Massachusetts.

² The following abbreviations and signs are used in this paper:

SM: 釋名 *Shih ming*; numbers refer to the index of B.'s work, but 1/2 refers to the Chinese text, indicating chapter and sequence of word pairs with their respective explanatory texts.

SW: *Shuo-wên chieh-tzû* 說文解字, quoted according to the

SWKL, *Shuo-wên chieh-tzû ku-lin* 說文解字詁林, by Ting Fu-pao 丁福保, Shanghai, 1928.

KYSH: *Kuang-yün shêng-hsi* 廣韻聲係 by Shên Chien-shih 沈兼士, Peking, 1944; quoted according to number of series and pagination.

SYHP: *Shih-yün hui-pien* 十韻彙篇 by Lo Ch'ang-pei 羅常培 and Wei Chien-kung 魏建功, Peking, 1935.

GS: *Grammata Serica. Script and Phonetics in Chinese and Sino-Japanese*, by Bernhard Karlgren. BMFEA, xii, 1940.

TT: *Tz'u t'ung* 辭通 by Chu Ch'i-feng 朱起鳳, Shanghai, 1934.

Takata: Takata Chūshū 高田忠周, *Kochūhen* 古綴篇, Tōkyō, 1919.

SWTH: *Shuo-wên t'ung-hsün ting-shing* 說文通訓定聲, by Chu Chün-shêng 朱駿聲 (1788-1858), quoted from SWKL.

TPYL: *T'ai-p'ing yü-lan* 太平御覽.

Hsh: *Hsieh shêng* 諧聲.

Signs preceding reconstructed forms: Archaic Chinese, when reconstructed according to GS *; when reconstructed according to the *Hsieh-shêng* system in SW and when differing from GS / *; when giving full *Hsieh-shêng* value (cf. note 20) √ *; when reconstructed from dimidiation binoms # *; when based on sound phrases, comparisons of cognates, dialect correspondences, etc. / * /; when representing a reconstruction special to SM time S *. Ancient Chinese: no sign.

1. Mr. Bodman has limited his investigations to the problems of initials and the consonant clusters in the initials, and has laid a basis for further research. In this study, too, we shall consider mainly the initials. It has been noted in the previous reviews that B. has been "pre-limited" by Karlgren's reconstructions of the Archaic and Ancient Chinese language, though he was able to infer the existence of some otherwise unsuspected clusters, preserved till the time of *SM*. But since by definition and premises the glosses of Liu Hsi 劉熙, "are intended to indicate sound similarity in the total phonemic structure of the paired words", it is surprising that B. has not been struck by the fact that so many cases show a very insufficient similarity when reconstructed according to Karlgren's Archaic and Ancient Chinese. As he has been able to bring some improvements to Karlgren's system, it has legitimately been asked whether a freer departure from Karlgren's system might not have yielded better explanations and more far reaching conclusions concerning the Chinese language in general.

2. The real crux in the interpretation of the *SM* lies in the reconstruction to be used for the comparison of the paired words. B. expressed his astonishment at the small degree of change and development of sound occurring during the interval between Archaic and Ancient Chinese; however, he has not been led to reject the antiquity, generally attributed to the reconstructions of Archaic Chinese, namely, Early Chou.³ He is therefore predisposed to explain *SM* in terms of Ancient Chinese, as *SM* is so much closer in time to Ancient Chinese than to the supposed time of Archaic Chinese. But since, as he is able to show, many initial clusters established by Karlgren for the Archaic period, and other clusters not yet discovered by Karlgren's methods of reconstruction, still existed in *SM* time, the sound development (from the beginning of Archaic Chinese time till *SM*), would seem to have been, in fact, much slower than had previously been realized, while the changes typical for the passage from Archaic to Ancient Chinese ought to have occurred in a comparatively short space of time, and therefore at a rather precipitate tempo. This conclusion, which follows from B.'s study, needs explanation. The simplest explanation is that the Archaic Chinese system on which B. builds his *SM* study—i.e., that of *GS*—cannot be earlier than the Middle Han period. There are no proofs that the rhyme system of *Shih ching* must date from the Chou period. Moreover, the *Hsh* connections really reflect a phonetic analysis which points to a period of Late Chou and Former Han times; they can be most safely established on

³ Archaic Chinese, as reconstructed in *GS*, is ascribed by Karlgren to the period of 800–600 B.C. (*GS*, p. 3), or according to his *Compendium of Phonetics in Ancient and Archaic Chinese* (BMFEA, xxii, 1954), even to a period beginning from 1028 B.C. H. Franke, *Sinologie* (Bern, 1953) estimates the period of Archaic Chinese from circa 1000 till 500 B.C.

the basis of the *SW* analysis of the characters, and when this is consistently applied, it leads us to a more complicated set of reconstructions than the Archaic system of Karlgren has admitted.⁴

3. Mr. B. isolated the word equations of *SM*, listed them according to initials and finals, and tabulated the contacts between the various kinds of initials. In this way, he tried to show the phonological system underlying these pairings of words in *SM*. It must be pointed out here that this system is only indirectly attained, for the word pairs are in themselves not a systematic list of words made with the aim of describing the sounds of the language like the *Ch'ieh yün*, but a word explanation, which included an attempt to describe the sounds by suggesting cognate words, citing folk etymologies, or by equating words of plain sound equivalence or similarity. The words in *SM* are not selected in order to give a phonetic sampling of the various initials, finals or vocalisms of the word units, and then rearranged according to subject matter. They were not intended to be a systematic phonological *exposé* of the language by means of examples arranged as word equations, and therefore do not necessarily represent a complete or consistent phonological analysis of the *SM* language. *SM* consists primarily of word to word pairings, which in each instance take into consideration only the sounds of the particular characters actually paired; it follows that these word pairs may deal with some phonetic details which in one case were stressed or considered essential, and on another occasion were disregarded. This aspect of the word pairs, as being, in the first place, one-to-one equivalences may help us to understand some irregular cases.

4. On the other hand, it is also probable that, on the assumption that *SM* was compiled by one author, it reflects the language of one period,⁵ with a good degree of consistency; though the words are treated as one-to-one equations, the cases of really unsatisfactory similarity or divergency, unusual readings, irregular phonetic analyses should normally remain exceptional; they should make up a minor part of the total number of the word equations. Moreover, when the same character appears in more than one

⁴ In the forthcoming *The Chinese Dialects of Han time according to Fang Yen* to be published by the University of California Press, Berkeley, it has been shown, by comparing *Hsh* analyses of *SW* and the rhyme system of the *Shih-ching*, that the Archaic Chinese as reconstructed in *GS* occupies an intermediate position between the language of *SW* (as reflected in the *Hsh* system), which is far more complicated in its initial and final clusters than in *GS*, and the language of *SM*.

⁵ B. deals with the question of authorship and date of the *SM* in his introduction, p. 3 sq. In his chapter *Sound Glosses in Historical Perspective*, he points out that "although Liu Hsi could naturally not fail to be influenced by the already existing sound glosses any more than his thoughts could by the current patterns of thought and scholarship of his day, . . . his sound glosses reflect his own personal beliefs as to correct pronunciation". The sound glosses of earlier works have not been studied, but B. thinks that Liu Hsi made a work on the language of his time, though he may actually have copied and incorporated much material from previous works, that was still valid for his time.

place, each time paired with a different character, it can be expected that all these word pairs should be taken together, and one solution should be found, applicable to all cases. If divergent forms of reconstructions are necessary for the same word, they must at least be explained in the light of a sound development derived from the normal reconstruction of sounds. In this way it is possible to set up a number of chains of word pairs, which form solidary groups, and must be studied together. E.g. 183 酪 *glāk > lāk / 澤 *d'āk > d'ak, 244 石 *djak > sjak / 格 *g'lāk > yak, 244 勒 *lak > lak / 刻 *k'ak > k'ak, 245 給 *glāk > lāk / 勒 *lak > lak, etc. Though B. has sometimes collected such cases, even outside of the SM material (e.g., 戌 *sjwēt > sjwēt / 恤 *sjwēt > sjwēt, 戌 *sjwēt > sjwēt / 脫 *t'wād > t'wād, and Shih-ching, Po hu t'ung 恤 *sjwēt > ching 恤 *sjwēt > sjwēt / 謫 *miēt > miēt, Shih-ching, Po hu t'ung 恤 *sjwēt > sjwēt / 滅 *mīat > mīat, etc.), it seems that he did not pursue this method in order to determine systematic solidary groups of word pairs in SM itself. If, however, we proceed in this way, instead of studying merely the contacts of the various Archaic and Ancient Chinese initials from the point of view of the reconstructions of Karlgren, it is possible to establish at least in some measure a new and independent source of information on the sounds of the SM language as such, that is, by studying what solidary groups of words are repeatedly connected with each other and how concatenations of word pairs may be interpreted according to a reconstruction, possibly different from the Archaic as well as from the Ancient Chinese system.

5. B. has not considered the explanatory phrases which SM adds to the bare word pairs as a source for linguistic information. He remarks, however, (p. 1) that "in the great majority of cases, his [Liu Hsi's] comment consists of a paronomastic gloss, usually followed by some further elucidating remark". These elucidations are only exceptionally used by B., and for the readers who completely rely on his presentation of the SM material (his list of word pairs), without personal investigation of the original text, the obvious conclusion would be that the phrases following the word equations are of very little importance and certainly entirely irrelevant to the problem of the reading of the characters. But, definitely, such is not the case. The phrases added to the word equations are often of the same nature as many sound phrases occurring in SW and in passages in other early works that quote the early scholastic glosses on the meaning and reading of words and graphs. In SW, many such phrases serve as a sort of mnemotechnic device to describe by means of a short, easily remembered phrase, the sound of the graph, which is explained in its meaning and graphic construction. SM defines words by means of paronomastic definitions, by which often a tenuous semantic connection is suggested; it uses the word pairs themselves only to indicate the sound, whereas in the elucidating phrase it may often offer a catch phrase suggesting sound and meaning. In earlier works the Shêng hsün (聲訓) method sometimes did not consist of a clear pairing of

two words, but only of a phrase in which the reader was able, through the help of a school tradition, to isolate the words that were relevant for the sound description.⁸

After these general observations on B.'s interpretation of SM and the general exposition of the method of SM, it is now possible to come to more specific details.

I

B.'s "Problematical Residue", including eight cases of difficult pairings, is very misleading. One wonders wherein 1268 岨 *ts'io > ts'iuo / 臘 *lio > liwo differs from supposedly normal cases such as 948 末 *liwār > liwi ~ *liwār > luai / 推 *t'iwār > ts'wi, 950 錐 *tjwār > ts'wi / 利 *lijd > li, 306 讀 *d'uk > d'uk / 錄 *liuk > liwok, 498 柳 *liōg > liu / 聚 *d'z'ju > d'z'ju, 128 疏 *sjo > sjwo / 寥 *gliog > liu; or in what way "residual" 1270 岨 *k'jōg > k'ji / 圮 *b'jōr > b'ji, and 1272 鼻 *b'jōd > b'ji / 噤 *xjwəd > xjwei differ from 197 莫 *māk > māk / 給 *glāk > lāk, 845 敗 *b'wəd > b'wai / 潰 *g'wəd > yuāi, 989 亂 *blwān (GS 180 lwān) > luān / 渾 *g'wān > yuān, 1231 麻 *gliām > liām / 懷 *bliām > liām and 1252 廩 *bliām > liām / 矜 *k'jāng > k'jāng ~ *g'jēn > g'jēn.

And, if word pairs with initials B- M- / G- K- etc., are startling, so also are pairings between words with sibilants and labials: 175 趨 *ts'ju > ts'ju / 赴 *p'jug > p'ju, 259 側 *tsjak > tsjak / 偏 *piak > piak, 884 跣 *tsjār > tsie / 弭 *mjār > mjie, 827 筆 *pijāt > piēt / 述 *d'jwāt > d'jwēt, 307 頤 *d'uk > d'uk / 睦 *mljōk > mjuk, 864 緇 *sied > siei / 弭 *mjār > mjie.

Similarly, the numerous pairings of words with sibilants and velar initials have not been satisfactorily explained. Thus, why consider 1273 餐 *ts'ān > ts'ān / 乾 *k'ān > k'ān, 1274 穀 *g'uk > yuk / 粟 *sjuk > sjwuk as "residual", and not the many other cases listed among the normal word pairs, such as 15 騎 *g'ia > g'jie / 支 *tjēg > tjie, and many other cases (78, 101, 108, 118, 183, 212, 217, 218, 244, 245, 292, 324, 381, 382, 449, 472, 485, 493, 582, 585, 601, 711, 784, 793, 813, 836, 856, 857, 870, 963, 999, 1013, 1050, 1067, 1077, 1174, 1178, 1185, 1230, 1241).

⁸ This will be shown in more detail under III. The origin of the simple word pair of SM can be exemplified by 922 and 289 which are already alluded to in a text without word pairing in *Li chi* (*Chung ni yen chü* 仲尼燕居; *Couvreur*, ii, p. 387-8): 言而履之禮也行而樂之樂也. Wulff (*Musik und Freude*, 1935, p. 13) translates: "Zu reden und darnach zu wandeln, das ist Schicklichkeit (li); zu handeln und sich dabei zu freuen, das ist Musik." "wandeln" (statt des gewöhnlichen 行) neben 禮 "Schicklichkeit" ist ein beabsichtigtes Wortspiel, das übrigens auch sonst vorkommt (*Li chi*, *Chi yi* 祭義; *Couvreur*, ii, p. 302: "Urbanitas est insistere [perhaps better: incedere] in ea" 禮者履此者也). Since in SM 16/52 履 is taken as the name of an object (sandal), the phrase is changed in order to make sense in the semantic connection: 履禮也飾足所以爲禮也 "Decorating the foot, the sandal is used to perform the rites". On the other hand, SM 12/82, the allusion is still the same as in *Li chi* 樂樂也使人好樂之也 "Music is pleasure (or to enjoy) for it makes people find pleasure in it."

Finally, what is so unusual about "residual cases" such as 1271 殺 **sat* > *ʃat* / 竄 **ts'wân* > *ts'uân*, in the light of the "normal" cases 976 讀 **tsân* > *tsân* / 纂 **ts'wân* > *ts'uân*, 772 額 **ât* > *ât* / 鞍 **ân* > *ân*; or about a definition listed as "residual", 1269 斯 **sieḡ* > *siḡ* / 斯 **sieḡ* > *siḡ* (斯彌), compared to 435 廁 **ts'jæg* > *ts'i* / 廁 **ts'jæg* > *ts'i* (雜廁)?

The majority of these cases were simply passed over without comment; for others B. offers three different explanations:

(1) Some of these equations are meant only for their rhyme value, or even only as semantic definitions (p. 60). This suggestion is nothing more than an easy escape from the difficulty of reconstructing a form which would explain the pairing of the two words. A mere rhyme gloss is contrary to the principle of *SM* itself. There is no external criterion in *SM*, to indicate that a word equation refers only to the rhyme of the words. Moreover, these cases are rather exceptional, and B.'s explanation cannot be accepted, unless all possible reconstructions have been tested in order to explain them. The word pairs which B. explains by assuming a mere rhyme gloss have been misunderstood by Grootaers (p. 139) as *sandhi* changes between two parts of a binom. They are not cases of *sandhi* like those I studied in my article *Philologie et linguistique dans les études sinologiques* (Monumenta Serica, 1943, p. 191). G.B. Downer (p. 396) supports the assumption of mere rhyme glosses, saying "that they are riming pairs is a simpler explanation". This is an easy way out, but it is not simpler to set a principle of total word similarity for *SM* and then to claim exceptions to that principle without positive proofs. Downer even extends such cases to others than B.'s, saying "the number of contacts is not enough to prove or disprove these cases" [i.e., 柳 = 丘 = 洲 or 101 語 = 敍 and 1050 言 = 宣]. On the contrary, a complete list of such cases indicates that they are frequent and important. For other word pairs Downer thinks that "graphic similarity may have influenced or been the chief reason for Liu Hsi's choice of gloss" [e.g., 218 赤 = 赫]. This assumption is entirely unsupported; there is no more graphic similarity in this equation than between 人 and 从. The explanation must be found in a different relation between 赤 and 赫 (cf. infra).

(2) Some of these pairings have a sufficient similarity of sound, often a perfect identity in the Ancient Chinese reconstructions, and there is no need to be shocked by the difference in the Archaic Chinese sounds. This seems satisfactory enough at first sight. Yet, of all the cases mentioned above (which include nearly all those in B.'s list), there are only three in which the Ancient Chinese reading gives a solution (78, 108, 1013). This fact is of importance for other cases where there is a doubt whether the Archaic or the Ancient Chinese sounds should be taken as the better reconstruction for the *SM* time. Thus, for 988 變 **blwân* > *luân* / 變 **bljwân* > *liwân*, or 1003 練 **gliân* > *lien* / 爛 **glân* > *lân*, B. is inclined to consider the Ancient Chinese sounds as sufficiently similar (though the Archaic sounds offer a

closer similarity in vocalism). Moreover, where the Archaic Chinese reconstructions would strictly require an initial cluster in both members of a word pair, B. again prefers to stay on the safe side, whenever the Ancient Chinese shows enough similarity to make the *SM* equation acceptable. Thus 36 瓦 **ngwa* > *ngwa* / 課 **g'lwâr* > *ywa*. But since the list of irregular word pairs, given above, shows so few cases where the Ancient Chinese system is of any help, it is doubtful whether the *SM* sound system is really more closely similar to the Ancient Chinese than to the Archaic.

(3) A third way, proposed by B., of explaining such unusual equations in *SM* is to take refuge in the theory of groups of morphologically differing words, which by separation of a prefix (according to Maspero⁷) offer a common stem, comparable in all the various derivations, and which, because of the etymological relationship, still felt in *SM* time, allowed Liu Hsi to equate these words in pairs as regular as the ordinary word equations. This explanation is proposed by B. for 289 樂 **glâk* > *lâk* "pleasure" / 樂 **nglôk* > *ngâk* "music" ~ **nglôg* > *ngau* "joy, to rejoice in", in which he supposes that in *SM* time, the prefixes were still recognized as such, distinct from the rest of the word, which was then almost the same in all three cases: *g-lâk* / *ng-lôk* / *ng-lôg*. The same theory is applied in other cases (p. 56) 485, 1178, 1185, but without much explanation.

This theory of the morphological role of some of the differences in the initials in *SM* raises serious difficulties. Derivations of words from the same stem, by means of prefixes (Maspero) or infixes (Wulff⁷) may occur in Archaic Chinese (i.e., Early Chou period as in Karlgren's dating), and the two processes of derivation are not mutually exclusive. The difficulty is in the supposition that such an early feature of the language would still be clearly perceived by the Chinese of *SM* time, when, judging from the small number of cases adduced by Maspero and Wulff as evidence for their theories, this morphological mechanism had already become unproductive or had never been developed to quite the same extent as e.g. in the Indo-European languages. Moreover, this mechanism of morphological derivation appears far from consistent, when considered from the point of view of

⁷ H. Maspero, *Préfixes et dérivations en chinois archaïque* (Mémoires de la Société de linguistique de Paris, xxiii, 5, 1930). Also H. Maspero, *Le Chinois* (Les langues du monde, 1952, p. 592-3), K. Wulff, *Chinesisch und Tai, Sprachvergleichende Untersuchungen*, and *Musik und Freude im Chinesischen* (Det Kgl. Danske Videnskabernes Selskab, Hist.-Fil. Meddelelser, xx, 1934, and xxi, 1935). In *SM* the paronomastic definitions 禮也 are technically the same as 樂也, though it is clear that Liu Hsi saw a definite difference in the relation between 禮: 禮 and 樂: 樂, as the latter was obviously still felt as a cognate, and the former a mere sound identity, with a tenuous semantic connection; the point is that 樂: 樂 were recognized as cognates because of the sound similarity, observed "in the total phonemic structure of the paired words" (B., p. 65), and in the graphic identity, but it does not follow that there were some differences in the initials which were considered as morphological elements in *SM* time.

the morphological role which the prefixes or infixes played in the formation of verbal, nominal, or adjectival derivations of one and the same stem. If this morphology was already so far "fossilized" in the earliest period, why expect a clear recognition of such a morphology in *SM* time, a period for which no such morphological features are known from any other source? Finally, since another explanation, more consistent with all the other equations in *SM*, can be shown to cover cases 289, 1178, etc., in a simpler way, namely, the mere use of different reconstructions, it is clear that a morphological theory is too far fetched and cannot be applied in *SM*.

(4) A last explanation is that in reality the *SM* equations are to be explained by a reconstruction entirely different from the Archaic and Ancient Chinese of Karlgren. B. has touched on such examples on pp. 27-9, pointing out that for some cases of the word pairs, the characters in *casu* already belonged to a *Hsh* series with velar and sibilant (or dental) initials as well. However, B. does not try to posit reconstructions specifically valid for the *SM* period, though the significance of *SM* is precisely that it offers a third intermediary stage between the Archaic and the Ancient Chinese periods. It is important to elaborate the details of the *SM* system to the greatest possible extent.

B. has done so half-heartedly and timidly in some exceptional cases, e.g., 1067 天 *t'ien (dialectal *txien*) / 顯 *xian, or 60 苦 *k'o > k'uo / 吐 *t'o > t'uo, for which B. posits 苦 *xo* or 吐 *txo*. His explanation does not fully cover the equation, which demands 顯 / *dxian // 天 / *tyien, and 苦 / *tko // 吐 *t'o < / *tyo.⁸ B. takes the regular alternation of velar and palatal initials in the *SM* equations as a sufficient explanation, but this is hardly more than to state a fact without explanation and without a satisfactory reconstruction. This remark applies also to the contacts between glottal stops or velars and sibilants or dentals. B. comes close to the reconstruction formula which we have already proposed elsewhere,⁹ in 101 and

⁸ 天 *t'ien is also paired with 坦 *t'an, which like 顯 *xian has -a- vowel. 天 in *SWKL* 12 is paronomastically defined 顯 *tien "top of the head", and analysed 从一大 "suppressed phonetic", *d'ad ~ *t'ad. It is not impossible that 天 was also read / *t'yan ~ *t'ian ~ *t'ien. As to 苦, Miller (p. 283) on the evidence of *SWKL* 278, where 大苦 is the definition of 苦 "mouse ear", proposes a form 苦 *tk'uo ~ tak'uo. On the basis of 大苦 one obtains *d'ad (t'ad)-k'o < # *dk'o, as a variant form, synonym with 苦, but it does not mean that 苦 "bitter" (*SM* 12/126 苦吐也人所吐也 "It is what man spits out" is opposed to 12/125 甘 "sweet" 含也人所含也 "It is what man holds in the mouth") should have the same reconstruction as 大苦, an entirely different word. *KYSH* No. 57, p. 91, lists derivatives with dental initials: / *tyo ~ tgo(g).

⁹ The Chinese Dialects of Han Time according to Fang yen, Ch. iv. The phonetic values of the Hsieh sheng in the Shuo-wen. 2. The initials. A comparison of the various *Hsh* series shows that the presence or absence of a medial -i- or -i- does not play an essential role for the inclusion of a character in a *Hsh* series. The argument of Miller (p. 282) that 庫 *k'o should have a yod, because of the *Hsh* derivative 車 *kjo (an argument also applied to 庫 *k'ang, 坤 *k'wan (not *k'won) and 空 *k'ung) does not seem convincing. 舒 / *syo is also paired with 徐 *dxjo < / *dzjo (113).

1050: 語 *ngio > ngiwo / 敍 *dzio > xjwo and 言 *ngjan > ngjon / 宣 *sjwan > sjwän, where he proposes *zng-* / *dzng-*? and *zng-* / *sng-*? On the strength of the *Hsh* derivatives of 五, 吾 (𠄎 *sjä*) we can posit 語 / *zngio, while for 敍, a form / *dzjo⁹ offers enough similarity, without requiring *dzng-*. In the other pair, the *Hsh* connections of 𠄎 *sjwän* ~ *xjwan*, permit a reconstruction 宣 / *sjwan, paired with 言 / *zngjan. There is no need for *sng-*. A similar solution must be offered for 61 (B. p. 56-7) 庫 *k'o > k'uo / 舍 *sjä > sjä. 庫 has a *Hsh* element 車 *kjo < / *tkjo ~ *t'jja < / *t'jja; 車 *t'jja > t'ja is also paired with 舍 *sjä > sjä. All this points to a reconstruction valid in *SM* time 庫 / *dk'o // 舍 / *syä ~ tsyä.⁹ For 1174, B. proposes 葉 *ngiäp > ngiwp (< *zng-*?) / 提 *dz'jap > dz'jap (< *dz'ng-*?), but the *Hsh* connections of 提 point to *dz'jap < / *dzgiäp ~ dzgiäp (*KYSH* No. 291, p. 353), which is sufficiently similar to / *zngiäp (*KYSH* No. 196, p. 242). B. could have used this approach in dealing with many other word pairs, e.g., 857 惠 *sjwad > sjwäi ~ *dzjwad > xjwäi / 惠 *g'jwad > xjwei; according to *KYSH* No. 864, p. 1015, it is a simple equation of / *sywad ~ dz'jwad // / *zg'jwad. 1169 躡 *niap > niäp / 攝 *snjap > sjap; better / *znjap: *snjap. 1170 躡 *niap > niäp / 攝 *snjap > sjap. 躡 too must be / *znjap.

(5) An explanation which is not mentioned at all by B. should be discussed here, for it will be applied in several cases later and shows the real value of the *SM* material for Chinese linguistics: it is *a priori* not impossible that *SM* preserved readings of words which are attested neither in the Ancient Chinese nor in the Archaic Chinese reconstructions. *SM* may sometimes indicate the existence of clusters, which are not shown by the *Hsh* connections, or it may indicate a reading which is either a peculiar variation of the normal word form as found in the Ancient or Archaic sound reconstruction or a peculiar development half way between the Archaic and the Ancient Chinese. I adduce one example of each of these possibilities.

(a) 827 筆 *pljät > pjät / 述 *d'jwat > dz'juët. B. avoids a discussion of the *Erh ya* and *SW* texts where the dialectal variants for "writing brush" are mentioned: 聿 *b'jwat < / *b'lwat (< -k), 律 *bliwat < / *blywat (< -k), 筆 *pljät < / *p'lat (< -k), 弗 *piwat < / *plwat ~ plgwat (< -k), and 不律 *piüg-bliwat < # *pg'liwat (< -k), though this gloss gives the clue to the solution of the *SM* equation: the series of dialect correspondences shows that 筆 and 律 belong to the same *Hsh* series, for being cognates it is clear that the common graphic element in both was a phonetic indicator also. Yet, *SWKL* 1273 does not consider 筆 as a *Hsh* graph, but analyses it instead as 从竹从聿. This formula of analysis in *SW* does not *per se* exclude any phonetic role in any of the parts of the graph, but for some reason or other, *SW* did not find it exact to consider this character as a regular *Hsh* derivative. As it has been shown elsewhere¹⁰ the *SW* formula

¹⁰ The Chinese Dialects of Han Time according to Fang yen, Ch. iii. 2. The Hsieh sheng principle in the light of the liu shu, 4. Hui yi.

从...从... may indicate a phonetic reading resulting from a combination of downward or sideward reading of the graphic elements which have been separated in the analysis. Thus **tjuk* < | **tjuk* (*Hsh* derivates **hiuk*, etc.) (竹) followed by (隹) | **b'wət* may indicate | * | *tl'wət*. Consequently, at the time of *SW*, 筆 had already a reading, where the initial labial was lost | * | *bt'wət* > *t(l)wət*, variant reading of the regular | **p'lot*, so that 筆 could not be considered any more as a *Hsh* graph derived from 隹. Though this reading was lost, and the regular *piēt* crops up again in *Ch'ieh yüin*, *SM* still has preserved the reading of *SW*, and has further proved it by the sound pair 筆 **tl'wət* || 述 **d'iwət* < | **d'iwət* (*KYSH* No. 302, p. 371).

(b) 50 鳴 **o* | 舒 **šyo*. The Ancient Chinese sounds **uo* | *šyo* are equally unsatisfactory, and the solution must be found in a reading, supported by the *SM* evidence only, and different from both Archaic and Ancient Chinese. Here the *SM* points to a reconstruction, which is more archaic than the *Hsh* connection seems to postulate. The *Hsh* connections of 烏, as well as those of 方 (a graphic variant) show only velar initials, while the *Hsh* derivates of 予, in which comes 舒 (according to *KYSH*, No. 755, p. 875) show no velar initials at all. By positing a reconstruction on each side of the equation, which satisfies minimum change from the Archaic Chinese of both words, and at the same time satisfies the required similarity for a word pair in *SM*, we could reconstruct a provisional equation | **z'o* || * | *šyo*. *SWKL* 1683 analyses 舒 as 从舍从予. 予亦聲. But some editions write 从予舍聲 (followed by Tuan Yü-ts'ai), others write 从舍予聲, or even 舍予皆聲. Since 舒 is arranged in *SW* under chapter 予, it is probable that in the analysis 予 was taken as the semantic element, and 舍 as the phonetic element, but being cognates (予: 推予也 "to push over to give" ~ 舒: 伸也 "to extend = hand over to give") their sound was still closely similar, so that 予 was "also phonetic". 舍 was **šjā* < | **šjā*. As to 烏, *SWKL* 1653 quotes a phrase, attributed to Confucius, explaining the name of the crow as an onomatopoeia of its cry 肝呼 or 吁呼, also written (*Ch'u hsüeh chi* 初學記) 嘔呼 and 偃呼, and (*Ch'un-ch'iu yüan ming pao* 春秋元命包) 偃呼. The full *Hsh* reconstructions 肝 $\sqrt{*}$ **bzgiu*, 偃 **ju* < $\sqrt{*}$ **bzju*, 偃 | **zlgug* ~ *zlgug*, show that a reconstruction 烏 *S* **z'o* is the most plausible *SM* form. The grammatical uses of 烏 suggest rather | **d'o*.¹¹

II

From the above, it appears clearly that the *Hsh* connections of the paired characters in *SM* are of primary importance for interpreting the sound

¹¹ The *Ku-shü hsiü-tzu chi-chieh* 古書虛字集解 by P'ei Hsüeh-hai 裴學海. Comm. Press, Shanghai, 1935, p. 35: sq. gives some examples of 烏 used for 何 **g'ā* < | **dg'ā*.

equations. B. has discussed the *Hsh* connections on p. 40. If the *Hsh* connections of both paired words indicate a consonant cluster, which is also required to explain the sound equations, then, but usually only then, will B. infer a cluster in the *SM* words. This procedure is safe, but he thereby fails to explain the cases where one member of the pair could have a cluster, according to its *Hsh* connections, and the other member only because of its pairing with the first kind. Such is 899 體 **t'liar* > *t'iei* | 第 **d'iar* > *d'iei*. It could be argued that the Ancient Chinese sounds are close enough, but 903 禮 **liar* > *liei* | 體 **t'liar* > *t'iei*, shows that in 903 the Ancient Chinese was not the sound of *SM* time. If in one word pair the Archaic Chinese sound is needed to explain 禮 | **d'liar* ~ *d'liar* || 體 **t'liar* ~ | **tl'iar*, is it very probable that in the other word pair the sounds will also be 禮 | **tl'iar* || 第 **d'iar*? It is true that a double reading | **tl'* ~ *t'* is not *a priori* to be rejected, but before admitting this conclusion, it is advisable to investigate the contacts of 第. The word pairs 895-8 can be considered inconclusive, but 899, 915, 916 show three different contacts (體, 姨, 修). *KYSH* No. 246, p. 305 lists only pure dental initials for 第. But *SWKL* 2349 analyses 第 as a *Hsh* derivate of 尸 (*KYSH* No. 778, p. 914; 尸 **djad*, 延 **djan*, 屢 *xiei*, 纒 *liei*) which suggests 第 | **dýlād*. The *Hsh* series 夷 (*KYSH* No. 740, p. 871) combines the initials *d*, *t'*, etc., and *x*-, 姨, 瘕 | **dýād*; 修 **t'ia* (*KYSH* No. 204, p. 262) was | **tyiad*. Consequently, it is probable that 第 *S* **d'iar* and *S* **dýiar* were two variant pronunciations, one paired with 體, the second with 姨.

1. It is obvious that everything in the interpretation of the *SM* will depend upon the particular way in which the *Hsh* principle is understood, the extent to which this *Hsh* principle is applied and the sequence in which the various components of the cluster are combined. The true meaning of *Hsieh sheng* (諧聲) is a corollary of the problem of the limit to which the *Hsh* principle is applied. B. (p. 45) quotes Tung T'ung-ho to the effect that Karlgren's method of extending the consonant clusters to all the characters in one long series of *Hsh* derivates is a dangerous procedure.¹² Yet, the first question is to know what is a *Hsh*, what characters are *Hsh* derivates, and what is their phonetic element. The *Hsh* principle means that one graph is

¹² "Although 各 ancient *kāk* is phonetic in 路, Ancient *luo*, 路 itself is phonetic in several words like 露 which Karlgren also gives as **glāg* > *glo* > *luo*. Tung believes that building a chain in this manner is dangerous." B. himself hesitates to follow Karlgren, but still holds that his "is the only hypothesis that offers a reasonable explanation that fits most of the facts most of the time", but adds "that Karlgren very likely reconstructs a cluster too often in the word with initial stop occurring in a phonetic series with the Archaic contrast *k* : *l*. Thus in *GS* 766 every word with 各 as phonetic has a cluster. Since this is the only phonetic series with *kāk* type words in Ancient Chinese, the result is that for Archaic Chinese one finds only *klāk* words and no *kāk* words, which seems a bit extreme." This difficulty can be solved when the question of sequence of the cluster elements is answered differently than in Karlgren's system which B. has followed throughout.

found to form part of another graph as sound indicator. The indication applies to the whole, *global* phonetic aspect of the word, within the limits of a certain, as yet not clearly determined variability, and is therefore phonetically similar in the various *Hsh* derivatives.¹³ The term *Hsh* "agreeing sounds" may in itself stress less clearly the role of the whole reading of the phonetic indicator for the pronunciation of the *Hsh* derivatives, and one might argue that *Hsieh shêng* did not originally mean the same as *Hsing shêng* 形聲, but in the present article the term *Hsh* is used as identical with *Hsing shêng* 形聲 (the term used in *SW*) "form and sound", a term more expressive of the sense given above, and also defined in this sense in *SW*.¹⁴ Furthermore, there is to my knowledge no other objective criterion for determining the *Hsh* elements of a graph within the frame of one and the same graphic and phonetic system except *SW*. 筆 is a good example of the value of *SW*. Though graphically containing 聿, 筆 could not be read phonetically as a *Hsh* derivative, but on the other hand, according to *SW*, 聿 is phonetic in 聿, 守, and 盡.¹⁵ The value of *SW* is that it provides a consistent analysis of the graphs according to the pronunciation of one definite period. Later scholars, Chinese and others, have often deviated from *SW*, but only because they thought the *SW* analysis seemed unacceptable in the light of their knowledge of sounds and derivations in the Chinese language (cf. W. Simon, *Tibetan So and Chinese Ya* 'Tooth', *BSOAS*, 1956, 15/3). There is every reason to follow *SW*, and to improve our reconstruction formulae by applying the *Hsh* system consistently.

In doing so, some *SM* equations, which B. leaves unexplained, become

¹³ The *Hsh* derivatives are by definition at least phonetically similar but they can also be etymologically related, so that a distinction can be made between mere phonetic derivatives and cognate derivatives. In fact, many such cognate derivatives can be pointed out, and with more special studies in semantics more such cases may appear. Sometimes wild guesses, completely unfounded and therefore rightly criticized (cf. P. A. Boodberg, *Ideography or Iconolatry?*, *TP*, xxxv, 1940, p. 267), may finally prove to be true. The semantic role of 亦 "armpit" (phonetic) in 夜 "night" (luminaries concealed under or also released from the armpits) may go back to some mythological motives about the conceptions on "light" and "dark", also found in China (C. Hentze, *Tod, Auferstehung, Weltordnung. Das Mythische Bild im Ältesten China*, Zürich, 1955, pp. 45 sq., 172 sq.). In the purely phonetic derivatives, the notion of "phonetic similarity" must of necessity remain rather vague: it is necessary that first of all the *Hsh* cases given by *SW* be reconstructed in a way as consistent and phonetically as satisfactory as possible, before the extension and limits of this similarity can be determined.

¹⁴ *The Chinese Dialects of Han Time according to Fang yen*, i, Sect. iii, Ch. i. The Principle of *Hsieh shêng*.

¹⁵ Pelliot (*TP*, xxvii, 1930, p. 376) for no reason but the apparent impossibility of a reconstruction for 聿, 守, and 盡, as derivatives of the same *Hsh* series, doubts the correctness of the *SW* analysis. If the reasons were based on facts connected with textual criticism, concerning corruptions, interpolations, Pelliot, with his usual passion for the textual critical details, would surely have delighted to explain at least some striking cases. Wherever the textual criticism does not impose an emendation of the *SW* text as we have it, there is no reason to doubt its analysis more than the *fan ch'ieh* analysis of *Ch'ieh yün* 切韻 or *Ching-tien shih-wên* 經典釋文.

easy and clear. Thus 324 俗 *dzjuk > zivok | 欲 *giuk > giwok, 166 裕 *dju > ju ~ *diog > iau | 裕 *giug > ju | 裕 *giug > ju. The two last equations could be read in their Ancient Chinese reconstruction, but it is reasonable to consider them together with the first one. *KYSH* No. 90, p. 132, has readings 谷 kuk ~ iwok ~ luk, 裕 ju, 俗 zivok (< | *luk ~ d'juk ~ lyuk ~ l'uk, | *d'jug, | *dz'juk). The character 裕 (*KYSH* No. 288, p. 349) belongs to *Hsh* series 俞, which indicates no cluster initial, but 與 (*KYSH* No. 754, p. 875) shows only vocalic initial in the *Hsh* series. The inference is that in *SM* time 裕 was already *S* *diug (not *giug or ju). Similarly 15 支 *iëg > tsië | 騎 *g'ia > g'jië, of which the first member of the pair, 支, is phonetic in 肢, paired in 212 *g'jak > g'jok | 楷 *iëg > tsië (者 appears in its turn in 963 者 *g'ier > g'ji | 指 *iëg > tsië). All this points to reconstructions, still reflected in *SM*, 騎 | *dgia-; 支 | *iëg; 肢 | *dg'jak; 楷 | *iëg; 者 | *dgie-; 指 | *iëg-¹⁶ To solve the cases 1178 邑 *iëp > iëp | 偃 *d'iëp > d'iëp, and 1185 溼 *iëp > iëp | 溼 *iëp > iëp, B. refers to a note (p. 139), and points out the possible etymological connection between 都 *tuo "to assemble" and 邑 *iëp "town" = 偃 *d'iëp "to congregate", but this does not explain the phonetic pairs 邑 : 偃 and 溼 : 溼 of *SM*. Yet the latter becomes clear in the light of the *Hsh* (*KYSH* No. 745, p. 866, No. 195, p. 241, following *SW*): 邑 | *d'iëp : 偃 | *d'iëp, 溼 *iëp : 偃 | *d'iëp.

2. The problem of initial clusters is further complicated by that of the sequence and proper combination of the elements involved. In his comments on this problem, Mr. Miller rightly says that a sequence *lk-* is as likely as *kl-*. His reasons for choosing one sequence rather than the other are based on considerations from Tibetan-Chinese correspondences of words, and from the Chinese binoms. The first criterion, though important, is a secondary one and not always conclusive. Assuming that Tibetan and Chinese are related languages, there is no positive proof that the sequence of the clusters should be the same in both. But if by other methods the sequence in Chinese has been established and the corresponding words in Tibetan happen to show the same sequence, it is a welcome confirmation.¹⁸

¹⁶ *SM* often pairs words with different finals -g : -d etc., and vocalic ending; B. has not studied this side of the *SM* equations.

¹⁷ Though 偃 is not listed in *SW*, its listing in *KYSH* as *Hsh* derivative of 邑 can hardly be doubted. It is confirmed by the loan word (mentioned by B. p. 139) 偃 *iëp < | *d'iëp for 偃 *iëp < | *iëp ~ *iëp < | *iëp (for the *Hsh* connections of 支 cf. *KYSH* No. 590, p. 693; 旨 ib. No. 386, p. 466. 奇 is not listed by *SWKL* 2049 as having 可 phonetic, but is analysed 从大从可, i.e., 大 *d'ad *af *k'ad - | * | dk'ad.

¹⁸ Such is Miller's comparison (p. 284) of Tibetan *rgjam* (-tshwa) ~ *lgiam* (-tshwa) with 鹽 *iäm* (for which Karlgrén *GS* has no Archaic reconstruction, 609 n) / *d'iam ~ *l'iam* < -b (not *g'lam; cf. *The Words for Salt in Shuo wen*, I, 3; to appear soon in *Oriens*). Though the comparison of 來 with Tibetan *ldog* and other related forms *zlog* ~ *balog* confirm the Chinese reconstruction in the *Hsh* series 來 / *d'le ~ l'te, it does not explain the pairing of 哀 with 來 and 萊 (cf. *infra*, p. 179). The Tibetan transcriptions,

As to his second criterion, Miller quotes from his previous paper (*Language*, 30, 1954, pp. 430-1), but omits the basic principle, which as enunciated there, cannot be accepted. "When we reconstruct initial clusters in Archaic Chinese solely by means of the phonetic-compound graphs, we can never be sure of the sequence of the components of these clusters: for the phonetic-compound graphs, **lk-* is as acceptable as **kl-*. The only control is the binom; **kanglang* points to **kl-*, but **lang-kang* to **lk-*. Tōdō's collection of these binom controls, each carefully documented as to source, should do much to resolve some of the problems in these reconstructions". In my study published in 1943,¹⁹ I stressed the importance of the binoms for studying the different semantic and phonetic shifts due to popular etymologies and scholastic semanticizations. My study showed that in the various forms in which the binoms appeared, one could observe an element of irregularity at work in the sound development, which had led to the evolution of words along lines different from those which normal sound laws would indicate. The title of Tōdō's article, *Chinese Phonology as Viewed from a Standpoint of Expression: Morphological Impressionism Shown by the Compound Initials kl, tk, pl*, shows that he had a similar viewpoint. How can one know without previous investigation, whether the sequence in the binoms has not been reversed, or changed in the first or second component because of semantic attraction or contamination with other words? Tōdō

Note from p. 149—continued.

such as 食 = *lham* and 他 = *lho*, are rather late to be used as a key for the *SM* language. And why should "the reason for these peculiar transcription surely be found in the Chinese rather than in the Tibetan sound system." (Miller, p. 283) ? (Cf. Jäschke, *Tibetan Grammar*, 1929, p. 9 𑄎 *lha* ~ *hla*, and Addenda, p. 108. S. Shirokogoroff, *Phonetic Notes on a Lolo Dialect and Consonant L* (CYYY, i, 1930, p. 215-6.) On the other hand, 食 **t'am* is paired with 探 **t'am* (1220), which does not support such a reconstruction. Such a special *l* was suggested by Miller (p. 285) for 128 疏 **sjio* > *sjwo* / 𑄎 **gliog* > *lieu*. *A priori*, this is not impossible, but this case must be considered with other cases like 127 疏 / 索 **sák* > *sák*, 129 梳 **sjio* > *sjwo* / 疏 **sjio* > *sjwo*, and 459 𑄎 **k'óg* > *k'áu* / 𑄎 **gliog* > *lieu* ~ **gliog* > *liáu*. Both 𑄎 and 𑄎 have identical readings in Ancient Chinese and belong to the same *Hsh* series 𑄎 (KYSH No. 882, p. 1040), suggesting √ **bi'iog* ~ *bi'ég*. Evidently at the time of *SM* the initial labial had dropped, leaving / **li'ég* ~ *li'ég*. B. (p. 50) posits 𑄎 *k'-* / 𑄎 *gl-*, but this does not seem to be phonetically satisfactory. The *Hsh* series 𑄎 (KYSH No. 70, p. 107) has besides the velars, also *n-* and *l-*, so that we may posit 𑄎 / **lk'óg* ~ *nk'óg*. 疏, 梳 **sjio* (KYSH No. 179, p. 226) was / **sjio* ~ *sjio(g)*.

¹⁹ *Philologie et linguistique dans les études sinologiques* (Monumenta Serica, viii, 1943, pp. 167-219). This article is mentioned by Miller (p. 286) as one of the titles, among others, to be added to B.'s bibliography, though little is said there about *SM*, but quite a bit about binoms. The doubts expressed there (p. 117) concerning the value of the material of *Kuang Shih-ming* 廣釋名 by Chang Chin-wu 張金吾 (1787-1829) and *Han Wei yin* 漢魏音 by Hung Liang-chi 洪亮吉 (1746-1809) was exaggerated. Though these compilations do not possess the uniformity of *SM*, nor the authority of a contemporary compiler as Liu Hsi, they still have a real significance, which must be appraised for each item separately according to the sources from which it has been extracted. Sometimes the paronomastic value of some definitions in these compilations is not certain.

did not proceed by comparison of binoms made up of variants of the same stem in order to establish the sequence of the consonantal clusters in the etymologically related words of monosyllabic structure, nor did he study individual binoms in all the various forms under which they could be found, in order to reconstruct prototypes or intermediate word forms. On the contrary his words, taken from the modern dialects as well as Chinese literary texts and Japanese, are grouped according to a few simple meanings, (1) rolling, (2) turn, return, (3) connect, etc., in order to show the influence of some formulae of expressivity and their role in word formation and word evolution. His examples are not exhaustive (a *conditio sine qua non*, if weight is to be given to the percentage of binoms that show a sequence *lg-* or *gl-*), but only illustrative. There are different sorts of binoms: compound words (verb + noun, noun + noun, adjective + noun, etc.), binoms resulting from dimidiation or reduplication of a monosyllabic word, and binoms due to enclitic or proclitic extensions of a monosyllable. The binoms which can serve as a control are probably only those that result from dimidiation, and can be supposed to possess parallel monosyllabic forms, etymologically connected with them. It is not *a priori* certain that any binom, e.g. **langkang* or **kanglang* have anything to do with ***lkang* or ***klang*. Many binoms are simply reduplicative or inversed dimidiations, reinterpreted and repeatedly changed as a result of a need for expressivity and semanticization. The example **langkung* : **kanglang* is an oversimplification of the real situation. If these forms are Ancient Chinese values, the ***lk-* or ***kl-* hypothesis is based on the assumption that **l-* and **k-* do not point to ***gl-* and ***kl-* or similar initials in Archaic Chinese, and that, therefore, it is not a simple reduplicative binom. If these forms are Archaic, it is known that they were obtained on the basis of the analysis of the *Hsh* connections or other sound descriptions.

It seems that the *Hsh* derivatives in their Ancient Chinese reconstruction must be used as the primary and most important starting point for the Archaic Chinese cluster, and that a method of reconstruction must be set up which is primarily based on the complete series of different derivatives, according to *SW*. This method consists (1) in taking all the initials that appear in one and the same series; (2) in considering all the possible combinations of the various initials (including the cases of three as well as of two elements), so as to posit reconstructions which fulfil two conditions: (a) that the reconstructed forms preserve the essential parts and combinations that provide the required similarity in the whole of the phonetic structure of each word of the series; (b) that, nevertheless, each reconstruction has enough individuating phonetic elements, so that a different sound development is still possible, resulting in the various Ancient Chinese forms.

It is true that such a procedure will not always yield completely certain results. But here, in given conditions, not only the binoms, but also

the sound phrases, the existing cognates, the paronomastic definitions can bring new light and corrections. The fact that a binom (supposedly etymologically related to the monosyllabic form obtained from the *Hsh* connections alone) does not show the same sequence as the *Hsh* reconstruction, is not an indication that the latter is wrong.

In using the *Hsh* reconstructions to interpret the *SM* equations it must be understood that the *Hsh* connections reflect a period in the language, much earlier than *SM*,²⁰ and that, therefore, they should be viewed in the perspective of the later developments. Sometimes a simpler or slightly different reconstruction, intermediate between the *Hsh* values and the Ancient Chinese values, will explain the *SM* perfectly, and consequently will help us understand the *SM* in terms of an independent system of reconstructions. By comparing the *Hsh* reconstruction according to *SW* with that required by the *SM* equations, it will appear that the words do not all develop with the same tempo; some may show interesting archaisms, while others have already developed to rather simple and sometimes unexpected forms. Even in cases where the *Hsh* connections give no evidence as to the existence of Archaic Chinese cluster initials, it still is not impossible that such a cluster did exist; if all words in the *Hsh* series are so closely similar that they develop according to the same regular pattern, all vestiges of the earlier cluster disappear together. However, *SM* may still preserve such clusters, and often they are confirmed by other sources of information. Examples follow:

493 𪔐 *tjōg > 𪔐 / 𪔐 *ku > kəu ~ *kju > kju. 𪔐 is √*btjōg (KYSH No. 602, p. 712), while 𪔐 belongs to the same *Hsh* series with 𪔐 *kijōg > kju and 𪔐 *sjōg > 𪔐 (SWKL 942, 1361), hence we reconstruct / *skijōg, / *sjōg, / *skug ~ skug. In the *SM* pairing the *b*- in 𪔐 had already dropped: / *tjōg: 𪔐 / *skug ~ *S* *tkug.

582 𪔐 *k'āng > k'āng / 𪔐 *f'iang > t'iang. In this word pair, 𪔐 belongs to an extensive *Hsh* series (KYSH No. 441, p. 529) which suggests √*b'lkāng. According to KYSH and GS 𪔐 is *kāng and 𪔐 is *kāng ~ k'āng. Nowhere could I find a reading 𪔐 *f'iang. The equation *kāng / *kāng is perfect; yet there are indications that 𪔐 may have been archaic / *dkāng ~ dk'āng, and though this reading is not necessary it could tentatively be proposed for *SM*

²⁰ The reconstructions built on the *Hsh* connections are generally to be ascribed to the same time as the source from which the full extent of the *Hsh* connections of any series can be known, viz., *SW*. *SW* can be considered as the final phase in the standardization of the Chinese script, started by the unification of the empire under Ch'in Shih-huang 秦始皇 and the policy begun by Li Ssü 李斯 (221 A.D.). In so far as *SW* may have preserved by tradition some *Hsh* connections which had already ceased to be preserved to any extent in the pronunciation of Hsü Shen's time (this is sometimes shown by the *Tu jo* explanations—讀者—or other paronomastic definitions) and in so far as *SW* may include pre-*SW* sound descriptions expressed in sound phrases and in residual cases of unsatisfactory graphic analysis (e.g. *hui yi*), the full *Hsh* reconstruction may often go back to Late Chou, but the great majority of *Hsh* connections reflect the language of Early Han and Middle Han.

on the strength of the great number of clusters regained at that time in other words. *SWKL* 4601 analyses 𪔐 as 𪔐 大省象頸脈形. "From 大 shortened, (and) the pictograph of the neck veins." This analysis does not indicate a complete pictograph, or *Hsh*, and the role of 大 is not explained. The two graphic components can be combined together in a downward reading *d'ād ~ t'ād (大) *k'iang (頸) < # *dk'iang ~ tk'iang. This is confirmed by cognates 𪔐 / *tk'iang ~ dg'iang (and its definition, *SWKL* 3920, 頭莖 *d'ug'eng < # *dg'eng), 𪔐 *g'ung (defined *SWKL* 3921 頭後 *d'u-g'u(g) < # *dg'ug) ~ / *dg'ung ~ lg'ung. From the *SM* pairing we can therefore infer a reconstruction, simplified from √*b'lkāng > *S* *lkāng ~ dkāng: 𪔐 / *dkang. Our reconstruction of 𪔐 / *tk'iang ~ dk'iang ~ dg'iang differs from B.'s (p. 49), which posits *kl*-, because of 685 𪔐 *lieng > liang, 676 𪔐 *ieng > iang. Against *k'lieng speaks the *Hsh* series 𪔐, which is one with 𪔐 (KYSH No. 228, p. 285), and has initials *k*- and *t*-, etc. Furthermore 681 𪔐 *k'iang > k'iang / 𪔐 *sieng > siang (B. p. 56) is best explained by reconstructions / *tk'iang: *S* *s'iang > s'iang. 𪔐 belongs to a *Hsh* series with initials *l*-, *ts*-, *g*-, which does not include 命 (*SWKL* 582),²¹ and is to be reconstructed / *l'iang ~ z'iang ~ d'iang. The other word pair opposes 𪔐 to 𪔐. This latter character, according to *SW* (KYSH No. 717, p. 838), is reconstructed √*b'lieng, without any trace of dental or sibilant. Nevertheless we posit *S* *z'iang 𪔐 from / *b'z'iang ~ √*b'lieng.²²

612 𪔐 *liang > liang / 𪔐 *liang > liang, 601 𪔐 *gliang > liang / 𪔐 *lāng > lāng, are two word pairs which are parallel with 582, since 𪔐 belongs to the same *Hsh* series as 𪔐 (𪔐 √*b'lāng, 𪔐 √*b'liang). The other members are 𪔐 *gliang ~ (better) / *l'iang and 𪔐 *liang (*SWKL* 3669 𪔐 has phonetic 𪔐 siang ~ xiang) < / *z'iang. The *b*- in 𪔐 and 𪔐 has also already dropped in *SM* time.

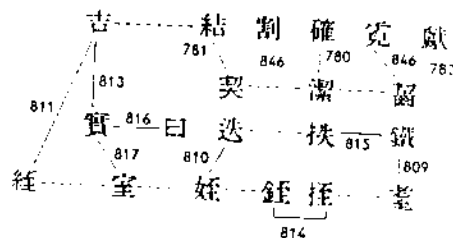
Sometimes the *SM* equation is not supported by the *Hsh* connections but by other kinds of connections, such as that between cognates, or in *SW* terminology *chuan chu* characters (Cf. my article *The Study of Chuan chu in Shuo wen*. CYYY. Anniversary Volume Y. R. Chao). Such cases are 218, 845.

218 𪔐 *tjak < t'jak / 𪔐 *xak > xok (*SWKL* 4550-5 has 𪔐 and 𪔐

²¹ *SWKL* 582 analyses 命: 𪔐 𪔐 𪔐. According to some editions 𪔐 may be "suppressed phonetic", nevertheless 命 still is exceptional and the only *m*- word in the series. GS 823 points out that "in the inscriptions 𪔐 very often serves for 命". It may indicate that there was once a labial in the initial; there is no certitude as to the pronunciation of these words in the inscriptions, and probably by the time of *SW* and *SM* this labial would already have been lost. Miller's note (p. 284) on 𪔐 as part of a binom 𪔐 𪔐 *lieng-ngu tells us only about a dialect variant for 𪔐 "prison", # *ingug, and nothing about the *SM* pronunciation of 𪔐 alone, as in 671 𪔐: 𪔐.

²² Fang yen 5/10, 11, 12, 13, 14, 15 lists various words, from different dialects for "jar", among which we can compare and reconstruct forms like 𪔐 / *b'eng, 𪔐 / *b'eng, 𪔐 / *b'd'ang, which show that a dental element may be present in the *Hsh* series 𪔐. This equation is not certain, for it could as well be explained that 𪔐 had already developed two readings *kieng (paired with 𪔐 *ieng) and / *tkieng paired with 𪔐 / *l'eng, etc.

Chain I. (Broken lines: *Hsh* contact; unbroken lines: *SM* word pairs).

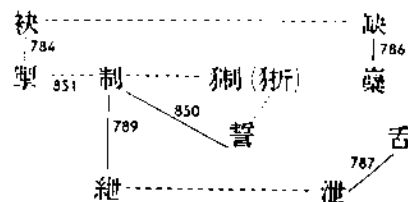


In this chain, only 813 (811) 吉 **kiēt* > *kiēt* / 質 **d'iet* > *d'iet* / 絰 **d'iet* > *d'iet*, and 816 日 **hiēt* > *hiēt* / 質, demand a special explanation in reconstructions different from either Archaic or Ancient Chinese. Once such a reconstruction has been posited, it is also necessary to test these new forms with the other words paired in this chain. The *Hsh* series 吉 shows a very regular range of sound derivations, but in one word pair 契 **kiad* was / **skiad*, and this points to a similar form for 結. Another word pair has 質, an isolated graph, but *SWKL* 3234, quotes a text from *Huai-nan-tzū* to suggest a paronomastic definition 質: 質. The *Hsh* connections of 質 are also irrelevant, unless 所 (*SWKL* 6381 所 *ngiən*, 2764 質 **tiad* ~ *tiət*), according to some editions, may be considered phonetic element, which would demand / **t'iad* ~ *t'iat* (所 / **dngiən*). This equation is confirmed by binomial variants 質確 - 質确 (*TT* 2312). 質 is further paired with 日 **hiēt*, a paronomastic definition already found in *SW*. *Kuang ya* equates 日 also with 節 *tsiēt* and 二 **hjer* < / **zhiəd* ~ *zhiəd*. Therefore 日 was in *SM* / **zhiət* and 質 / **dyiet* ~ *ndyiet*. From the pairings 吉: 質 and 結: 契 it is also clear that 吉 **kiēt* was / **skiēt* ~ *tkiēt* in *SM* time. Though the *Hsh* connections of 至 do not indicate any initial cluster, the pairing of 絰 with 吉 requires a reconstruction **d'iet* < / **dyiet*. However, though 失, having 乙 **iēt* as phonetic, can be reconstructed 迭 **d'iet* < / **dyiet*, 扶 **t'iet* < / **t'hiēt*, and though the *Hsh* series of 鐵 (*KYSH* No. 228, p. 290) shows initials *k-* and *t-*, demanding 鐵 / **tyiet*, it is not strictly proved from the *SM* pairing, that such was the reconstruction of *SM* time. In the *Hsh* series of 丰, there are three characters which appear in this group, and are paired with 獸 (782), 割 (846), 確 (780). All of these characters, according to their *Hsh* connections, can be reconstructed with an initial cluster 獸 / **zngāt*, 確 / **tkōk* > **k'ōk*, 割 / **zkat*.²⁶ Since the *SM* value 契 / **skiad* is already shown to be necessary, and the *Hsh* reconstructions of all the

²⁶ 失 has the phonetic element 乙 **iēt*, and among other derivatives there is also 日 **giwāt* < / **dgiwāt* ~ *zgiwāt*, 失 / **dyiet*. The word chain could be extended by 800 轄 **g'āt* < / **zg'āt*: 害 **g'ād* < / **zg'ād*, 801 轄 **xāt* < / **sxāt*: 迄 **xiət* < / **?* (cf. *infra*, pp. 175, 180), 803 戔 **giwāt* < / **zg-*: 轄 **xāt* < / **sxāt*. It is not proved, however, from the *SM* equations that the initial cluster was still preserved in all these words.

characters show initial clusters, the possibility of such clusters in *SM* time is very strong, but not strictly proved by *SM*. Even 醫: 覓 may point to 覓 / **zngiet* > **ngiet*, though 兒 shows no *Hsh* connection in favour of a cluster.²⁷

Chain II.



In this chain special attention is required for 784 袂 **k'wat* > *k'wet* / 製 **t'iad* > *ts'iai* ~ **t'iat* > *ts'iat*. B. (p. 64) deviates from Karlgren's reconstruction by suggesting a possible cluster *km-* ~ *gm-* in the series 袂, but he does not explain the *SM* pairing. This word equation would involve three initials *k-*, *m-*, and *t-*. The *Hsh* series 制 (*KYSH* No. 611, p. 727) has derivatives like 獬 *k'iad* < / **dk'iad*, and 製 **t'iat* < / **t'hiat*. 獬 is not found in *SW* but is written there 折 (*SWKL* 4414); this loan is very probable in the light of 850 誓 **d'iad* > *z'iai* / 制 **t'iad* > *ts'iai* and 784 袂. The *Hsh* series 折 has one derivative 誓 *x'iat* < / **sx'iat* (~ **x'jōg*). In order to explain 袂: 製, we may propose that from / **kmiat*, a *SM* form was developed with ending *-wiat* rather than *-iwat*; thus *S* **kwiat* could easily have had variants like *S* **twiat* or *S* **tgwiat*, equated under this reading with 製 / **t'hiat*. This reconstruction is confirmed also in 786 藥 **ngiat* > *ngiāt* / 缺 **k'wat* > *k'iwāt* ~ **k'iwat* > *k'iwet*, for / **kmiat* would not fit together with 藥 / **zngiat* (*KYSH* No. 291, p. 353) while *S* **twiat* ~ *tgwiat* is sufficiently similar. In the other word pairs (789), 繼 **s'iat* is a *Hsh* derivative of 世, a series which points to / **s'iat*, and (787) 泄 **s'iat* < / **s'iat* ~ **z'iat* < / **z'iad*, paired with 舌 **d'iat* > *ds'jāt*, a character belonging to a rather complicated *Hsh* series (*KYHS* No. 22, p. 35) which must be reconstructed / **dyiat* > *S* **d'iat*.

Chain III.

The figure representing this chain is divided in four different groups.

GROUP I.

SWKL 1756 defines 肋 **lāk* as 脅骨 "rib", and indicates 力 as its phonetic; *SWKL* 1182 defines 勒 with a phrase 馬頭絡銜也. "The halter at the head of a horse holds (it) by the bridle." Probably the *SM* definition 244 was already suggested in *SW*, and possibly by a binom 頭絡 *d'u-glāk* < / **dylāk*. Yet, the *Hsh* series 力 shows no trace of consonant

²⁷ Cf. p. 187. Though the *Hsh* series 兒 has no traces of cluster, 兒 is a variant of 彳 / **mād*.

clusters.²⁸ If one passes to the *Hsh* group 亥, again there is no trace of initial clusters. But the pairings 244 勒 *lāk > lāk / 刻 *k'āk > k'āk, 381 能 *næg > nài / 該 *kæg > k'ai, clearly demand a special reconstruction. Among the *Hsh* derivatives of 能 *næg ~ *næg < / *dn'æg, there is an intermediate form n'æg, it is quite possible that the *SM* form was a variant of n'æg : S *nyæg, and thus paired with 該 S *nkæg ~ lkæg. Probably, a similar reconstruction must be posited for 刻, which is paired with 勒 (244) and with 克 *k'āk (240). To be sure, however, one must investigate also 245 勒 *lāk > lāk / 絡 *glāk > lāk. The *Hsh* series 各 (KYSH No. 102, p. 149) suggests a reconstruction 絡 √*blyāk > / *lyāk. Comparing 肋, 勒 in the light of 刻 and 絡, it is probable that it was S *dl'āk. Finally there remains 240 克 *k'āk > k'āk / 刻. The *Hsh* series of 克 offers no suggestion for a better reconstruction, but *SWKL* 3061 says 克: 肩也. 象屋下刻木之形 "克 is a shoulder (i.e., supporting—shouldering—beam or buttress). It depicts the figure of carved wood under a building." It is obvious that 刻 here plays a rôle to indicate the sound, as it is almost the same as *SM* 12/169 刻物有定處. "To carve things there is a fixed place." The *SM* text continues but explains nothing about the pairing of 刻: 克, yet it may contain another sound indicating part: 人所克念有常心 "Wherein man subdues his thoughts, he has a constant heart." 所克 *sjō-k'āk < # *škāk. 克 / * / zh'āk : 刻 S *dkæg.

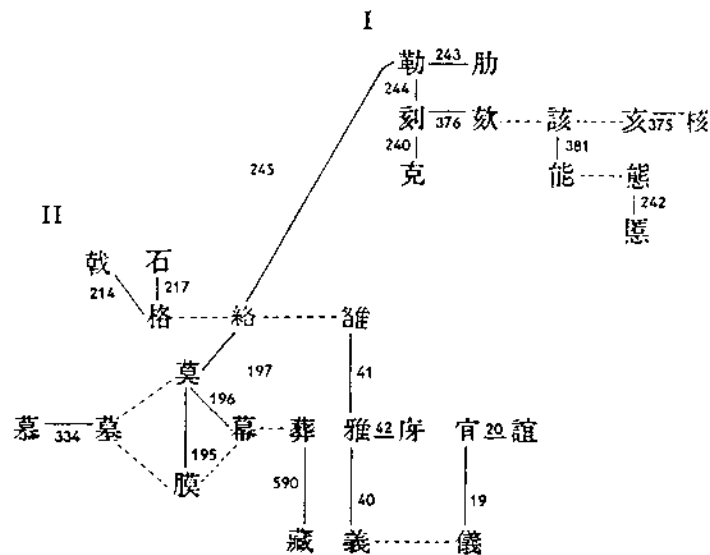
GROUP II.

The case 214 戟 *kij > kijak / 格 *klāk > kāk shows that the sequence in the reconstruction of 絡 / *lyāk is better than *glāk. For 格, too, we reconstruct / *lkāk.²⁹ Though the *Hsh* series of 戟 shows no traces of a cluster

²⁸ *SWKL* 6214 defines 力: 筋也 "nerve, muscle" and explains 象入筋之形 治功曰力能固大災 "It depicts the external form of a muscle. To achieve merit means the strength can confine the great calamities." On the other hand, 筋 is defined in *SWKL* 1820 肉之力也 "muscle of the flesh", analysed from 力从肉从竹, and explained 竹物之多筋者 "Among the bamboo objects, those that have much strength." It can be suspected that these phrases contain some words intended to indicate the sound of the word discussed, but at the present it is difficult to isolate any of them with certainty. One may suggest that 力 / * / dl'āk and 筋 *kian < / * / tjeian, 竹 / *tyōk were possibly cognates.

²⁹ The reason for preferring / *tn'āk to t'nāk is that by taking tn- as one phonological unit, followed by the aspiration, the loss of the -n- is easier to explain, as it is only a nasal release of the t-. Similarly, when reconstructing 格 *klāk, the loss of the medial -l- without any trace in the form of -j- has not been explained and it is as probable to reconstruct / *lkāk; this way the loss of l- is easily explained. Parallel to 格 / *lkāk, one can reconstruct 絡 / *lyāk rather than *glāk developing into lāk. A gradual simplification from √*blyāk > / *lyāk > lāk is easily understood. The same reason is behind the reconstruction 格 / *lyō(g), a character belonging to the same *Hsh* series as 芭 *kijō > kijō; here a form / *klo explains very well the -j- of kijō, but in 格 / *lyō the -j- is developed through vocalization of -y-. It shows that in the same series the sequence kl- may interchange with lk- like in 貉 lym- interchanges with bly-.

initial (according to *KYSH* No. 104, p. 152), its analysis (*SWKL* 5679) is 从戈 𠂔 "suppressed phonetic" (*KYSH* No. 723, p. 843, 𠂔 belongs to the *Hsh* series 𠂔), and it may be reconstructed therefore as / *tkiāk. This reconstruction is also suggested by the *SM* text 旁有枝格也 "On the side it has a branched-off (part)": 枝格 *ijēg-kāk < # *tkiāk. But 格 is also paired with 石 *djak > zjak, for which Miller (p. 285) suggests a reading *g'uk. This is quite possible, though the vocalism is not satisfactory. But on the basis of this variant reading *g'uk, one can go farther and posit two readings / *dg'uk ~ / *djak, of which the latter was equated with 格 / *lkāk ~ dkāk.



For case 41 雅 *ngā > nga / 離 *nglāk > ngv; the latter reading needs to be corrected *glāk < / *lyāk.³⁰ 雅 *ngā is further paired with 義 *ngia < / *zngia and with 序 *nga < / *znga (*KYSH* No. 171, p. 220) and through 義 with 宜 *ngia < / *dngia (*SWKL* 3243: 多 shortened phonetic).

It remains to explain 197 幕 māk > māk / 絡 *glāk > lāk, and the words of the same *Hsh* series 莫, 膜, 慕, 幕 (196, 195, 334). It is clear that here 絡 is taken in its full *Hsh* value √*blyāk, still preserved in *SM* time, alongside with the more frequent / *lyāk. Since in the *Hsh* series of 各, there is 貉 with the double reading lāk < *gl'āk ~ / *lyāk < √*blyāk and *māk < / *lymāk ~ glmāk, it is a reading similar to the latter one, that should be expected for 絡. 莫 is a *Hsh* derivative of 𠂔 *māng (*KYSH*

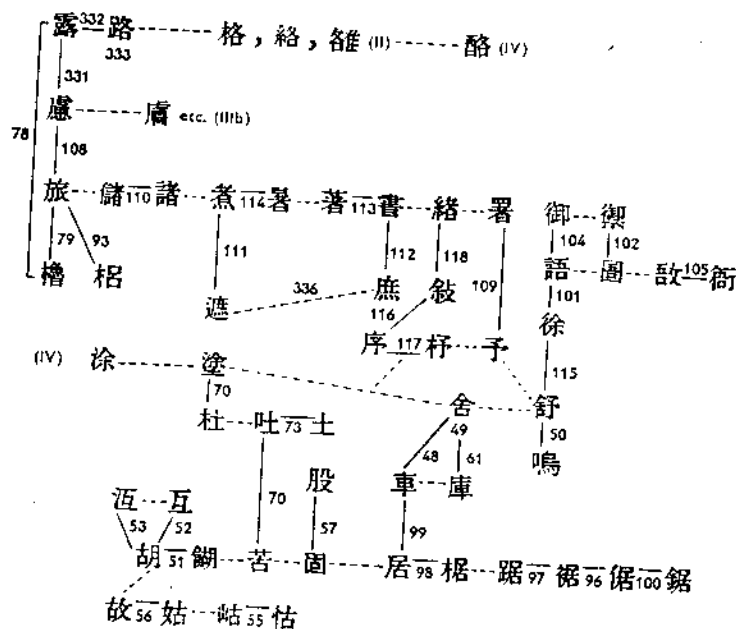
³⁰ For the character 離 no other reading can be found but lāk (*KYSH* No. 102, p. 149; *SYHP* ju 錄 12; *GS* 766 q *glāk > lāk).

No. 357, p. 431), and in the light of all the derivatives the full *Hsh* value was $\sqrt{*zmāk} \sim dzmāk$, and possibly in *SM* time $S *gzmāk \sim zymāk$.³¹

GROUP III (a).

This group again must start with the *Hsh* series 各, and the derivatives 路 and 露 $*glāg > luo$, for which Karlgren imagined a development with an intermediate form *glo*. In the assumption of $/ *lgāg$, the Ancient Chinese *luo* was a development where *-g-* became *-u-*. 露 $*glāg \sim / *lgāg$ is paired with 慮 $*ljo > liwo$ (331) and with 櫓 $*lo > luo$. 慮 has a derivate 慮 $*ljo$, and belongs to a *Hsh* series 慮 with labial initial element (*KYSH* No. 803, p. 960), already lost in *SM* time. Paired with 慮 $/ *dljog$, 露 probably had already developed *-o-* vocalism $S *lgōg \sim dljog$. According to *SWKL* 1476 魯 $*lo$ falls in the *Hsh* series 魚 (with 鮮 $*so$), and must be reconstructed $/ *zlgog$.³²

IIIa



Through 慮, the character 露 is also in contact with 旅, and through 櫓 with 櫓 ($*gljo > liwo$). For 櫓 we posit $/ *ljo$.²⁹ The reconstruction of 旅

³¹ 露 $/ *zmāk \sim dzmāk$ is reconstructed on the basis of the *Hsh* connections with 露 $*māng < / *zm-$, 葬 $*tsāng < / *btsāng$. *SM* 590 pairs 葬 $*tsāng > tsāng$ with 藏 $*dz'āng > dz'āng$, and further 591 倉 $*ts'āng > ts'āng$ with 藏 $*dz'āng > dz'āng$. The first equation appears already in *SW*, and at that time the pronunciation was probably $/ *btsāng : / * / bds'āng$. But there is no *Hsh* connection in the series of 藏 and 倉 to support a form $/ * / bds'āng$ or a similar form for 倉 (cf. note 67).

³² Cf. *The Word for Salt in Shuo wen*, I, 1.

can be derived from its *Hsh* connection with 者 (*SWKL* 1477: 旅 phon. in 者 $/ *tjōg$) as $/ *dljog$. There is good probability that 露 was not read *luo* in *SM* time but $/ *lgōg \sim dljog$, and that therefore also the paired words 路, 慮, 櫓, 旅 are to be reconstructed with the clusters as indicated before, because of the readings strictly demanded for 露. There is another proof in 333 where the paired words are 路 "chariot" / 路 "road". *SM* 24/2 indicates in the text that the word paired with 路 "chariot" was 道路 $*d'ōg-(g) lo < \# *dglog$, for it says: 天子所乘曰路, 路亦車也. 謂之路者言行於道路也. "What the emperor rides in is called 路. 路 is also a chariot. To call it 路 is to say paronomastically 'go on the road'."

The *Hsh* connections of 旅 allow us to attach here a long and complicated series of *SM* equations with the characters 者, 煮, etc. Since the *SM* value for 旅 is $/ *dljog$, it is possible that for this series 者 too, there was a cluster. Yet, this is not certain for it is not *a priori* to be expected that in *SM* time all the *Hsh* derivatives of one series must have attained exactly the same level of development. This subdivision within Group III must be studied in its own inner contacts. Cases 109 and 118, 116, will be the starting point of this investigation. Previously the cases 101, 115, 50 have been treated individually, and have led to reconstructions 語 $/ *zngjo$, 敍 $/ *dzjō$ (cf. p. 144), 舒 $/ *sjō$ and 烏 $S *z'o \sim d'o$ (cf. p. 146). 緒 and 敍 have the same Ancient sound *xiwo*, it is possible that in *SM* they had the same phonetic value too: $/ *dzjō$. For 舒 and 予 there is a probability that the specific graphic analysis in *SW* indicates that they are cognates: 予 $/ *djo$. Although the reconstructions 109 署 $*djo > xiwo$ / 予 $*djo > iwo$ and 118 緒 $*dzjo > xiwo$ 敍 $*dzjo > xiwo$, offer already perfect identity either in the Archaic or Ancient Chinese reconstruction of B., there is a strong indication that the exact values were 緒 $/ *d'jog$, 予 $/ *djo$, 舒 $/ *dzjō$.

Two other characters of the *Hsh* series 者 are paired with 庶 and 遮 respectively: 112 書 $*sjō / *sjog$: 庶 $*sjwag > xiwo$, 111 渚 $*tjō < / *tjog$: 遮 $*tjag > tsja$. The *Hsh* series of 庶 (*KYSH* No. 609, p. 726) gives no indication as to possible clusters, but *SWKL* 4145 analyses 庶: 从 广 共 "suppressed phonetic"; 共 古文 光 $*kwāng$; 庶 $/ *sjwag$, 遮 $/ *tjag$. That this cluster was still present in *SM* time is strongly indicated by the sound description of 書 $*sjō = 刺書 *ts'jēg-sjōg \sim *ts'jēk-sjōg < \# *tsjōg \sim tsjōg$ (cf. *infra*, p. 199). It is probable that similar cluster initials were preserved in the *SM* reading of 煮, 署, 著, 緒, 諸 etc. The contacts between the 者 series and the *Hsh* derivatives of 庶 will be treated later.

Cases 48 and 61 have already been treated independently above (pp. 144-5); now they have to be considered in the frame of this whole chain. 49 舍 "lodging": 舍 "stop for night" appears in (*SM* 17/5) not as a simple word equation, but a plain sound phrase: 舍於中舍息也 "舍 Lodging is that inside which one stops and rests at night." 舍 is according to *SWKL* 505 shortened phonetic in 余; hence the possibility that 塗, 涂, (paired with 度)

labial had already dropped in *SM* time. A number of binoms, which have 澤 as one of the component members, shows variant writings, which suggest 澤 / *d'ýák ~ d'ýák.³⁶ This reconstruction is the best fitting one in the *SM* equations. 184 鐸 *d'ák > d'ák / 度 *d'ák > d'ák and 219 席 *dzják > zják / 釋 *sják > sják brings this sub-group again in contact with 庶, for which the *SM* time reconstruction has already been established as 庶 / *s'ýwag and 遮 / *t'ýag. Here, too, it is probable that the reconstruction 席 / *dz'ýák and 度 / *d'ýák is equally applicable for *SM*. 度 itself is paired with 涂 / *d'ýog (69) and 圖 / *d'ýog (71) (cf. note 67).

222 腋 *zják > ják / 釋 *dják > ják can be explained according to the Archaic as well as the Ancient Chinese values, but it is quite clear that the Archaic values fit better for *SM* time. The *Hsh* contacts of 亦 bring in some equations, such as 221 跡 *tsják > tsják / 積 *tsjék > tsják, 239 脊 *tsjék > tsják / 積 *tsjék > tsják. In 223 亦 / 亦, the *SM* text does not give any additional clue as to the *SM* reading. The *Hsh* connections in the series 亦 (KYSH No. 783, p. 922) show no derivatives with initials other than dentals and sibilants. The same is true for the *Hsh* series 束 (KYSH No. 504, p. 602) 脊 (KYSH No. 488, p. 579); the *Hsh* series 冊 (KYSH No. 639, p. 754) shows no exceptional derivatives except in the finals. It follows that for the derivatives of 責, 亦 and 脊, 冊 there are no proofs for any cluster in *SM*, and that, therefore, 釋 was also *dják.

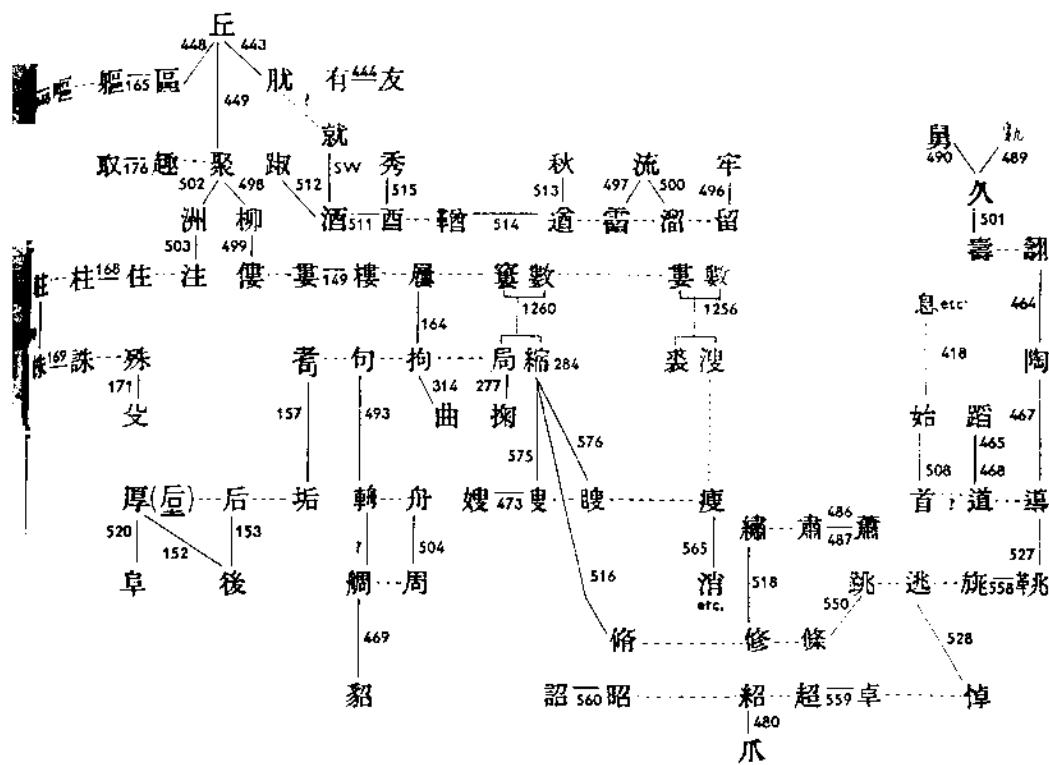
Chain IV.

This chain is of special interest because of its binomial pairings 1260 寰數 *g'liu-sliu > g'liu-sliu / 局縮 *g'liuk-sjók > g'liuk-sjók, and 1265 裘洩 *g'lióg-sjóg > g'liu-sliu / 寰數 *g'liu-sliu > liu-sliu. The first binom is mentioned in *Han-shu* (cf. TT 1597) as the name of a head covering. Its paired binom 局縮 is elsewhere mentioned as the paired word for 縮 alone (B. writes 284 縮 / 縮, but cf. *SM* 24/35 ... 車枕以前曰縮. 言局縮也... "small space between the shafts of the carriage and its front cross bar"; this pairing of binom with monosyllabic word indicates a reconstruction of 縮 *sjók = 局縮 *g'liuk-sjók ≠ *gsjók. Both components of the binoms 寰數 and 寰數 belong to the *Hsh* series 寰 (KYSH No. 872, p. 1024) and can be reconstructed separately 數 √*ls'ýug ~ ls'ýák, 寰 √*zg'lug, 儻 √*zlgug. Therefore 寰數 *g'liu-sliu was ≠ *gslug, equated with 裘洩 *g'lióg-sjóg from ≠ *gsjóg. Among the other words, 寰 was √*zlyug ~ zlgug, 樓 √*zlgug and 屢 *sklug. 149 樓 *glu > lau / 寰 *glu > lau "wide apart"; from the *SM* text it appears that the meaning of 寰 was "wide open, broad frames and criss-cross beams of doors and windows";

³⁶ TT 2565 lists 澤澤 and 郝郝 *xák < / *dxák, *sják < / *s'ýák, 2126 澤命 and 舍命 / *s'ýág, 647 澤然 and 與然 *sják < / *s'ýák ~ *xják < / *s'ýák, 566 澤蘭 and 石蘭 / *d'ýák. Probably 澤澤 is a reduplicative binom, for TT 1288 has 澤蘭 and 澤蘭 zjuen < *d'juen. As to 句, cf. 552 要 *iog > iau / 約 *ioh > iah, 295 的 *tiok < tiok / 灼 *tjók > tják, where the cluster has completely disappeared.

SM 17/54 樓言 (better 有) 牖戶者射孔婁婁然... "A tower has windows and doors, and many shooting holes...". In this sense, 婁 must have derived its meaning from the basic sense "connected (sticks)", and be read *g'liu < / *zlyug. This reconstruction is confirmed by the binomial words 離婁 *lia-(g)liu < / *dlia-l'ýug < / # *dl'ýug, and 麗廢 *liég(g)liu < / *zliég-g'liug < / # *zlyug. (SWKL 5635, Tuan Yü-ts'ai's commentary).

Chain IV



In order to determine the reading of these words in *SM* time, it is necessary to compare the words of the *Hsh* series 婁 as they appear in other equations. 499 柳 *lióg > liu / 儻 *gliu > liu ~ *glu > lau, 498 柳 / 聚 *dz'ju > dz'ju. According to SWKL (6201, 6862, 6870, 6650) 柳 has no phonetic connections with 卯 (SWKL 6627);³⁷ accordingly KYSH (No. 772,

³⁷ Though SW and *SM* show no labial elements in any of the *Hsh* derivatives of 柳, it is possible that in earlier periods 卯 (m-) served really as phonetic in 柳, etc. *SM* 16/43, 閨幕 is a binom for "lined coat reaching knees" of which 197 幕 *mák < / √*lymák: 絡 lāk < / √*blyák describes the sound of the second part, and 496 雷 *lióg < / *dlióg: 牢 *lióg < / *dlóg explains the first. 閨幕 *lióg-mák < / # *lgmák points probably to the same word as 幕 √*lymák ~ lgmák. SWKL 197 still mentions 雙升也 *piek-lióg < / # *pklióg ~ / *b'lióg ~ blyóg "jade circle".

p.909) lists only derivatives with *-l* or dentals: /**dljóg* (柳, 露, 瘤), /**dzlóg* (輶), /**dz'ológ* (酒) /**tslóg* (酒). 露 and 瘤 are paired with 流 (497, 500) **ljóg* < /**dljóg* (SWKL 5123: 流 *t'ust* phonetic), and 輶 is paired with 牢 (496) **lóg*, which is analysed in SWKL 532 as 从牛冬省 (suppressed phonetic): **tóng* < /**dlóg*. It follows that in *SM* time 婁 had developed into *S *zljug* ~ *zljug*. The binoms were read probably as *S *g'ju-sljug* (婁數), *S *g'ju(g)-sjuk* (局縮), *S *g'ju-sjug* (婁數) and *S *g'j(u)-sj(u)ug* (婁瘦).³⁸ 聚 **dz'ju* (KYSH No. 502, p. 600) and the derivatives 176 取 **ts'ju* > *ts'ju* / 趣 **ts'ju* > *ts'ju*, show no traces in their *Hsh* connections, of any velar element in the initial: **dz'jug* 聚: 柳 / **dljóg* ~ *dljóg*: 婁 *S *zljug* ~ *zljug*. The aspiration of 聚 may correspond to the *-y*- of 婁, or it may have been considered irrelevant; also 婁 / **zljug* would have been *S *zljug*, thus making a perfect pair with 柳 / **dljóg*.

On the extremities of the branch 留, word pairs appear like 511 酒 **tsjóg* > *tsjau* / 酉 **zjóg* > *jóg*, 512 酒 / 跟 **tsjók* > *tsjuk*, 513 秋 **ts'jóg* > *ts'jau* / 迺 **tsjóg* > *tsjau* ~ **dz'jóg* > *dz'jau*. 迺 / **tslóg* is defined in SWKL (6655) by paronomastic forms: 就 **dz'jóg*, 造 **ts'óg* ~ *dz'óg* < /**tsyóg* ~ *dz'óg* (KYSH No. 86, p. 130), and 酒醪 **tsjóg-glóg* (- /**b*) *d'lóg*, KYSH No. 882, p. 1040) < # **tsglóg*.³⁹ SWKL 2280 defines 就 as 高 **kog*, and analyses 从京从尤; according to some authors 尤 may be phonetic; 就 **ts'jóg* < /**tsyóg*. 秋 (KYSH No. 466, p. 558) has no velar initials in any of the *Hsh* derivatives. Finally 515 酉 **zjóg* > *jau* / 秀 **sjóg* > *sja* (complete lack of velars in the initials of 秀); (KYSH No. 567, p. 669) shows that in this part of the chain some words indicate a cluster, others not, and that in *SM* time the words with clusters had already developed a medial *-i*-: 酒 **tsjóg*, 酉 *(d)zjóg*, 迺 **tsjóg*, *dz'jóg*, 秀 **sjóg*, 秋 **ts'jóg*.

The *SW* analysis of 酒 establishes another contact with 就 and its derivatives. 443 朕 **g'jug* > *jju* / 丘 **k'jug* > *k'ju*, 444 友 **giüg* > *jju* / 有 **giüg* > *jju*, 449 丘 **k'jug* > *k'ju* / 聚 **dz'ju* > *dz'ju*, 448 丘 / 區 **k'ju* > *k'ju*. Of all these word pairs, 448-9 are the most important and also decisive for the reading required in the others. Only the *Hsh* series 區 has derivatives which allow a reconstruction with initial clusters 區 **k'ju* < /**bskjug*, 區 *xju* < /**bsxjug*, 樞 *ts'ju* < /**b'jug*, 區 *p'ju* < /**p'jug*. In *SM* time as appears from 448, this labial was already lost: 區 *S *skjug*. But the *Hsh* series 丘 shows no traces of cluster initials, yet the *SM* suggests there must have been, since 區 **k'ju* and 聚 **dz'ju* will not possibly explain the

³⁸ Miller (p. 283) posits **g'ulusu* and compares it to Turkish forms **kidiiz*, etc. But in order to do so, he has to presuppose a vowel *-a-* and the loss of *-u*: **g'ulusu*. Though it may well be a loan word, the particular identification needs more detailed substantiation. There are various Chinese binoms which constantly show the same structure: 龍 龍 **g'juo-sju* > *g'ju-sju*, 龍 龍 **g'juo-sjóg* > *g'jo-sjau*, and (a later form) 龍 龍 **kju-lju*.

³⁹ 醪 **glóg* belongs to *Hsh* series 醪 (KYSH No. 882, p. 1040) and was **bd'lóg* > *d'lóg*. *SM* 13/44 has a phrase which may be meant as a paronomastic phrase 宜城酒 宜城酒 'Like for 'wine' one says 'the *lo*-wine of Yi ch'eng'; 酒 / **tslóg*: 醪 / **dlóg*.

SM equations. Probably the *Erh ya* expression 泥丘 **njär-k'jüg* indicates an archaic form # **nk'jüg* ~ /** / tkjüg*.⁴⁰ (*Erh-ya yi-shu*, 10/3: 水潦所止泥丘 "Where water and rain pour stays (is) *ni-ch'iu*"). This reconstruction will also fit with 聚 / **dz'jug*. In 443, 朕 **giüg* belongs to a *Hsh* series, which according to KYSH (No. 799, p. 953) has no cluster at all; but if the hypothesis regarding 就 (尤 phon.) is right, it goes back to /**zgiüg*. But from these word pairs, one cannot strictly conclude that the same clusters must be applied in *SM* time for 148 區: 偶, 176 取: 趣, 444 有: 友, though there is some probability that in 165 軀 too had the same cluster: 區 **k'ju* > *k'ju* / 軀 **k'ju* < /**sklug*.

164 leads us into a new group of word pairs: 屨 **kju* > *kju* / 拘 **kju* > *kju*. As for 屨 the *Hsh* connections suggest a value **sklug* > *kju*. Though the readings *kju* or *kju* may seem sufficiently similar, nevertheless, as was established above (p. 152), 493 pairs 輶 / **tjóg* with 句 / **skjug*, and it is probable that a similar value should apply for 拘: /**skjug* / 屨 *S *skjug* (from **sklug*). Another *Hsh* derivative of 句 appears in 157 苛 **ku* > *kju* / 垢 **ku* > *kju*. This branch in our word chain ends in an unusual word pair 520 阜 **b'jóg* > *b'ju* / 厚 **g'u* > *gau*. The explanation is that in *SM* 阜 apparently still had a dental or sibilant, and 厚 a labial. But the *SM* text explains the equation 阜: 厚 by adding 言高厚. Since 阜 is the word defined paronomastically, it is possible that here a reading, different from the *Ch'ieh yün* reading, is suggested /**thóg* ~ /**dg'ug*. The SWKL (6474) defines 阜 as 大陸山無石者; as is done in many definitions of pictographs, a sound phrase is used instead of definition by a simple synonym: 大陸 **d'ád-liók* (/ **lyók*) < # **d'liók* ~ *dljók*. 阜 **b'jóg* was probably /**bz'jóg*, from which a *SM* form developed *S *z'jóg* ~ *dz'jóg*, paired with 厚 **g'u* < /**dg'ug*. In SWKL (2288) 厚 has a *ku-wen* variant 后, analysed from 后土 ("suppressed phonetic" 土 **d'o* < /**dyog*). Furthermore 152, 153, 后 **g'u* > *gau* / 後 **g'u* > *gau*, is explained by the *SM* text 12/21: 有終後也 **h'ióng-g'u* < # **tg'ug*, and *SM* 11/47 后後也言在後不敢以副言也 **dz'ag-g'u* < # **dzg'ug*.⁴¹ Finally, a *Hsh* derivative of 句, 苛 **ku* > *kju*

⁴⁰ The form *S *nk'jüg* agrees with other words which in *SM* have *n-* preceding in the initial cluster. Thus 1070 年 **nien* > *nien* / 進 **tsjen* must be solved through a reconstruction 年 / **dznen* > *S *ndzien* (P. A. Boodberg, *HJAS*, ii, 1937, p. 338): 進 **tsjen* < /**tslen* (KYSH No. 300, p. 370), 562 燒 **sjóg* > *sjau* / 燒 **tsjóg* > *tsjau* was *S *njóg* = **tsjóg*, 952 水 **sjwár* > *swi* / 淮 **sjwán* > *sjuan* was *S *sjwád* = *S *njwán*, 122 聚 **snjo* > *sjuo* / 荷 **sjó* > *sjuo* was *S *snjo* > **sjó*, 797 雪 **sjwat* > *sjwat* / 殺 **sjwár* > *swi* and 953 殺 **snjwár* > *swi* / 哀 **sjwár* > *swi* was **sjwat*: *S *snjwád*: /**sjwád*; 1224 穆 **sam* > *sám* / 黏 **njam* > *njam* was *S / *ls'am*: *S *n'x'am* (cf. pp. 170, 173), 885 屨 **snjar* > *sjé* / 徒 **sjég* > *sjé* was *S *nsjád*: *S *sjé*-, 855 羈 **ts'jwád* > *ts'jwái* / 芮 **njwád* > *njwái* was **ts'jwád*: *S *n'jwád* (KYSH No. 266, p. 323).

⁴¹ SWKL 2288 defines 厚: 山陵之厚也 "The cliff of mountain", but in SWKL 2286 厚 is also defined 厚, and is a cognate of 厚. (Moreover Tuan Yü-ts'ai thinks that 后 is phonetic in 垢 = 厚). 厚 is read like 厲 / **tgók* (cf. p. 48) and this supports the *SM* reading 厚 / **dg'ug*. 厚 is analysed by *SW* as 从言竹聲, but 言 (semantic element) is the inversion of 厚. *GS* 716 reconstructs 享 (= 旨) **xjang* ~

is paired in 157 with 垢 **ku* > *kəu*, for which we may probably posit the *SM* reconstruction on both sides / **tkug*. Although it could be argued that in the word pairs 152, etc., the Ancient and Archaic reconstruction taken by B. are equally good, 493 輯 **tiōg* > *tjəu* / 句 **ku* > *kəu* ~ **kju* > *kju*, shows that certainly for 句, and probably also for 耆 and the contact words, other reconstructions are necessary (cf. *supra*, p. 152). 504 舟 **tiōg* > *tjəu* / 周 **tiōg* > *tjəu* and 469 觸 **tōg* ~ (*tog*) > *tāu* / 貂 **tiog* > *tieu* must be considered in connection with the word pair 493; not only is 舟 of the same *Hsh* series as 輯, but 觸 is obviously cognate with 舟. 周 (*KYSH* No. 600, p. 710) has one derivate 惆; 惆 has a variant reading 惆, and *SWKL* 606 analyses 周 as 从用口 "suppressed phonetic"; furthermore, the interchanging between 周 and 舟 in some names and expressions, indicates that the same reconstruction must apply to 舟 as to 輯 / **tjōg*, but it is not proved that in *SM* the cluster was still preserved (*SWKL* 6950-1).

聚 **dz'ju* < / **dz'jug* is also paired with 洲 **tiōg* < *tjəu* (502), and through 洲 with 注 (503) and its various derivatives 住, 柱, 駐, and their further contact words 株 (170), 誅 (169), and 殊, paired with 父 (171). All these words show no traces of any cluster in their respective *Hsh* series, and it is more probable that 聚 had a reading / **dz'jug* ~ **dz'ju*, which sufficiently explains all these contacts in *SM*.

The remainder of the present chain of word pairs shows connections between the individual members of the binomial equations 1260 and 1256. 314 and 277 are irrelevant cases. But since 縮 alone is explained in *SM* by the binom 局縮, the contacts established with 縮 alone are valid in this context. 575 includes besides 叟 **sug* > *səu*, also 嫂 **sōg* > *səu*, paired with 縮 **sōk*, which reappears 576 嫂 **sug* > *səu* / 縮. For 縮 alone (in 284) we reconstructed on the basis of the binom 局縮 ≠ **gsiōk* (cf. *supra*, p. 164). The *Hsh* series 叟 (*KYSH* No. 557, p. 660) has one derivate *xjəu* (腹), suggesting 瘦 / **s'ōk*, 叟, 嫂 **sug* < / **sug* ~ *syug*. 縮 may have been / **s'ōk*, with an inversion ≠ **gsiōk*. *SM* 11/39 adds a text which has nothing to do with the definition of 嫂; it says 嫂叟也, 叟老者稱也. "shou is the appellation for old people". 叟 and 老 are cognates; / **g'ōg* ~ / **g'ōk*.⁴² But again there is no proof that such a cluster was preserved in

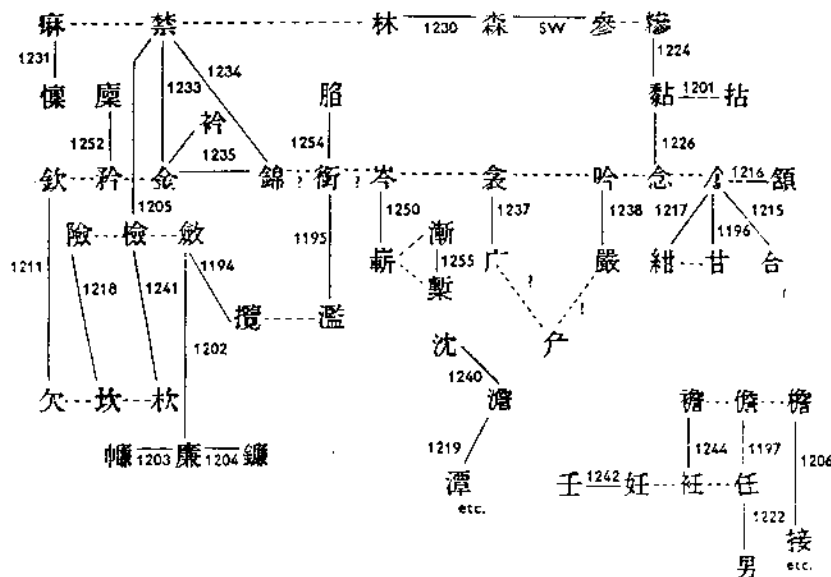
Notes from p. 167—continued.

xāng; it is a loan for 享 *GS* 751 **p'āng*, contacts which suggest / **bxāng*: *bxāng*: *pyāng*. The derivations and contacts of 厚 and 亨 indicate that equation 厚:阜 may probably be explained in terms of reconstructions of earlier period than that of *SM*: 阜 / **b'āyōg*: 厚 / **b'zyug*.

⁴² In *Fang yen* 1/18, 6/55, 10/40, various words for "old" are mentioned, and here one can compare 老 / **glōg*, 舊 / **g'lug* ~ **g'log*, 考 / **kl'ōg*, 耆 / **ku-t'ag* < ≠ **kt'ag*. 穉 / **k'eg-sag* < ≠ **ksag*. 叟 / **g'ōk* shows a remarkable similarity with these words; its reconstruction is confirmed in the *SM* text 12/134 on 瘦: 省瘦也 體瘦約少之言也 "省是瘦. 體瘦 'thin, lean' says that it has shrunk small". **g'jwo-siōk* < ≠ **g'ōk*. The word pair 省: 瘦 is a difficult one, not listed in B.'s list; may be 省 **siēng* was S **siēng* (?). Cf. *The Study of the Chuan chu in Shuo wen*, ii, 2: the example of *Shuo-wen*, *k'ao lao*.

SM time. It is possible that besides ≠ **gsiōk*, there was also a reading **siōk*. Moreover, 516 脩 **siōg* > *səu* / 縮 **siōk* > *suk*, introduces an entire new branch of word pairs (550, 518, etc.), none of which demands a cluster for *SM*, though some of the *Hsh* connections of these characters indicate such clusters in the initial for an older period. The only exception is at the very extremity, namely, 501 壽 **d'ōg* > *səu* / 久 **kiūg* > *kju*. Though the connection with the word pair 501 is too distant, and made through contact of *Hsh* derivatives only, without direct *SM* equations, the case itself needs explanation. Neither one of the *Hsh* connections of the two paired words (*KYSH* No. 69, p. 106, and No. 296, p. 364) indicates any cluster initial. Only 𣎵, the phonetic element of the *Hsh* series of 壽, is described in *SWKL* 6187 as a variant writing of 𣎵 with the text (emended by Tuan Yü-ts'ai) 从田 𣎵 象耕田溝誼也. "Depicts the sinuating line of water channels of the ploughed field." Probably 𣎵 is the original graph for 溝 "water channels in the field", and was a cognate of 𣎵. **d'ōg* < / **d'ōg*: 久 / **kiūg*. 490, 489 also pair 𣎵 **g'ōg* > *g'əu* and 舅 **g'ōg* > *g'əu* with 久. 舅 (*KYSH* No. 156, p. 202) was / **zg'ōg*, 𣎵 was probably / **dg'ōg* (?), as it belongs to the same *Hsh* series as 九 and is directly paired with it.

Chain V.



The *Hsh* series 林 (*KYSH* No. 889, p. 1048) is a complicated one and requires Archaic reconstructions as follows: 林 / **t'ylam*, 林, 麻 / **z'ylam* ~ *dl'ylam*, 霖 / **ls'ylam* ~ *sl'ylam*, 禁 / **tklam*, 禁 / **dklam*, 禁 / **nglam*, etc. 1230 林 **g'lam* > *lam* / 森 **s'iam* > *siam* is not a very good

SWKL 6867, 6871; it is a variant of 纒 and 纒. From the inspection of the earliest graphs for 纒, one form 纒 (Takata 1/22, SWKL 5174) contains 纒 (回 doubled), probably a phonetic indicator. This is confirmed by various binoms and definitions in SW¹⁸: 纒 / *dl'ywād. 纒 is also paired in 32 纒 *luwā > l'wēi / 纒 *l'wār > l'wēi. The first member of this word pair is listed in KYSH No. 902, p. 1058, with several other derivatives, luā, lien, luan, luāi, and jäng. This Hsh series faithfully follows the SW analyses, and a complete study of this intricate group of words, points to a reconstruction 纒 / *dl'ywād.¹⁹

¹⁸ 纒 is defined in SWKL 5881 纒得理也一曰大索也 "To connect together and obtain order. One theory says: 'a big rope.'" 得理 *təh-l'jəg < # *t'jəg. In SWKL 6527 纒 is defined 增也 "to add" and explained by a sentence 纒十黍之重也 "The piling of ten millet (stalks) in one"; 十黍 *diap-t'jə < # *d'jə-. The definition 增 becomes more significant in the light of the binoms 曾累 (Huai-nan-tzū) 纒累 (參) (Wén Hsüan, Pan Piao; Han shu) *tsəng (dz'əng)-l'wār < # *ts'jwād ~ dz'liwād, *ts'jə (ts'jəg)-l'wār < # *ts'jwād. The binom of TT 1724 纒談 is explained in Erh ya (2.64) by 纒, a definition repeated in SWKL 1006 纒: 纒談, 纒也, and 纒: 纒也 *fwia-ñwār < # *ñwād. According to Sun Yen 孫炎, 纒 is a dialect word of Ch'u corresponding to the Ch'in word 談. The binom 纒談 is reduplicative and 纒 was / *t'gwād, 談 / *dnywad. All this indicates a reading 纒 / *dl'ywād.

¹⁹ The reason why Karlgren GS 816 reconstructs 纒 jäng < *d'jəng is not apparent from the other Hsh derivatives. According to SWKL 5523 it has shortened 纒 l'wēi as phonetic. A loan word 纒 is also jäng < *d'jəng (GS 815). Since 纒 jäng could not be from an initial l- (cf. KYSH No. 902, p. 1058), the only probable initial was d- or n-. From the chia chieh 音 and SM 682 纒 *d'jəng > jäng / 章 *d'jəng > d'jəng, 纒 was *d'jəng. Among other derivatives, SW lists 纒 (SWKL 5980) *lwā- < / *dlwād ~ dlwād, and defines it 纒 *lwā- / *lwād-dlwād < # *dlwād and 纒 (底) 纒, reduplicative binom, *d'ia (d'jəg) -d'jə; / *d'jə ~ d'jəg ~ d'jəg. SWKL 6265 defines 纒 *lwā-; 姓 纒 *dz'uk-lwā ~ *dz'ā-lwā ~ *ts'wā-lwā < # *dz'uk-lwā ~ dz'uk-lwā ~ ts'glwād. SWKL 1719 defines 纒 *lwā-: 畜產 (short for 纒) 疫病也 "epidemic sickness of domestic animals". This word has been identified with 瘧疾 *ts'uk-lied < # *ts'uklied (Tso chuan, Huan, 6 y.), 瘧疾, *ts'uk-liwār < # *ts'ukliwād ~ ts'glwād, 瘧疾 *ts'uk-liwār < # *ts'ukliwād ~ ts'glwād (SW). SWKL 4634 defines 纒 *lwā- as 瘧 "rheumatism, arthritis". Fang yen 7/19 mentions among other words 瘧瘧 *jwār- jwār, which also has a reading n'wēi, and must be compared to the binoms 也 也 *uāi-t'wāi; all this points to 纒 / *dnywad ~ zn'jwād ~ t'gwād, etc., and to a form 纒 / *dlwād. SWKL 4587 defines 纒 *lwā- ~ *lwā / *l'wā-: 膝病也 "sickness in the knees". Kuang yün has lwān < *lwān 腰膝病也 "sickness of the back and the knees: rheumatism". The character appears in the binom 纒 纒 *lwān-l'wān < # *l'wān. SWKL 1568 纒 l'wēi < *lwā "lean, emaciated, weak", is used as a chia-chieh in Yi ching for 纒 *l'wār < / *dl'ywād. SWKL 3739, 6889 纒 ~ 裸 *glwār ~ / *l'wār is defined 裸 "naked", and appears in Meng-tzu 裸程 / *l'gwād-d'yēng, a reduplicative binom which shows the same alternations of the Hsh series 纒 itself: 纒 — 纒. SWKL 4343 纒 *lwā-, is written in Kuang ya 纒 *lwā < / *dl'ywād; it is surprising how many words in this series have script variants with 纒, also among the characters not found in SW, 纒 luā = 纒 / *dl'ywād. SWKL 6913 纒 luā is a character not found in SW, but listed in Erh ya (17/58) and compared with 纒 *t'ie / *t'ied (-g) and 纒 纒 *t'ie-twār < # *stwād ~ slgwād. SWKL 5822 defines 纒 luā as 不均, and Kuang ya as 不均也 "gross, uneven (like thread with knots)" it is cognate with 纒: 纒節也 "knots in silk" (SWKL 5803) *lwād; 纒 / *l'gwād. SWKL 1944 纒 jäng < *d'jəng is defined 答 / *d'jəng, itself defined 答籠 (-d'yung) "basket", both cognates of 答 / *d'jəng ~ d'yēng. Graphically Karlgren explains 纒 as "women + bear: clan name." Takata 93/15 lists various graphs of 纒 which can be compared to those of 能. 能 *nəng was / *dn'əng (cf. GS 885

948 pairs a character of the same Hsh series as 采 of 946, 采 *l'wār > l'wēi ~ *l'wār > luāi with 推 *l'wār > t'wēi ~ *l'wār > t'wēi. The second member of this equation is the centre of a whole group, as it has five different direct contacts in SM pairs. It is necessary to start with this character. The Hsh series of 佳 (KYSH No. 593, p. 697, entirely in accordance with SWKL 1433, 4875, 1595) is very extensive, including 佳 t'wēi, 佳 g'jwēi, 佳 xjwēi, 佳 l'wēi (~ jwēi ~ wēi), 佳 dz'wēi, 佳 ywēi, 佳 佳 sjuēn.⁵⁰ Accordingly one may safely reconstruct / *t'jwād. On the word pairs 947, 948, 829, B. has some interesting remarks.⁵¹ But on the strength of 793 拙 *l'wāt > t'jwāt / 屈 *k'jwāt > k'jwāt, it is necessary to posit / *t'jwāt: / *t'jwāt (KYSH No. 631, p. 744), and it is probably correct to apply this also to 829 出 *t'jwāt > t'jwāt / 推 *t'jwār > t'wēi ~ *t'wār > t'wēi; < / *t'jwāt: / *t'jwād ~ t'gwād. 33 pairs 吹 *t'wā > t'wēi / 推. KYSH No. 626, p. 742, lists the Hsh derivate 吹 xjē; this and some binoms (TT 278-81) suggest 吹 / *t'jwād ~ t'jwād. Whether 949, 945 had cluster initials in SM time or not, cannot be decided on the basis of these equations only. The fact that the majority of the word pairs with other Hsh derivatives of 佳 do require a cluster in SM, can be taken as a strong indication to the affirmative. Thus 960 and 944 pairing 淮 *g'wār > ywēi and 帷 *d'wār > jwēi with 圍 *g'wār can only be explained by / *dg'wād: / *d'ywād: / *dg'wār. (SWKL 2335 reduces the two Hsh series 韋 and 回 — KYSH No. 787, p. 934, — to one). Another word pair involving the Hsh series 佳 is 892, 緘 *ts'wār > ts'wēi / 摧 *dz'wār > dz'wēi < / *dz'ywād. KYSH No. 635, p. 752 shows only derivatives with ts-, s- in the Hsh series 衰. The aspiration in *dz'wār ~ dz'wād was probably a satisfactory corresponding element to the -y- in 摧, even -y- could also already have developed into mere aspiration. 953 緘 *snjwār > swēi / 衰 *sjwār > swēi was probably in SM time an equation of S *snjwād > swēi (from / *snjwād; cf. note 40) with / *sjwād. The final -r in both is to be changed to -d, as is probable from 797 雪 *sjwāt > sjwāt / 緘 *snjwār > swēi < ~ *snjwād. 雪 (KYSH No. 586, p. 689) was, however, / *s'ywāt. This suggests that 緘, 衰 may have had an initial cluster with -y- but it is not proved by the SM equation.

942 緯 *g'wār > jwēi / 圍 *g'wār > jwēi, 941 閱 *g'wār > jwēi / 衛 *g'wād > jwēi may have had the cluster initial dg- established for 圍

態 *t'nəg ~ / *t'n'əg; KYSH No. 765, p. 891, phonetic 台 *d'jəg; SWKL 4441. Ting Fu-pao identifies the Chou li expression 三台 with 三能 / *d'yəg: / *dn'əg. KYSH (No. 792, p. 947) following SW puts 熊 "bear" under the phonetic series 炎 jām < *d'iam < / *d'iam. Karlgren's reconstruction *g'jūm is probably based on Swatow dialect him (JRAS, 1928), but *g'jūm is from / *dg'jūm ~ d'yūm. W. P. Yetts (The Cull Chinese Bronzes, 1939, p. 89) explains 熊 (KYSH No. 49, p. 76 *i'um) as a loan word used for 熊 in order to avoid a clan tabu; this indicates a reconstruction 熊 / *d'iem.

⁵⁰ The case of 隼, variant of 隼, as a Hsh of 隼 is not certain. It is written accordingly to different sources 隼, 隼, 隼, 隼. Some authors analyze 隼 as consisting of 隼 ÷ 隼, shortened into 十. On the reconstruction of 隼 in SM, cf. note 40.

/ *dgiwəd, but it is not proved, for 園 could have developed in some cases *giwəd alongside the form with a cluster. 943 葦 *xiwər > xjwəi / 葦 *xiwər > xjwəi remains equally uncertain as to the preservation of a cluster in 葦; the Hsh series 葦 (KYSH No. 19, p. 30) is evidence against it. The reconstruction of the character 葦 (873) and its derivatives (874, 869) 葦, 葦 depends not only on the contact with 葦 (/ *dgiwəd) but also on the contact at the other extreme with 葦. (cf. *infra*, p. 180).

In 946 葦: 葦 the reconstruction of 葦 and 葦 has not been treated. The forms posited for 葦 and 葦 give already a good basis to reconstruct in 葦 and 葦 a cluster with dental + velar as in the other members of the word pairs. Though KYSH No. 891, p. 1050 shows only initial *l-* in the Hsh series 葦, B. suggested *d- for both 葦 and 葦 (cognates of 葦) on the basis of the Primitive Tai form *t'lai.⁵¹ This argument from facts

⁵¹ B. (p. 58) writes: "The phonetic series of 829 葦 is one with both velar and palatal initials. There are in addition 葦 *jiwəd and 葦 *p'jiwəd where 葦 is probably the phonetic. Maspero (p. 319) includes the phonetic 葦 in his class of words having *l* as the presumable common factor. There is thus some evidence for a cluster in the word 葦. This gives us a basis for reconstructing a *dl* cluster for 948 葦 'plough'. Now there is another word for 'plough' GS 519 葦 *liar > liei and *liar > li. The phonetic here is 葦 *liad which appears in example 950 b above, glossing the form *liwər. In this case we said that 葦 possibly had a *dl*-cluster. Since the two words for 'plough' are undoubtedly cognate, there is, to my mind, good internal evidence for both words having had a *dl*-cluster. The gloss 葦 *lag > lai for 葦 *liwər > liwəi may have indicated a variant pronunciation for 948 a. 葦 is itself glossed in example 382 by 葦 *ar > ai, so it looks as if the vocalism of both words was -ai in Han times. It is pertinent here to mention a very likely comparison with the Tai languages. Li Fang-kuei has reconstructed the Primitive Tai word for 'plough' as *t'lai. The tone category of the word is that which corresponds to Chinese p'ing-shēng, so the direct cognate here is not 葦 but 葦 *liar > liei ~ *liar > li which also corresponds better in vocalism, presumably -iai or -jai in Late Han. I have reconstructed *dl*- for the two related Chinese words on the analogy of Karlgren's *gl*- and *bl*- words. It is not possible that the Chinese word had *t'l* because if Karlgren is correct this became *t'* in Ancient Chinese." — In the Hsh series 葦 (KYSH No. 631, p. 744) there is no derivative with *l*-, and the derivatives with *n*- can as well be considered as variations of *d*- or *ng*- as of the non-present *l*:- the reconstruction of Maspero with *l*- seems less probable. The character 葦 *jiwəd (mistakenly written 葦 by B.) is analysed in SWKL 90 as 葦 示 示 but is emended by Tuan Yü-ts'ai into 葦 示 示 "suppressed phonetic" (or even 葦 示). The character 葦 presents more difficulties. KYSH reads *kuat*, agreeing with SYHP ju 24. But the latter lists two other readings: shang 海 11, 葦乃切 p'ai, 又音葦 p'jwei, and ch'ü 葦 5 滂佩切 p'ui. SWKL 2995 analyzes 葦: 从月出 "suppressed phonetic" (some editions: 出 葦); this is followed by the phrase, which may be meant as a sound phrase: 丙午 葦 *piāng: / *p'yang-ngo (/ *zngo) < # *p'zngo(g)? In the light of the Hsh connections, 葦 *p'jiwəd ~ *p'wəd ~ *p'ad should go back to √ *p'zgwəd ~ *p'zgwəd ~ *p'zgwəd, while the other derivatives in this series would have had a labial element in the initial, lost in later periods. However, SM 210 葦 *p'ak > p'ok "phase of the moon" / 葦 *pag > pa "have hegemony" is isolated from a SM text 1/66 葦月未成明也 葦月始生 葦然也. "葦月 is the moon when it is not yet bright. The new moon begins to grow incessantly (like a hegemon)". Probably the pairing is not only between 葦: 葦 but also between 葦月 and 葦月; *p'jiwəd-ngiwdt: *p'ak-ngiwdt ~ p'ag-ngiwdt. A possible sandhi in 葦月 S *p'jwan-ngiwdt > p'jwan-ngiwdt may make this member even more similar to the two other word pairs. 葦月 is found in Shu ching, Yi li under the form 葦月 *p'ak-ngiwdt.

outside the Chinese field is suggestive, but not certain. In SWKL 1868 葦 is analysed 从木推丰 "From 木 (wood), pushing through 丰 (grass, brushes)", and is explained: 古者垂作耒耜以振民也 "In early times Ch'ui⁵² made the plough share in order to assist the people". The use of 推 in the graphic analysis (/ *t'jiwəd) and the name Ch'ui 垂 *dwia < / *dgiwā- ~ d'giwā- may have served as phonetic indicators, so that a reconstruction 葦 / *dl'wəd ~ dl'wəd is very probable, and, from the word pairs of SM, must even have been preserved till SM: S *dl'wəd.

In 950 葦 *liwər > liwəi / 葦 *liad > li, the reconstructions of the Archaic as well as of the Ancient Chinese in B. can hardly explain this. The problem is further extended to 920 and 902. The Hsh series 葦 (KYSH No. 907, p. 1061) has beside the *l*- also *d*-; it permits a regular / *dl-, and the SM pairing with 葦 / *t'jiwəd even suggests S *dl'wəd.⁵³

947 葦 *liwər > liwəi ~ *liwər > luai / 葦 *lag > lai is a particularly puzzling word pair. It needs explanation from the point of view of finals and initials. The former problem was solved by B. by supposing that -ag had already become -ai,⁵¹ but he had nothing to say about the initial of 葦, which on one side must agree with that of 葦 dl-, and on the other side with 葦 *ar (382). The Hsh series 葦 (KYSH, No. 874, p. 1029) lists derivatives like 葦 ngien, 葦 lien, 葦 f'i and 葦 tai, which point to reconstructions / *dnglén, / *dglén, / *t'ylag, / *l'lag.⁵⁴ For 葦 one may propose / *d'lag > S *d'lai paired with 葦 S *dl'wəi, and with 葦 (382).

382 葦 *lag > lai / 葦 *ar > ai; 889 葦 *ar > ai / 葦 *ad > ai, 865 葦 *ied > i / 葦 *ad > ai, 869 葦 *xiad > xjoi ~ *xiad > xji ~ *g'ied > g'ji / 葦 *giwəd > jwəi, 868 葦 *k'iad > k'joi / 葦 *xiad > xjoi, 801 葦 *xat > xat / 葦 *xiat > xiat. 911 葦 *iar > jai / 葦 *iar > jai, 913 葦 *iar > jai / 葦 *ia > ie, etc.

The Hsh series 葦 (KYSH No. 700, p. 825) and the series 葦 (KYSH No. 71, p. 109) offer no material to reconstruct any sort of cluster. Yet the pairing of 葦 with 葦 demands a reconstruction / *d'ad > S *d'ai. It would be possible to suppose two readings / *d'ai (paired with 葦) and / *ad (paired with 葦), but 865 pairs 葦 with 葦. Now the latter member is a cognate of 葦 (SWKL 4591) which has 葦 phonetic: 葦 / *d'ied, 葦 *iē

⁵² On Ch'ui 垂, minister of Shen nung, cf. Granet *Danses et légendes de la Chine Ancienne*, p. 506-7, 520-22, 545, 577, and Karlgren, *Legends and Cults in Ancient China* (BMFEA, xviii, 1946), p. 256-7, 268, 229, 260-2.

⁵³ Chu Chün-sheng 朱駿聲 (SWKL 1826) quotes Kuang ya 利和也 as a shēng-hsün (paronomastic definition), referring to texts in Yi ching and Li chi. 葦 / *dl'wəd: 葦 / *zg'wəd. (Cf. note 46, on 葦).

⁵⁴ GS 932 葦 is a pictograph, and so is GS 944 葦; they are probably cognates, but in SWKL 2307 葦 has no Hsh connection with 葦. If, as a cognate of 葦, 葦 ever had a labial element, this was no longer the case in SW time, but it was probably still felt dialectally as indicated in SWKL 3099 which explains 葦 as a dialect word of Ch'i corresponding to 葦. The reconstruction 葦 / *l'lag, 葦 / *d'lag is confirmed by definitions like e.g. SWKL 120 葦: 葦, *lag-iuk < # *lgtuk ~ l.tuk.

another *Hsh* derivative of 川, 訓 is read **xiwən* < / **dxjwən*. The character 吮 too (*KYSH* No. 765, p. 891) permits a reconstruction / **dyjwən*. This reconstruction is confirmed by the pairing of 吮 with 循 **dzjwən* > *ziwən*, and through 循 with 順 **d'jwən* > *d'sjuən* (1142, 1144). 順 was / **dyjwən*. *SWKL* 5136 s.v. 川 has already the same word equation as in *SM* with the difference that 穿 is part of a binom 貫穿. 穿 **t'jwən* (*KYSH*, p. 749) does not belong to a *Hsh* series which can be reconstructed with initial clusters, but 穿 and 貫 are probably cognates and 貫穿 could be an inverted sequence of a binom dimidiated from **tkwān* ~ / **tj'jwān*. 循 **dzjwən* (*KYSH* No. 247, p. 306) has no *Hsh* connections that suggest any initial cluster, but the contact with 吮, paired itself with 咀, and the contact with 順 strongly suggests a cluster in 循 as well as in 吮. 酸, a *Hsh* derivative of the same series as 吮 is paired in 987 with 遜; in itself **swān* > *suān* : **swān* > **suān* is a perfect pairing, but since 酸 goes back to / **sgwān* it is possible and probable, though not proved, that this reconstruction is applicable to *SM*. As to 孫, *SWKL* 5786 analyses it as 从子从系, but discusses it under the same division as 系 (cognate). Some editions write 从子系 "suppressed phonetic", *yiei* < / **g'ied* < / **g'ied*.⁵⁸ A positive indication for a cluster in 孫 is found in the paronomastic definition of *Kuang ya* (*Shih ch'in*, No. 12) 孫 : 順.⁵⁹ 坤 **k'wən* : 順 **d'jwən* can only be explained by a reconstruction / **tkwān* : / **dyjwən*; similarly 孫 : 順 of *Kuang ya* was / **sgwān* : / **dyjwən*; it confirms the reconstruction in *SM* 遜 / **sgwān* : 遜 / **sgwān*.

1098 pairs another *Hsh* derivative of 夔 : 夔 **siwən* > *siwən* / 峻 **sjwən* > *siwən*. 峻 appears again in 1093 囧 **sjən* > *sjən* / 峻. Whether 峻 **sjwən* was still / **sjwən*, and 夔 **siwən* was / **sjwən* in *SM* time, appears quite possible according to the respective *Hsh* series (*KYSH* No. 644, p. 760), but will be proved only from the other contacts in this group. Thus in 1042 襪 **dz'jwān* > *dz'jwān* / 綠 **d'jwān* > *jwān*, 襪 has also the reading *g'jwān*. 綠 (*KYSH* No. 231, p. 291) goes back to / **dyjwān*. A *Hsh* derivative of the same series 象 is paired in 1035 橡 **d'jwān* > *d'jwān* / 傳 **d'jwān* > *d'jwān*, and 綠 itself in 1141 with 唇 **d'jwān* > *d'sjuən* / 綠 **d'jwān* > *jwān*. 唇 (*KYSH* No. 818, p. 975) also goes back to / **dyjwān*, and 傳 (*KYSH* No. 291, p. 353) to / **dyjwān*, but nothing in the *SM* pairings necessitates such a cluster in *SM* time for any of the equations 1093, 1141; there is a probability, however, for 1042. The character 囧 (*KYSH* No. 563, p. 663) has derivatives with initial *n*-, but nothing suggests a cluster with a velar for

⁵⁸ 系 belongs to the *Hsh* series *J* (*KYSH* No. 778, p. 914) which indicates a final *-d*, as against *GS* 876 **g'ieg*. On the basis of rhymes no final *-g* is necessary; according to *Chu Chün-sheng*, it appears in *Lao-tzu* and *Chuang-tzu* rhyming with 雌 *-r*, in *Chou shu* rhyming with 溪, 離, 宜, 奚 (*-r, -d*). But the *SW* defines 系 paronomastically by 繫 **g'ieg* ~ *kieg*, and this is repeated in *SM* 346 系 **g'ieg* > *yiei* / 繫 **g'ieg* > *yiei* ~ **kieg* > *kiei*. These two reconstructions may, with alternating finals *-g* ~ *-d*, well be acceptable as two variations of the same word.

either 囧 or 峻 of 1093 in *SM* time.⁵⁹ 1143 盾 **d'jwān* > *d'sjuən* ~ **d'wān* > *d'uān* : **d'uān* > *d'uān*. 盾 (*KYSH* No. 247, p. 306) shows no trace of any cluster, and though 豚 (phonetic in 遞) is a cognate of 豕, there is no proof that any cluster was present in this equation at *SM* time.

1273 餐 **ts'ān* > *ts'ān* / 乾 **k'ān* > *k'ān*, listed by B. among the "problematical residue", is perfectly clear in the light of *SW*. 餐 (*KYSH* No. 519, p. 623) has a phonetic 歺, which in *SWKL* 1697 is analysed 从又从夕. Yet some editions have the additional 夕亦聲, and (*KYSH* No. 192, p. 237) indicates a reconstruction / **ts'ān(d)*. On the other hand, *SWKL* 2951, 6563, 225 analyzes 乾, 乾, 於 as finally derived from *Hsh* 於; 乾 / **dk'ān(d)*. The hypothesis that 餐 and 歺 are cognates seems the more acceptable, since the same kind of word pairing as in 1273, reoccurs for the same word chain, in 999 輓 **g'wān* > *ywān* / 散 **s'ān* > *s'ān*. 輓 **g'wān* goes back to / **zg'wān* (*KYSH* No. 291, p. 358); though nothing similar is found in the *Hsh* series 散 (*KYSH* No. 552, p. 651), this equation requires a *SM* form 散 **s'ān* ~ *s'ān* ~ *s'ān* (cf. *infra*, p. 189), and the character 殮 **swān* < / **sgwān*, cognate of 餐, paired again with 散 **s'ān* confirms this reconstruction (1109). However, there is no certainty that a cluster is equally present in 1008 霰 **s'ian* > *sien* / 星 **sieng* > *sieng*, though it is probable, since 霰 is directly paired with 散; but the evidence of 星 (*KYSH* No. 676, p. 798; *SWKL* 2690) is negative in this respect.

1124, 1125 list 伸 **sjən* > *sjən* with 辰 **d'jan* > *sjən* and 晨 **d'jan* > *sjən* ~ **d'jan* > *dz'jən*. Though both *Hsh* series of the characters on each side of the equation do indicate clusters / **sjən* and / **d'jan* ~ *d'jjan*, there is no proof that such a cluster still existed in *SM*. The same applies to 1085 身 **sjən* > *sjən* / 伸 **sjən* > *sjən*, 1086 申 **sjən* > *sjən* / 身, 818 膝 **sjēt* > *sjēt* / 伸 and 1094 信 **sjən* > *sjən* / 申. However, at the extreme branches of this chain, the clusters are again necessary. One of these cases is 1077 印 **j'jən* > *j'jən* / 信 **sjən* > *sjən*. *SWKL* defines 印 with a phrase which contains already the *SM* equation 印 : 信, for it says 印, 執政所持信也 "What those who wield power in government hold is the seal". The analysis 从爪从卩 does not exclude the phonetic role of 卩, for 信 and 印 are cognates: 印 / **z'j'jən* : 信 **sjən* < / **sj'jən*. Since 伸 is also paired with 信, this latter character had probably two readings **sjən* alongside with / **sj'jən*.

⁵⁹ 囧 heads a long and complicated *Hsh* series (*KYSH* No. 563, p. 663), which agrees with *SWKL* (4643, 1150). Yet, it offers no indication of any initial cluster other than the cluster found in 囧 / **znōng*, etc. However, *SWKL* 218 describes 卩 *k'wān* as similar in sound to 囧 **sjən* or 退 **t'wəd*; / **t'wān*, / **sj'jən*, / **t'gwəd*. Furthermore, *SWKL* 6629 s.v. 辰 suggests that 辰 and 晨 are cognates, 辰 (phonetic 辰 *xān*) **d'jan* < / **d'jan* is explained by a phrase 三月陽氣動雲電振民農時也 "The third month is the time when the yang vapours move; thunder and lightning stir the people to husbandry; (then) all things grow." / **d'jan* : / **dnōng* ~ *znōng*. Also the pairing of 囧 with 峻 **sjwān* / **sj'wān* and through 峻 with 夔 **siwān* < / **sj'wān*, suggests 囧 / **sj'jən* < / **sj'j'jən*.

Furthermore, 身 (according to *SIWKL* 3673, contrary to *KYSH* No. 652, p. 771) belongs to the same *Hsh* series as 延 and its derivatives; one of these is listed in 1013 延 **djan* > *jān* / 衍 **gjan* > *jān*, which can only be explained by positing / **d'jan* : / **dgjan* (*KYSH* No. 769, p. 899). Since 印 was reconstructed / **z'jēn* / 因 **jēn* > **jēn*, and the direct contacts of 因 in 1075 姻 and 1076 綢. Though the *Hsh* series 因 (*KYSH* No. 704, p. 828) shows no trace of any cluster, *SIWKL* 2731 analyses 因 : 从口大 "suppressed phonetic" (大 **d'ād*) / **d'jēn*, a reconstruction which probably applied also to 姻 and 綢.

For the word pairs 1017 筵 **djan* > *zjān* / 延 **djan* > *jān*, 1016 脛 **t'jan* > *i'jān* / 挺 **gjan* > *zjān*, 1014 演 **djan* > *jān* / 延 **djan* > *jān*, 1122 寅 **djan* > *jēn* ~ **djēr* > *i* / 演 **djan* > *jān*, 1018 善 **djan* > *zjān* / 演 **djan* > *jān*, 624 祥 **dziang* > *zjāng* / 善 **djan* > *zjān*⁶⁰, 1079 引 **djēn* > *jēn* / 演 **djan* > *jān*, 1090 進 **tsjēn* > *tsjēn* / 引 **djēn* > *jēn*, 1089 晉 **tsjēn* > *tsjēn* / 進 **tsjēn* > *tsjēn*, 1088 津 **tsjēn* > *tsjēn* / 進 **tsjēn* > *tsjēn*, 1087 秦 **dz'jēn* > *dz'jēn* / 津 **tsjēn* > *tsjēn*, 1082 腎 **djēn* > *zjēn* / 引 **djēn* > *jēn*, 1034 絹 **kjwān* > *kjwān* / 緙 **kien* > *kien*, 1062 肩 **kien* > *kien* / 堅 **kien* > *kien*, though the *Hsh* series of each character suggests the possibility of clusters, there is no reason to suppose that such a cluster was still present in *SM*.

In 1067 天 : 顯 (cf. p. 144, note 8), appears another case, where an extreme branch in the chain of words demands a cluster. Most probably the cluster is also found in 1068 天 : 坦. 坦 itself is further paired with 檀 (976) and 檀 (1015), which are of the same *Hsh* series as 旦 (*KYSH* No. 216, p. 276), and here, too, there is a possibility that *SM* has preserved the reading with a cluster initial. Yet there is no reason to extend this to the word pairs 1127 震 **tjān* > *tjēn* / 戰 **tjān* > *tjān*, 1020 旃 **tjān* > *tjān* / 戰 **tjān* > *tjān*, 1019 旌 **tjān* > *tjān* / 旃 **tjān* > *tjān*. However, in 975 難 **nān* > *nān* / 憚 **d'ān* > *d'ān*, one finds no longer the same perfect sound similarity of the previous pairs; according to the *Hsh* connections (*KYSH* No. 151, p. 195) 難 **nān* goes back to / **dn'ān* and 憚 **d'ān* to / **dyān*. The preservation of the element *d*- in 難 indicates an archaic pronunciation, which suggests also the preservation of the -*γ*- and the aspiration corresponding to each other in the two members of the pair. But 901 難 **njēr* > *njēr* / 呢 **njēr* > *njēr*, needs no such cluster to make a perfect sound equation, though it is clear that the final of 難 was -*d*.

⁶⁰ 1018 善 **djan* > *zjān* / 演 **djan* > *jān* and 624 祥 **dziang* > *zjāng* / 善 **djan* > *zjān* involve a different reconstruction of 善 in its final. 善 has a difficult *SW* analysis; *SIWKL* 1101 says 从羊从言 and for its *chuan wēn* variant 善 : 从言. The character 言 is read *g'jōng* and *r'ām*. The graphic variation in the bottom element may indicate different (dialectal) readings : 羊 **zjāng* + 言 **g'jāng* = / **zj'jāng*, and 羊 **zjāng* + 言 **ngjān* = / **zj'ngjān* ~ *zjān* ~ *d'jān*. The *Hsh* series 羊 itself indicates 祥 : **dz'jāng*, 羊 / **zjāng* (*KYSH* No. 758, p. 882 : *SIWKL* 1571, 5521).

The last sub-group in this chain includes the case 1050 言 : 宣 already explained (cf. p. 145), and another difficult word pair 1115 昏 **xmwān* > *xuān* / 損 **swān* > *suān*. The character 損, belongs with others in this chain (脂, 絹, 損, 鞞) to a *Hsh* series already discussed (*supra*, p. 178, Chain VI), which indicates / **sgwān*, / **thjwān*, / **dxjwān*, / **dg'jwān*. However, there is no proof that such a cluster was actually preserved in *SM* time in the pairs 1034 絹 **kjwān* > *kjwān* / 緙 **kien* > *kien*, 1011 鞞 **g'jwān* > *yjwān* / 縣 **g'jwān* > *yjwān*, 1057 損 **xjwān* > *xjwān* / 𣦵 **xjwān* > *xjwān*; the Archaic reconstructions as given by B. are sufficiently similar. But an equation 昏 **xmwān* / 損 / **sgwān*, or *xuān* : *suān* (*swān*) is unsatisfactory. **xmwān* was obtained on the basis of the *Hsh* element 民 *mjān*, *mjēn*, etc. (*GS* 457.) Apart from the question of sequence of the cluster elements in 昏 (/ **mxwān* ~ *bxwān* being as probable and may be better), it is perhaps feasible to reconstruct a special *SM* reading *S* **xxwān* ~ *zxwān*, derived from a variant form / **bswān* ~ *bxgwan* instead of / **bxwān*.⁶¹ As to the word pair 1110 膳 **swān* > *suān* / 饋 **tsān*, and 976 譜 **tsān* > *tsān* / 纂 **tswān* > *tsuān*, though the *Hsh* 贊 (*KYSH* No. 479, p. 571) shows no traces of any velar element in the initial, and the reconstructions in B. are perfectly satisfactory, the fact that 饋 is cognate to 殮 and 餐 may suggest that possibly in *SM*, the sound was still 饋 *S* **ts'ān* : 膳 / **sgwān*. Yet extension of the cluster to 976 is not necessary. This hypothesis would mean that in *SM* time the *Hsh* derivatives with Ancient Chinese -*j*- had already lost the original -*γ*-, but the Ancient Chinese *su*- < *sw*- still was *sgw*-.

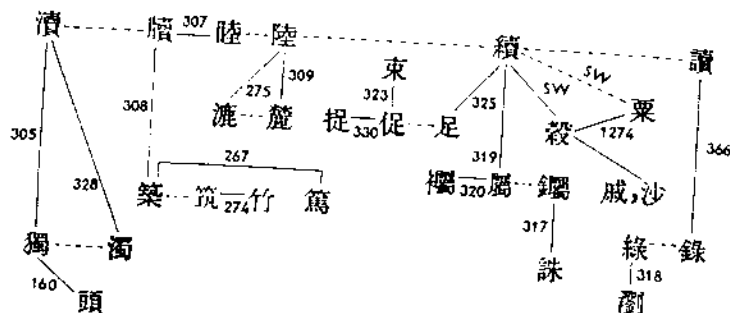
Chain VIII.

884 跣 **ts'jār* > *ts'jē* / 弭 **mjār* > *mjē*, and 864 細 **sied* > *siei* / 弭 are equally strange sound equations. 跣 belongs to the *Hsh* series 此 which *SIWKL* 720 analyses as 从止匕 : 匕 "suppressed phonetic" (*KYSH* No. 386, p. 466, differs from *SW*), and the *SW* text explains it by a phrase : 匕相比次也 "Pi is to follow each other" : **pjār*-*tsjār* < # **ptsjār*. The pairing with 弭 **mjār* (*KYSH* No. 935, p. 1093) cannot be explained otherwise but by a reconstruction / **btsjād* : / **mzād*. For 864, B. suggested (note 864, p. 136) that "there is a possibility of a relationship between 弭 and 微 **mjwəd* > *mjwei* 'small', also 靡 **mia* > *mjwig*, loaned for 'small, tiny'." This does not explain the word pair 864, and though there is no *Hsh* derivative of 田 with labial initial, there is no other explanation but

⁶¹ The reconstruction of 膳 / **sgwān* is confirmed by *SIWKL* 1800 which writes 讀若遜, already reconstructed / **sgwān* (cf. p. 182). In the *Hsh* series 民 (*GS* 457, *KYSH* No. 426, p. 524) the words are either of the type *m*-*j*, or *x*+*y* (*w*). Nothing indicates a sibilant element, except in a more remote way, in cognate words as for 民, which Tuan Yü-ts'ai (*SIWKL* 1914) compares to 筭 **jwēn*, 減 **mjāt* < / **zmjāt*. Similarly, *SIWKL* 5113 民 is defined 減 / **zmjāt*. Binoms as 緘 鈞 **mjēn*-*zjwəd* < # **mz*-, 民 朗 may point to such a sibilant in some *Hsh* derivatives of 民 though it is not directly attested.

of ≠ *ptsjər. *SWKL* 3896 defines 次: 不前不精也 'not prior, not perfect (=second in quality)'. 不前 *piŋg-dz'ian < ≠ *pɔz'ian. This suggests that probably in the word pair 929 the labial element in the initial was still preserved in *SM* time, but not in 928 養 *dz'jər > dz'i / 漬 *dz'jæg > dz'ie.

Chain IX.



The clearest case from which one can start the study of this word chain is 307 讀 *d'uk > d'uk / 睦 *mliók > mliuk, where neither the Archaic nor the Ancient Chinese forms provide adequate sound equations. Since the *Hsh* series 六 (*KYSH* No. 918, p. 1071) includes among others the derivatives 睦 *mliuk* and 讀 *d'uk*, it is necessary to reconstruct / *bd'uk : / *mlyók. Furthermore, for 306 讀 *d'uk > d'uk / 錄 *liuk > liwok, one may be satisfied with the reconstructed forms, listed by B., but, since 讀 belongs to the same *Hsh* series as 睦 and 讀, and 錄 belongs to the *Hsh* series 剝 *pák* (*KYSH* No. 917, p. 1069), it is probable that a closer similarity like / *bd'uk : / *blyúk ~ b'liuk may have applied in *SM* time. However, in 318 綠 *liuk > liwok / 劉 *lióg > liəu, since previously (*supra*, p. 166) it has been established that 劉 was / *dlyóg in *SM*, 綠 had lost its labial initial / *lyúk. Similarly, in 309 麓 *luk > luk / 陸 *liók > liuk, and in 275 陸 *liók > liuk / 漉 *luk > luk, though one may consider the reconstructions satisfactory, it is possible on the basis of the *Hsh* series 鹿 (*KYSH* No. 916, p. 1069) to posit a closer similarity 麓, 漉 / *gluk ~ lyúk : 陸 / *lyók (with labial -b dropped by *SM* time).

In 308 牘 / *bd'uk is also paired with 築 *tjók > tjuk. The latter character is listed in the Hsh series 竹 (KYSH No. 275, p. 335), and the word chain is thereby extended to 274 筑 *tjók > tjuk / 竹 *tjók > tjuk, and 267 篤 *tók > tuok / 筭 *tjók > tjuk. The Hsh series 竹 suggests only a reconstruction 筑, 築, 竹 / *tjók, 篤 / *g'wók > twók > tuok (there probably never was a form *tók). However, SWKL 1906 adds a sound phrase to the definition 竹: 冬生艸也 and the analysis as a pictograph: 下垂者筭筭也 "That which is let down is the bamboo (fishing) net". 筭筭 *b'ag-(d)niak < ≠ *bdniak indicates that 竹 was / * / btjók, and 篤 / * / btók even in SM time, since 築 is still paired with 牘 / *bd'uk.

There remains only to discuss the contacts of the *Hsh* derivatives 賣. This group of word pairs also provides a clue to solve the "problematical" word pair 1274 穀 *g'uk > yuk / 粟 *šjuk > šiwok. The explanation of B. (note p. 142) suggesting that the present version "was a reduction of 穀穀也 (穀)粟也 'gauze is grain; grain (*kuk*) is grain (*šjuk*)'," is of no help, for it considers the equation as purely semantic, not phonetic. Furthermore, 穀 is a correction based on *TPYL*, for the original 穀, which obviously does not fit well in a chapter of *SM* (14) on "textile materials". But whether written 穀 or 穀, the pairing with 粟 is a phonetic equation, and if 穀: 粟 can be explained, the *SM* word pair is solved too. *SWKL* 3120 defines 穀: 續也。百穀之總名也。"Ku is Hsü. The general word for all grains"; *SWKL* 3041 defines 粟: 嘉穀實也 "The fruit of the good grain", and adds the text: 孔子曰粟也爲言續也。"K'ung-tzū says: Hsü is paronomastically called 續 *hsü*." *GS* 1226 reconstructs 穀 and 穀 *g'uk > yuk. In the light of the *SM* and *SW* definitions, the Archaic Chinese sound was probably / *zyuk, and the *SM* value a slightly different form S *zyuk, paired with 粟 *šjuk ~ S *šjuk, and with 續 *dzjuk < / *dzjuk from $\sqrt{*}bdzyuk$, the labial element of which had already been lost in *SM* time. In the *SM* text (*SM* 14/28) there are two other sound definitions of the word 穀 (穀), one is 沙 *sa* ("sand, sandy"), the other 戚 *ts'iek* < **ts'io*k (其形戚戚, 取戚戚如沙 "its appearance is rough, uneven to the touch like sand"). The reading 戚 **ts'io*k need not be changed, for the aspiration can be considered as an element sufficient to correspond to -y- in S *zyuk ~ dzjuk. But 沙 (*KYSH* No. 554, p. 653) belongs to the same *Hsh* series as 少 / *šyog < $\sqrt{*}bšyog$; it is defined in *SWKL* 4992 水散石也 "the scattered stones of rivers", analysed 从水从少, further explained by a phrase 水少沙見 "When water is few, the sand is visible." The opinion of T'an Ch'ang quoted by *SW* 从少 "From 少 *tsiāt*", indicates that 沙 had probably two readings: / *šyad ~ bšyad ~ / *šyāg ~ šyōg (?). Probably the word 散 in the *SW* definition played a role as phonetic indicator 散 *sān < / *s-ān ~ s'ān (cf. *supra* p. 183). The reading 沙 šyad ~ šyāg is confirmed by the binom 沙穀, 紗穀 *sa-g'uk < ≠ *sg'uk ~ syuk.

績 is also paired in 325 足 **tsjuk* > *tsiwok* / 績 **dziuk* > *ziwok*, and the contact with 足 extends the word chain further to 330 捉 **tsuk* > *tsak* / 促 **ts'juk* > *ts'iwok*, and 323 束 **sjuk* > *sjwok* / 促 **ts'juk* > *ts'iwok*. Probably 績 was also read **dziuk*, so that the reconstructions **tsuk*, *tsjuk*, *ts'juk* are quite satisfactory. The same solution applies to the equations 319 屬 **djuk* > *ziwok* / 績 **dziuk*, 320 禡 **djuk* > *ziwok* / 屬 **djuk* > *ziwok*, 317 鋤 **tjuk* > *tiwok* / 誅 **tju* > *tiu* (/ **tiung*).

The last link in this word chain consists of the three word pairs 305 瀆 *d'uk > d'uk / 獨 *d'uk > d'uk, 328 濁 *d'uk > d'uk / 瀆 *d'uk > d'uk. Though the *Hsh* series 蜀 (*KYSH* No. 694, p. 818) shows nowhere any labial element in the initials of the derivatives, it has been shown that the top

The last sub-group in this word chain consists of the contacts of 仆 and 否 with its *Hsh* derivatives. 246 仆 *b'ək > b'ək / 踣 *b'ək > b'ək. The *Hsh* derivatives of 否 (KYSH No. 383, p. 461) indicates a reconstruction / *b'ək, but there is nothing to suppose this cluster in *SM* time. Equally, though the explanation of *SW* under 𠂔 would allow a cluster initial,⁶⁷ it cannot be proved that in 346 𠂔 *piəg > piəi / 否 *piəg > piəu and in 347 𠂔 *piəg > piəi ~ *piəg > piəu / 否 *b'jəg > b'jəu such a cluster was preserved in *SM* time. The same applies to 388 佩 *b'wəg > b'wəi / 倍 *b'wəg > b'wəi, 389 背 *pwəg > puəi / 倍 *b'wəg > b'wəi, and 451 負 *b'jūg > b'jəu / 背 *pwəg > puəi. The only exception is 450 where the pairing of 𠂔 *b'jūg > b'jəu / 復 *b'jōg > b'jəu is only one of two different word pairs, included in the text; the other is 430 𠂔 *sɿəg > si / 思 *sɿəg > si; both are listed in *SM* 17/52 to explain a binom 𠂔思 *b'jūg-sɿəg < # *b'zɿəg ~ psɿəg.

Chain XI.

The central word in this word chain is 冒. To establish its reading in *SM* one has to line up the 10 different characters paired with it, and posit a reconstruction which shows the closest similarity and still

⁶⁷ 𠂔 (KYSH No. 385, p. 466) is defined in *SWKL* 2296 as 𠂔 *sɿək "harvest, greedy". They are probably cognates: / *psəg : / *b'jək. It is analysed in *SW* as 从口 (wei) 𠂔 "suppressed phonetic". In its graphic structure, 𠂔 shows a great similarity with 𠂔. (Bone and bronze forms 𠂔, 𠂔, and 𠂔.) The top element of 𠂔 is explained as "wheat", in 𠂔 it is explained as carrying the meaning "to surround, to gather together", but both explanations are probably different interpretations of a pictographic element: "roof of a granary". 𠂔 is defined 愛 𠂔 *əd-sɿək "to be greedy, to desire" which probably suggest a reading # *d'jək ~ s'jək, variation of / *b'jək. The nominal meaning of 𠂔 "granary" is still alive in the expression of *SW* 𠂔夫 for 田夫: "master of the granary", "master of the field". There is another word to be compared in this connection: *SWKL* 2722 has 𠂔: 𠂔計難也从口从𠂔 "To plan difficult (things); from 𠂔 and 𠂔". Some editions still have 𠂔 𠂔: *d'o < / *bd'og — 𠂔 / *psəg. However, the role of 𠂔 as "phonetic" in 𠂔 needs an explanation. 𠂔 √ *bl'əm (cf. *supra* p. 170) may have had variant readings √ *bl'əg ~ bl'og ~ bd'əg ~ bd'og. *SWKL* 2293 explains 𠂔: 穀所振入(也)宗廟粢盛黃黃向而取之謂之向. 从入. 回象屋形中有戶屬 "That to which grains are moved and brought into [the granary]. The ancestral temple's millet is abundant; with hurry and trembling fear (嚶嚶) they take it. Therefore it is called 'lin'. From 入 and 回, depicting the external appearance of the building: in the middle are doors and windows." This definition and explanation must be compared with *SWKL* 2231 倉: 穀藏也倉黃取而藏之 "Store of grain. Hurriedly they take and store it up." Like 藏 is a patronymic definition of 倉, probably the definition of 向 too is a sound phrase where 振入 is the important part: *l'ən-ŋəp < # *l'ŋəp. 𠂔 was originally a pictograph where 𠂔 is interpreted in a phonetic role instead of the pictographic 'roof', parallel to the top elements of 𠂔, 𠂔, which were also reinterpreted graphically. 倉 is phonetically described by 倉黃 *ts'āng-g'wāng < # *ts'āng ~ d'g'wāng; 从食省口象倉形 "From shortened 食 and 口, depicting the external form of a granary." Probably 食 has a phonetic role, since only 口 is really pictographic. 食 has phonetic Δ *d'z'əp; *d'jək ~ *d'z'əg < / *d'jəmk > -wk > -k ~ / *d'z'əng > -wg > -g. 倉 / *ts'āng may have developed from / * / ts'āng and can be compared to 𠂔 / * / l'ŋəp ~ l'ŋəmp.

xuāi, 390 晦 **xmwæg* > *xuāi* / 灰 **xwæg* > *xuāi*, 377 醢 **xæg* > *xāi* / 晦 **xmwæg* > *xuāi*, 248 黑 **xmāk* > *xāk* / 晦 **xmwæg* > *xuāi*, 247 黑 **māk* > *māk* / 晦 **xmwæg* > *xuāi*.

理 and 羅 belong to the same *Hsh* series 里 (KYSH No. 892, p. 1050) **mlg* ~ / **l-meg* > *S* **meg* ~ *m-eg*, which is paired under this latter form with 晦, 晦 / **xmæg* ~ *gmæg*. 灰 (KYSH No. 804, p. 965) **xwæg* < / **xmæg* (灰 **mæg* < / **gmæg*) offers no difficulty. But 醢 **xæg* has a phonetic 右 **giüg* (cf. *supra* p. 167) < / **dxæg*, but the pairing with 晦 demands that the initial *d*- had dropped, and **xæg* had developed in *SM* to *S* **xwæg*. The words 墨 **māk* and 黑 **xāk* require a reconstruction / **gmāk* and *bxāk* to be paired with 晦 / **xmæg* ~ *bxwæg*.

IV

It is striking how many of the words appearing in any word chain belong to *Hsh* series which suggest a cluster in the initial and have some derivatives requiring a cluster initial on the strength of the *SM* equations only; but also other derivatives which do not appear in any word pairs requiring such a cluster as a necessary reconstruction of the *SM* language. Generally, there is a strong indication that the initial clusters were even more frequent in *SM* time than the strict *SM* pairings require.

In the reconstructions posited for *SM*, we often arrived at exceptional forms, and sometimes different coexisting readings for the same character. This should not surprise us, for in the long span of time between the Ancient and Archaic Chinese, it is quite possible and to be expected that some words did not always in the standard language or in the dialects strictly follow the regular development according to the sound laws. It is also clear that readings of *SM*, being word to word equations, which were not preceded by a systematic pre-established analysis of the sound system as in *Ch'ieh yün*, could sometimes follow different ways of sound analysis, or take words in unusual and archaic readings.

That *SM* often had different archaic readings in mind when pairing them with other words is clearly apparent when one reads the explanatory phrases, since these in many cases must be understood as sound phrases. A few important and illustrative examples may suffice.

It has been shown that some of the word pairs listed by B. do not as a matter of fact appear in *SM* according to the usual formula *X* : *Y*, followed by an explanatory text, but are presented directly in the form of a sound phrase. One of the inherent difficulties of the sound phrase is to isolate the relevant words that are intended to describe the sound of the words. In some cases of this kind, as has been shown, the word pairs were wrongly isolated by B. Other cases were simply omitted in B.'s list. Thus *SM* 1/79 震...又曰辟應. 辟析也所歷皆破析也 "It is also said *p'i-li*. 辟是析.

Wherever it passes, it destroys and breaks (things)." 辟應 **piek* (*b'jēk*, *b'iek*) -*liek* ~ **piek* (*b'jēk*, *b'iek*) -*siek*; 破析 **p'wā-siek* < # **pžlek* ~ *bžlek* ~ *bslek* ~ *pslek* ~ *pwslek*. Another case is *SM* 1/79 厲, 疾氣也中人如磨厲傷物也 "Li is the air of sickness. Inside man, it is like grinding and wounding things." 厲 **liad* < / **mdlad*; 磨厲 **mwā-liad* < # **mwliad* ~ *mwldiad*.

In some word pairs the separate *SM* equation does not support a cluster initial, though the *Hsh* connections and other derivatives of the same *Hsh* series in the *SM* pairings do demand a cluster in the initial. A study of the *SM* text shows that an archaic reading with this cluster was intended. Thus, in 308 讀 : 築, a cluster was reconstructed for both words, though it was not extended to 274 筑 : 竹 and 267 篤 : 築. But the *SM* text, added to 274, which B. takes as nothing more than an analysis of the graph 筑 : 以竹鼓之 巩秘之也 "The guitar is played with a bamboo (pick), it is held by the handle", may be meant as a sound phrase; 秘之 **piēt-liæg* ~ *b'jēt-liæg* < # **ptiæg* ~ *btæg*. 481 鮑 : 腐 supports by itself no initial cluster, but the text (*SM* 13/70) says 鮑腐也埋藏演使腐臭也 "Pao (of 鮑魚) is fu; To bury and conserve it in soaking matter, makes it rot and stink." 腐臭 **b'ju-t'jōg* (< / **tyjōg*) < # **bt'jōg* ~ *bt'jōg*.

In 1162 甲 **kap* > *kap* "shoulder blade" / 闔 **g'áp* > *yáp* and 1161 甲 **kap* ~ *kap* "cyclical sign" / 甲 **kap* > *kap* "shell" seems absolutely satisfactory. But in *SM* 1/39 the pairing is made between a monosyllabic word and a binom 甲 : 孚甲, followed by the text : 萬物解孚甲而生也. "甲 is 孚甲; the 10,000 things break through the shell and grow." 孚甲 **b'jug-kap* < # **bkap*. The binom appears in other contexts, such as 23/23, where it follows a character without its expected word pair, but with three definitions, all meant as cognates : 甲, 似物有孚甲以自禦也. 亦曰介. 亦曰函, 亦曰鎧 "甲 is like the shell (孚甲 **b'jug-kap* < # **bkap*) which (some) beings have in order to protect themselves. It is also said 介 **kād* < / **bkād* < -*b* (KYSH No. 78, 119 : 介 **mād*); it is also said 函 **g'am* ~ *g'am* < / **bg'am* < -*b* (KYSH No. 850, p. 1003); it is also said 鎧 **k'er* < / **bk'er* < -*b* (KYSH No. 434, p. 521). Logically 1162 was also 甲 / **bkap* : 闔 **g'áp* < / **bg'áp*.⁷¹ Furthermore 孚甲 appears in the text of 519 浮 **b'jōg* > *b'jau* / 孚 **p'jug* > *p'ju* : (*SM* 12/140) 孚甲在上稱也 "It (孚) is the term for the shell on top", and 521 覆 **p'jōg* > *p'jau* / 孚 **p'jug* > *p'ju* : (*SM* 12/91) 如孚甲之在物外也 "It (孚) is like the shell outside of (some) beings." This comparison of 孚 **p'jug* with the binom 孚甲 **bkap*, indicates that 甲 is a cognate with 孚 "shell = to hatch, hatched thing in shell" : / * / *pžjug*.

⁷¹ In *SWKL* 2144 蓋 is already analysed 从血大 (emended by Tuan Yü-ts'ai 大鑒), so that the labial element had dropped in the *SW* pronunciation / **dž'áp*, but this labial may still have been preserved in some circumstances, as is shown by *SM* 24/51 蓋在上覆蓋人也 "The cover; above it covers man." 覆蓋 **b'jōg-g'áp* < # **bg'áp*.

In 876 轡 *piəd > pjiw / 拂 *b'iwət > b'iwət is explained SM 24/62: 牽引抱戾以制馬也. "It (轡) pulls and leads, opposes and stops as to direct a horse." 拂戾 *p'iwət (*b'iwət)-liəd < # *p'iwət.⁷²

In SM 17/14, 16, 48 we find a common element in all the word pairs, with in each case, an interesting sound phrase added: (1) 廷停也人所停集之處也 (2) 亭停也亦人所停集也 (3) 楹亭也亭亭然孤立旁無所依也. 齊魯讀輕輕勝也孤立獨處能勝任上重也. "廷 is 停: it is the place where men stay and assemble." - "楹 is 停: it stands straight up alone without anything to lean on. In Ch'i and Lu dialects it is read saying: 輕. 輕 is 勝: standing alone and set up alone, it can support the heavy things above it." The expression 停集 *d'ieng-dz'jəp appears twice and can be compared with 勝任 S *s'jəng-dnjam. The pairing 輕: 勝 was explained above, but in the context of these sound phrases, it is very probable that the end ing -ng is a secondary phenomenon (朕 -m / 勝 -ng) of dissimilation inside the binoms 停集, 勝任; however, 停, 勝 were precisely chosen to describe the reading in -ng of 廷, 亭, 楹.

The study of the sound phrases will also explain many of the "alliterative binoms" (B. p. 120). Most of them are really dimidiated binoms. 1263 不借 *piŋg-tsiäk, paired with 搏腊 *pâk (piwog)-s'jāk, is a binom corresponding to the Ch'i word for "straw sandal" 屣 (paired with 皮), and is explained in the text (SM 16/52): 以皮作之. "It is made of leather", 皮作 *b'ia-tsāk < # *btsāk. 搏腊 is explained 猶把作蠹兒也 "It is like the rough appearance... *pâ-tsāk < # *ptsāk. Similarly 1258 麾娑 *mwā-sa / 末殺 *mwāt-sat. Both are dimidiations of # *mwsād and # *mwsāt. The word pair probably involves a semantic attraction between the words "to wipe out" and "to kill, destroy" cognate with 殺 / *bsat, 滅 √ smyat, and 麾 / *mgwād, 拭 / *bsjāk. 1262 pairs two binoms 謁摘 *mwēk-tēk (S *mwēttēk) / 謁摘 *k'iwat-tēk, defined in SM (9/77) 見事者稱也 "It is the appellative of those who inspect affairs", and explained: 如醫別人謁知疾之意 "Like in healing others one feels the pulse and knows the meaning of the illness." 謁知 *mwēk-tjag (S *mwēttjag). The difficulty, however, is in the binom 謁摘 *k'iwat-tēk; probably 謁知 was an inversion of 知謁 "to know, study the pulse", and 謁摘 a contaminated form influenced by 謁摘 *mwēttēk and 知謁 *liēgmwēk: *kmjet-tēk > *k'iwat-tēk.

Finally, coming back to the word 筆, SM 1/76 mentions a special kind of comet, called 筆星, with a sound phrase but without a regular separate word equation: 星氣有一枝末銳似筆 "The air of the star has a branch, the end (of which) is pointed like a writing brush." 末銳 *mwat-diwad < # *mdjwad ~ mliwad ~ mlywad indicates a word form

⁷² The dialect word of Yen for 筆 (Erh ya, SW) was 弗 *p'iwət. The reconstruction / *p'iwət ~ p'iwət (cf. supra p. 145) established on the basis of comparison of the other dialect words for "writing brush", is confirmed by this SM definition.

where the initial labial is preserved, in 筆, though it was dropped in the reading in another word pair 筆: 述. (筆 / *p'liət.) According to Hsh connections, -t of 筆 was probably developed from -k. In SM 19/1 筆 is explained 述事而書之也, a phrase in which 書 / *s'iwog ("to write") is probably cognate with 筆, and in this context indicated a reading of 筆 ending in -g. SM 19/29 書 is again explained 稱刺書以筆刺紙簡之上也 "To write is said 'to prick' the document; it is to prick paper and tablet with a stylus." The text continues 又曰到寫. 寫此文也 "It is also said 'to bring down the inscription'. This is to inscribe the text." 刺書 *ts'ieg-šiwog ~ ts'jēk-šiwog < # *ts'iwog ~ ts'kiwog, 到寫 *tog-s'jāk < # *ts'jāk. SM 19/23 explains the expression 刺書 "document" (scriptum) with the phrase 所以驅策諸下也 "It is that on which the messenger records it for those below." 策書 *ts'ēk-šiwog < # *ts'kiwog, 策諸 *ts'ēk-šiwog < # *ts'iwog.

The sound phrases sometimes seem a risky material to work with, but there are indubitably many instances where the phonetic role of some words or expressions in these phrases appears to be certain and provides a perfect explanation of some of the most unusual word equations of SM.