

Chronology of the Western Chou Dynasty

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I. Introduction

In my article entitled "Certain Dates of the Shang Period" (*HJAS* Vol. 23, 1961) I suggested that, while accepting 1028 B.C. as the first year of Wu Wang's reign, the year 1018 B.C., Wu Wang's eleventh year, was the only one which accords with both the *Shu-ching* and the *Bamboo Annals* and Liu Hsin's *San-t'ung-li*. Max Loehr, in his book, *Relics of Ancient China* (1965), writes that my system shares the crux of the much condensed reign lengths for the Western Chou kings with the system adopted by Ch'en Meng-chia and Karlgren, all the more so because "1018" leaves nine years less for that period. The present paper attempts a reconstruction of regnal years of the Western Chou kings down to 771 B.C. in accordance with historical and epigraphical data as found in Ssu-ma Ch'ien's *Shih-chi*, fragments of *Bamboo Annals* and bronze inscriptions of the Western Chou.

It is appropriate to approach our problem with the several live options in respect of the chronology of the reigns of the kings of the early Chou.

II. Length of the various reigns

On the length of the various reigns of the Western Chou Dynasty, Shinjō-Shinzō 新城新藏¹, Wu Ch'i-ch'ang 吳其昌², Ch'en Meng-chia 陳夢家³, Tung Tso-pin 董作賓⁴, Perceval Yetts,⁵ *et al* differ with each other. Their differences are presented in the following Table with my own suggestions listed under column number 6.

*Read before the 28th International Congress of Orientalists, January 6 to 12, inc., 1971, at Canberra, Australia. The author is especially indebted to Professor and Mrs. Noah Edward Fehl for valuable advices and discussions.

- 1 Shinjō Shinzō 新城新藏: "The Chronology of the Early Chou Period" 周初の年代, *Shinagaku* 支那學, Vol. 4, No. 4, 1928, pp.471-620, also in *Studies on the History of Chinese Astronomy* 東洋天文學史研究, pp.34-193 (Chinese translation by Shen Hsüen 沈璿, 1933, pp.26-159).
- 2 Wu Ch'i-ch'ang 吳其昌: *Chin-wen Li-shuo Shu-cheng* 金文曆朔疏証, 1936.
- 3 Ch'en Meng-chia 陳夢家: *Studies on the Chronology of the Western Chou Period* 西周年代考, 1955 (revised edition).
- 4 Tung Tso-pin 董作賓: "A Chronology of the Western Chou Dynasty" 西周年曆譜, *BIHP* 歷史語言研究所集刊, Vol. XXIII, 1952, pp. 681-760.
- 5 Perceval Yetts: "Chronological Tables of the Three Dynasties", in A. C. Moule, *The Rulers of China*, 1957, pp. xi-xxiii.

	1. Shinjō	2. Wu	3. Ch'en	4. Tung	5. Yetts	6. Chou
Wu Wang	(10+)3	7	3	7	3	(10+)2
Chou Kung Regency	7	7	-	7	-	-
Ch'eng Wang	30	30	20	30	30	24
K'ang Wang	26	26	38	26	25	25
Chao Wang	24	51	19	18	19	19
Mu Wang	55	55	20	41	55	23
Kung Wang	12	20	20	16	15	15
Yih Wang	25	17	10	12	3	2
Hsiao Wang	15	15	10	30	7	15
Yi Wang	12	16	30	46	32	34
Li Wang	16	37	16	37	20	18
Kung-ho Regency	14	14	14	14	14	14
Hsüan Wang	46	46	46	46	46	46
Yu Wang	11	11	11	11	11	11
Mandate to Mu Wang	100 (exc.)	121 (exc.)	100 (inc.)	100 (exc.)	132 (inc.)	103 (inc.)
Wu Wang to Kung-ho (exc.)	225	281	186	270	209	177
Chou conquest	1066 B.C.	1122 B.C.	1027 B.C.	1111 B.C.	c. 1050 B.C.	1018 B.C.
Western Chou	296	352	257	341	280	258

I shall now discuss briefly the reigns of the kings in the Western Chou period according to the *Bamboo Annals*, the *Shih Chi* and the relevant bronze inscriptions.

Perceval Yetts says:

A crucial problem of Chou chronology is the dating of the conquest. It is crucial because most of the scanty clues to absolute dating before the conquest and 2 centuries after it depend upon the date of the conquest as a basic point of reckoning. The chronological tables of Ssü-ma Ch'ien leave the problem unsolved; for the earliest exact date indicated in them is that of the 1st year of the Regency (Kung Ho) corresponding to 841 B.C. In contrast to the general haziness before that date a meticulous measurement of time appears in the *Bamboo Annals*. It reads: 'From the extinction of Yin by King Wu until King Yu there were in all 257 years'. Presumably King Yu's death is meant, and, since that occurred in 771 B.C., the conquest is thus dated exactly 1027 B.C. Such precision implies an accuracy of record sustained over a long period which seems improbable. There is, too, history of the text's integrity being repeatedly imperilled during discovery, reconstruction, and survival. Fragments of the original that remain are preserved in quotations by early writers, and they sometimes disagree. We hesitate to accept for the Table this exact and solitary figure of 257 unless full support for it can be found elsewhere. A search reveals that the balance of evidence, while not actually denying it, points to a slightly larger sum of years. All considered, we prefer to adopt the round figure c. 1050 B.C.⁶

I think the evidence is meagre for the assumption that the conquest is dated around 1050 B.C. as the *Pseudo Bamboo Annals* does. The same is for 1066 B.C. suggested by Shinjō, 1055 B.C. suggested by Chang Hung-chao 章鴻釗 and 1062 B.C. suggested by Yamada Suberu 山田統⁷

6. *Op. cit.*, pp.xix, xx.

7. Chang Hung-chao, "On the Dating of the Chou Conquest" 武王克殷年考, in *Chung-kuo Ku-li Hsi-yi* 中國古曆析疑, 1958. Yamada Suberu. "The Absolute Dates of the Early Chou" 周初の絕對年代. Cf. Ong Tee-wah 翁世華, "On the Date of the Chou Conquest of the Shang," *Journal of Nanyang University*, Vol. II, 1968, pp. 157-159.

On the other hand, Wu Ch'i-ch'ang followed Liu Hsin's 劉歆 1122 B.C. date without knowing that Liu Hsin made an error of three days.⁸ Yi-hsing 一行 of the T'ang Dynasty discovered the error and tried to correct it by assuming 1111 B.C. to be the year for Chou conquest. His evidence is that the *Bamboo Annals* stated: "In the 11th year *keng-yin* 庚寅, Chou began to attack Shang". 竹書:「十一年庚寅,周始伐商」。Shinjō Shinzō suggested that the cyclical figure *keng-yin* was added by Yi-hsing by calculation since the recording of the year by cyclical figures was a later practice.⁹ Chang Hung-chao thought that it was based on an old tradition originating from the period of the Warring States. The *Hsün-Tzū* 荀子 ("Ju-hsiao" 儒效篇) says:

While Wu Wang killed Chow, he was facing the east to meet the *t'ai-suei*. 武王之誅紂也,東面而迎太歲。

Huai-nan-tzu 淮南子 ("Ping-lüeh-hsün" 兵略訓) has the same saying. Kao Yu's 高誘 commentary says:

The *t'ai-suei* was in *yin* 太歲在寅。

Chang concluded that "*keng-yin* 庚寅" was not a later interpolation.¹⁰ But I think he is wrong because Kao Yu of the later Han dynasty only mentioned "*yin* 寅", not "*keng-yin* 庚寅". 1027 B.C. (*chia-yin* 甲寅), which was suggested by Lei Hai-tsung 雷海宗,¹¹ Karlgren¹² and Ch'en Meng-chia¹³ according to the *Bamboo Annals*, also fits the requirement. Besides, 1027 B.C. as well as 1122 B.C. fits the saying in *Kuo Yü* 國語 6.2, 6.3. But unfortunately it does not fit the "Wu Ch'eng" 武成, *Shu Ching* 6.1, 6.2.

I have suggested 1018 B.C. to replace 1027 B.C. just because the former fits the "Wu Ch'eng" 武成 in *Shu Ching*, *Kuo Yü* and the *Bamboo Annals* although it does not fit Kao Yu's commentary.

8 John Chalmers, in his article "On the Astronomy of the Ancient Chinese", says: "In round numbers, the error of the Metonic cycle, as modified by Callippus, amounts to one day in the time of new moon for every 300 years, and three days in the time of winter solstice for every 400 years. So then the scholars of Han, in calculating the day of new moon at the commencement of the Chow dynasty, made an error of three days". Cf. Legge, *Chinese Classics*, Vol. 3, Prolegomena, p.100.

9 Shinjō Shinzō, *op. cit.*, pp.147-152 (Chinese translation, p.124).

10 Chang Hung-chao, *op. cit.*, p.101.

11 "Chronology of Yin and Chou" 殷周年代考, *Bulletin of the College of Arts of the National Wu-han University* 國立武漢大學文哲季刊, Vol. 2, No. 1, 1931, pp.1-14.

12 "Scine Weapons and Tools of the Yin Dynasty", *BMFEA*, No. 17, 1945, pp.116-120.

13 Ch'en Meng-chia, *op. cit.*, pp.17, 18.

As for the length of the reigns of Wu Wang and Ch'eng Wang, Yetts says:

According to the *Shu ching*, King Wu died in the 13th year of the dynasty and 2 years after the one in which he had vanquished the Shang-Yin (*Chinese Classics* III 320, 351-356). Though the time of his death is not clearly stated, it surely was the year he consulted the Prince of Chi 箕 and recovered from the illness as narrated in the *Chin t'êng*. Ssü-ma Ch'ien takes this view and so does the *I Chou shu* 逸周書 (VI 25), where it is said: 'After he had smitten Chou 紂, he died in the 6th year of his reign'. Thus the 1st year of King Wu was the 8th of the dynasty and 3 years before that of the conquest.

If the statement in the *Ch'ien Han shu* is correct, King Ch'êng and Po Ch'in 伯禽, Prince of Lu, started their reigns in the same year and Po Ch'in reigned 46 years until he died in the 16th year of King K'ang (Chapter *Lu li chih* 律歷志, 下, 18). That leaves 30 years for King Ch'êng's reign. For reasons to be stated presently, we give 25 years as the minimum for King K'ang's reign. Together these two come to a total of 55 years which agrees with the *Bamboo Annals* statement, often repeated elsewhere, that 'during the reigns of Ch'êng and K'ang the world was tranquil and punishments were not inflicted for 40 years'. As quoted in the *T'ai p'ing yü lan* (LXXXIV) the words are '40 years and more'. At both beginning and end of the 55 years there is room for the recorded punitive campaigns without encroaching on the traditional '40 years' of peace. Early in King Ch'êng's reign 2 great rebellions were quelled and so was another in the 25th year of King K'ang as will be seen in the next paragraph.¹⁴

Yetts tried to compromise between the *Bamboo Annals* and the *Yi Chou Shu*. He followed Liu Hsin by stating that Ch'eng Wang reigned for 30 years. But it was pointed out by Ch'en Meng-chia that Liu Hsin might have calculated the length of reign to fit his assumption.

For the reign lengths of K'ang Wang and Mu Wang, Yetts says:

The 25 years tentatively assigned to King K'ang in our Table is a minimum derived from an inscribed bronze cauldron often called the 'Small Yü Ting' in comparison with its fellow cauldron, the so-called 'Large Yü Ting' mentioned above. Jung Kêng remarks that they are thus misnamed since the capacity of the 'Small' is 12 gallons while that of the 'Large' is only 8 gallons. Parts of the inscription in question have perished, but enough remains to show that it commemorates 2 victorious campaigns led by Yü against rebels. Incidentally it mentions that the *ti* 禘 sacrifice was offered to 'the King of Chou, King ..., and King Ch'êng'. 'The King of Chou' must be King Wên, and 'the obliterated name of the second king must be Wu – inferences supported by the naming of these 2 kings on the aforesaid companion cauldron. The inscription on the 'Small Yü Ting' ends: 'It was the King's 25th year 佳王廿又五祀', and surely that refers to King K'ang.

According to the *Bamboo Annals*: 'King Chao in the 16th year [of his reign] invaded Ch'u-ching 楚荆, and when crossing the Han [River] encountered a large rhinoceros. In the 19th year the heavens were greatly clouded; pheasants and hares were afraid. [The King's] 6 armies perished in the Han'. There is also the statement that the King came to his end while on a tour of inspection in the south 南巡, but the year is not specified. At all events, the *Annals* set a minimum of 19 years for King Chao's reign.¹⁵

14 *Op. cit.*, pp.xx, xxi.

15 *Ibid.*, p.xxi.

I agree with Yetts in setting 25 years for K'ang Wang and 19 years for Chao Wang. The *Tso Chuan* (Duke Hsi, Year IV) recorded a dialogue between Kuan Chung and the messenger of the Viscount of Ch'u in which the latter replied: "As to king Ch'au's not returning *from the south*, you should inquire about it along the banks of the river".¹⁶ It is probable that Chao Wang died in the 19th year of his reign. In the original edition of the *Studies on the Chronology of Western Chou Period*, Ch'en Meng-chia assigned 20 years for K'ang Wang's reign and 38 years for Mu Wang's reign; but in a revised edition (1955), he assigned 38 years for K'ang Wang's reign and 20 years for Mu Wang's reign because he deciphered "the 25th year" of the Small Yü Ting as "the 35th year", which he assigned to K'ang Wang's reign. Since the Large Yü Ting was made in the 22nd year of the same king, "the 25th year" may be more reasonable than "the 35th year".

For the reign length of Mu Wang, Yetts says:

Legend assigns extreme longevity to King Mu. Ssü-ma Ch'ien echoes legend when he states King Mu reigned 55 years starting at the age of 50 and he identifies him with the king, mentioned in the *Lü hsing* 呂刑 of the *Shu*, who the *Preface* to the *Shu* says was King Mu (*Mém. hist.* I 250, 259-265). But the figures do not agree if the opening sentence of the *Lü hsing* is given the usual interpretation that the king had been on the throne 100 years when he charged the Prince of Lü to codify punishments (*Chinese Classics*, III 688). Perhaps the text known to Ssü-ma Ch'ien meant that the king was still on the throne a centenarian. The *Bamboo Annals* contain this entry: 'From Chou's receiving of the mandate until King Mu there were 100 years'. Should it be taken to include a reign of 55 or more years, this statement is so obviously false that some have turned to the *Annals* for evidence of a shorter reign. They find the following sentence and suppose the event was near the King's death: 'In the 37th year he smote the Yüeh 越, and when his muster of 9 armies went westward to the Nine Rivers, turtles and alligators formed themselves into a bridge'. Even taking 37 years as the maximum for Mu's reign, the tenure of his predecessors has to be lessened to an extent quite incompatible with the evidence we have cited. Moreover, the historicity of tales about King Mu is dubious because so many are romanticized. If Mu's accession is meant in the *Annals* statement, the previous years (according to our list) and 10 years back to the reputed mandate come to only 13 short of the 100. Ssü-ma Ch'ien's figure of 55 seems the best choice for a tentative estimate (*Mém. hist.* I 265).¹⁷

But "the 37th year" sometimes was quoted as "the 47th year" (ap. *Lu Shih* 路史), "the 17th year" (ap. *Kuang Yün* 廣韻) and "the 7th year" (ap. *Tai-p'ing Yü-lan* 太平御覽). Ch'en Meng-chia followed the version "the 17th year" and assigned 20 years for Mu Wang's reign. In this paper, I assign 23 years to Mu Wang's reign.

For Kung Wang's reign, I agree with Yetts in assigning 15 years to his reign. Yetts says:

For the reign of King Kung the contemporary evidence of 15 years afforded by the 2nd Ch'io Ts'ao Ting supersedes all other estimates which vary from 12 to 25 years. This cauldron's inscription presents the combination, rare on bronzes, of a king named together with the year of his reign. It records favours given Ch'io Ts'ao by King Kung on the occasion of archery practice at the New Palace in [Ch'êng-] Chou.¹⁸

16 James Legge, *Chinese Classics*, Vol. 5, p.140.

17 *Op. cit.*, p. xxi.

18 *Ibid.*, pp. xxi, xxii.

Regarding the reigns of Yih Wang 懿王 and Hsiao Wang, the *Bamboo Annals* mentioned an event in the 1st year of Yih Wang and an event in the 7th year of Hsiao Wang. I assign 2 years to Yih Wang's reign and 15 years to Hsiao Wang's reign because "the 15th year" as recorded in *Ta Ting* 大鼎 should belong to Hsiao Wang's reign.

For the reigns of Yi Wang 夷王 and Li Wang, Yetts says:

We take the *Kuo Yü Ts'ung Ting* to warrant the surmise that King Yi reigned at least 32 years. A typical Second Phase piece, it has in common with a number of vessels certain names, some inscribed on one and some on another but associated in such a way that they tie the vessels together into a group. The names relevant to the present theme are those of the landowner Kuo Yü Ts'ung, his late grandfather and father, an official called K'o 克 holding the post of *shan-fu* 善夫 (perhaps a sort of court chamberlain), and his late grandfather. Recorded on the *ting* is a plea for justice before the King brought by Kuo Yü Ts'ung accusing certain persons of encroaching on his land. The plaintiff dedicates the *ting* to his late grandfather and father by name, and mentions the "32nd year". The next link in the chain of evidence is the record of a similar plaint some 7 years before made by the same Kuo. It occurs on a food-vessel of the *hsü* 盪 class, and names K'o as intermediary in gaining restitution of the stolen land. Then the inscription on a cauldron, commonly called the *Ta K'o Ting* 大克鼎, serves to date K'o in a eulogy to his late grandfather. The words are: 'in the execution of his functions he was able with devotion to protect his sovereign King Kung 肆克葬保厥辟纘王'. That places K'o in the 2nd generation after King Kung and therefore lends support to our theory that assigns not less than 32 years to the reign of King Yi. Had Ssü-ma Ch'ien felt confident as to Li he could have fixed the date of his accession merely by counting back from the beginning of the Regency in 841 B.C. Actually he gives several conflicting figures. In Chapter IV the 30th, 34th and 37th years of the reign are mentioned, the last being pegged to 841 B.C. when rebels caused the King's flight to Chih 囂 (*Mém. hist.*, I 268, 272, 274). Yet elsewhere in the *Shih Chi* synchronization between his and certain feudal rulers' reigns presents a very different picture. Bracketed with a Ch'i 齊 prince, for instance, the length of his reign works out to some 18 years (*Mém. hist.*, IV 41). Several princes of Wei 衛 had held the title of *po* 伯, often likened to 'earl', until one more ambitious, named Ching 靖, on his accession bribed King Yi 夷 to raise the rank of Wei princes to that of *hou* 侯, often likened to 'marquis'. After ruling for 12 years he died and was succeeded by his son whose 13th year was the one in which King Li fled to Chih. That points to a maximum of nearly 25 years for Li's reign (*Mém. hist.*, IV 192). The principality of Ch'en 陳 affords yet another clue. Prince Shên 慎 was a contemporary of King Li, and it was in the 12th or 13th year of his successor, Prince Yu 幽, that the rebels drove the King from the capital. Unfortunately Ssü-ma Ch'ien omits to say how long Prince Shên occupied the Ch'ên throne (*Mém. hist.*, IV 170). Though these correspondences yield no precise conclusion, they do indicate that King Li's reign lasted much nearer 20 than 37 years. Accordingly we tentatively assign to him the round number of 20 years.¹⁹

It was also pointed out by Shinjō and later followed by Ch'en Meng-chia without mentioning Shinjō's name. Yetts followed them. I assign 34 years to Yi Wang's reign and 18 years to Li Wang's reign.

19 *Ibid.*, p.xxii.

III. The Calendar

Wu Ch'i-ch'ang, Tung Tso-pin and Orient Lee 黎東方 have all reconstructed the calendar for the Western Chou period. Wu followed Liu Hsin's San-t'ung calendar 三統曆, Tung said that his reconstructed calendar was based on the principles of Szū-fen calendar 四分曆, while Lee's two versions of the calendar were reconstructed according to the principles of both of the Szu-fen and T'ai-ch'u calendars separately.²⁰

In principle, the differences between the calendars reconstructed by Wu, Tung and Lee are not many. The main differences are: (1) Wu and Tung put the intercalary months in the middle as well as at the end of a year, while Lee, at the end of a year as the 13th month. (2) The cyclical name for the 1st day of each month may differ by one day or 30 days. (3) Tung's calendar has been adjusted according to the rule as stated above, while Wu's and Lee's have been left unadjusted.

20 Orient Lee, "Chronological Data from Western Chou Bronzes", *Chinese Culture*, Vol.VIII, No. 4, 1967 (pp.19-79 and pp.20, 21), writes:

"Sometime during the 5th century B.C., we do not know exactly when, a so-called Sse-fen calendar (四分曆) came into use. The word Sse-fen means one-fourth! This calendar assumed that the solar year was 365 days and 'one-fourth' of a day. It also assumed that the synodic month was $29\frac{499}{940}$ days or 29.530851 days. It was soon adopted with slight variations by the various feudal states which existed then, while the royal court of Eastern Chou at Lo-yang, powerless, poor and under-staffed, was neglecting its duty of promulgating the dates for the first day of the months.

The Sse-fen calendar was a convenient device good for around three centuries. By the time of Wu Ti of Han (140-87 B.C.), its deficiencies became so apparent that the emperor decided to have a new calendar promulgated in 104 B.C. with its technical beginning set on the 1st day of the 1st month (officially called the 10th month) of Year 7 of the Yuan-fen Era (元封), namely, December 23, 105 B.C., Gregorian Calendar. This calendar, named 'T'ai-ch'u' (太初) after the title of one of his many 'eras', was in reality even less accurate than the Sse-fen calendar, but neither the emperor himself nor his specialists knew about the unpleasant truth. It was not until 27 years later that a chief astronomer named Chang Shou-wang (張壽王) ventured some protest. This T'ai-ch'u calendar estimated the synodic month as $29\frac{43}{81}$ days or 29.530864 days, which was farther from the modern figures (29.530388) than the Sse-fen. It estimated the solar year as 365.25016244 days, also farther from the Gregorian figures (365.2425) than the Sse-fen estimate.

Both the Sse-fen and the T'ai-ch'u calendars include 7 'leap months' in every 19 years in addition to the 12 months per year. As I have mentioned above, the 'leap month' was added at the end of the year during the latter part of Shang and throughout the Western Chou. By the time the Sse-fen calendar came into use, there had been already an established practice of inserting the leap month in the middle of the year. Just when and where did this practice begin, we do not know. In the marquissate of Lu, it began in the first year of Wen Kung (文公), 626 B.C.

When we wish to reconstruct the calendar for the purpose of finding out what was the name of the first day of a certain month of a certain year, either the T'ai-ch'u or the Sse-fen calendar may be used. However, the T'ai-ch'u calendar, with all its faults, can do us a better service than the Sse-fen, simply because we know when it was devised and put into use.

The T'ai-ch'u errs by having one day too many in every 3623.188 synodic months. We can adjust it, while extending it backwards, by deducting one day, for the days before the 24th day, 1st month, Year 4, An Wang (安王)'s reign, i.e., Jan. 12, 387 B.C.; two days before the 19th day, 2nd month, Year 7, Chuang Wang (莊王)'s reign, i.e., Feb. 1, 690 B.C.; three days, before...Feb. 21, 983 B.C....till....1102 B.C."

The following is a table of the cyclic names (abbrev. as CN):

CN1 甲子 chia-tzū	CN11 甲戌 chia-hsü	CN21 甲申 chia-shen	CN31 甲午 chia-wu	CN41 甲辰 chia-ch'en	CN51 甲寅 chia-yin
CN2 乙丑 yi-ch'ou	CN12 乙亥 yi-hai	CN22 乙酉 yi-yu	CN32 乙未 yi-wei	CN42 乙巳 yi-szü	CN52 乙卯 yi-mao
CN3 丙寅 ping-yin	CN13 丙子 ping-tzū	CN23 丙戌 ping-hsü	CN33 丙申 ping-shen	CN43 丙午 ping-wu	CN53 丙辰 ping-ch'en
CN4 丁卯 ting-mao	CN14 丁丑 ting-ch'ou	CN24 丁亥 ting-hai	CN34 丁酉 ting-yu	CN44 丁未 ting-wei	CN54 丁巳 ting-szü
CN5 戊辰 wu-ch'en	CN15 戊寅 wu-yin	CN25 戊子 wu-tzū	CN35 戊戌 wu-hsü	CN45 戊申 wu-shen	CN55 戊午 wu-wu
CN6 己巳 chi-szü	CN16 己卯 chi-mao	CN26 己丑 chi-ch'ou	CN36 己亥 chi-hai	CN46 己酉 chi-yu	CN56 己未 chi-wei
CN7 庚午 keng-wu	CN17 庚辰 keng-ch'en	CN27 庚寅 keng-yin	CN37 庚子 keng-tzū	CN47 庚戌 keng-hsü	CN57 庚申 keng-shen
CN8 辛未 hsin-wei	CN18 辛巳 hsin-szü	CN28 辛卯 hsin-mao	CN38 辛丑 hsin-ch'ou	CN48 辛亥 hsin-hai	CN58 辛酉 hsin-yu
CN9 壬申 jen-shen	CN19 壬午 jen-wu	CN29 壬辰 jen-ch'en	CN39 壬寅 jen-yin	CN49 壬子 jen-tzū	CN59 壬戌 jen-hsü
CN10 癸酉 kuei-yu	CN20 癸未 kuei-wei	CN30 癸巳 kuei-szü	CN40 癸卯 kuei-mao	CN50 癸丑 kuei-ch'ou	CN60 癸亥 kuei-hai

We may raise the question: Is the calendar reconstructed just the same as that of the Western Chou people? Of course not.²¹ But we may use the reconstructed calendar as a working basis, because the Western Chou people might have known how to measure the longest day and the shortest day within a year (the summer solstice and the winter solstice), to observe the waxing and waning of the moon, to check the solar and lunar eclipses and to look at the position of the stars. They should have known how to set the intercalary months in the middle or at the end of a year (we have found the term "the 13th month" in oracle bone and bronze inscriptions of the Yin and Chou period).

21 Chalmers says: "Sze-ma Ts'een, who gives a full history of these discoveries, does not indeed tell us that they became acquainted with the cycle of Callippus, either through the Bactrians or the Hindoos; but there is scarcely a shadow of doubt that this was the case. In no other way can we account for the sudden appearance, in Ts'een's *History*, of a method so far in advance of anything known before in China, and one which had been already employed in the West for more than two centuries. The cycle of Callippus is simply this:— $4 \times 19 = 76$ years = 27759 days = 940 lunations. It must have been well known to Alexander the pupil of Aristotle, and the conqueror of Sogdiana, Bactria, and the Punjab, B.C. 328-325. The reformation of the Chinese calendar by Sze-ma Ts'een and others, with the help of these numbers, dates from the winter solstice of the year 104 B.C." (*Op. cit.*, p.100).

IV. Phrases describing the moon

Orient Lee says:

There are four such phrases:

- A. *ch'u chi* (初吉), felicitous beginning.
- B. *chi sheng pa* (既生霸), after the birth of the crescent.
- C. *chi wang* (既望), after full moon.
- D. *chi sse pa* (既死霸), after the death of the crescent.

For the convenience of the reader, they will be referred to simply as A, B, C, D. It was Wang Kuo-wei (王國維 1878 - 1927) who brought forth first the interpretation for these four phrases as denoting the four quarters of a month. Thus, A stands for the 1st to the 7th, if the preceding month had 30 days; to the 8th, if the preceding month had 29 days. B stands for the 8th to the 14th, or the 9th to the 15th. C stands for the 15th to the 22nd, or the 16th to the 23rd. D stands always for the 23rd (for the 23rd or the 24th) to the end of the month.

Wang's 'Four Quarters Theory' has been accepted by most scholars in this field, with more or less reservation. Tung Tso-pin (董作賓 1895-1963), however, offered a 'Fixed Points Theory'.

Tung insisted:

- A stands for the 1st of the month only.
- B stands for the 15th of the month only.
- C stands for the 16th, the 17th and the 18th, only.
- D also stands for the 1st of the month, only.

In other words, the four phrases put together denoted only five specific days in the month. One is led to wonder why, among all the days in the month, the many events described in the inscriptions of the bronzes should have happened only on these five specific days.²²

Wang Kuo-wei's interpretation has been revised a little by Shinjō Shinzō and followed by most scholars, while Tung Tso-pin's interpretation, which was originated from Liu Hsin, has been followed only by Ch'en Meng-chia.²³ For *ch'u-chi* 初吉, Huang Sheng-chang 黃盛璋, in his article "An Interpretation to Ch'u Chi" 釋初吉 (*Li-shih Yen-chiu* 歷史研究, 1958, No.4, pp.71-86), following Wang Yin-chih 王引之 of the Ch'ing Dynasty, suggests that *ch'u-chi* stands for the 1st to the 10th of a month. Huang's interpretation does not differ from Wang Kuo-wei's too much. In this paper, I follow Wang's interpretation with flexibility.

V. How to make use of the calendar

In applying Wang Kuo-wei's "4 quarters theory", we should be flexible, because, as Huang Sheng-chang pointed out, during the Eastern Chou period, *Ch'u-chi* 初吉 might imply the 9th or 10th day of a month.

22 *Op. cit.*, pp.22, 23.

23 "A Chronological Study of Western Chou Bronzes", II, *Kao-ku Hsueh-pao* 考古學報, No. 10, 1955, pp.112-115.

Besides, it is permissible to shift the cyclic names for the 1st day of a month by one day because we assume that, during the Western Chou period, the calculation was not as exact as that during the Han Dynasty.²⁴ Even in Wu, Tung and Lee's calendars, the cyclic names for the 1st day of a month may differ by one day or 30 days.

In applying a fully dated record to a certain date, the chance of success is 1/8, because 60 cyclic names normally occur within two consecutive months and each month consists of 4 quarters. We assume that the intercalary month may be shifted backward or forward because of inaccuracy of calculation during the Western Chou period, hence the chance may be increased to 1/4. For example, an inscription (Group G, No.30, Shih Huei Kuei 師兌簋) says: "In the 1st year, 1st month, first quarter, on the day Ting-hai, Po Ho Fu said so....." 「佳王元年正月初吉丁亥伯蘇父若曰」。 If we try to fit it (1-1-A-CN24) to the 1st year of the Kung-ho Regency (841 B.C.), we find out that the 1st day of the 1st month was jen-wu 壬午 (CN19), the 6th day was ting-hai 丁亥 (CN24). Besides the dating, we should have some historical data to support us. Here is another example. Group G No.31 Shih Twei Kuei (1) 師兌簋 (一) says: "In the 1st year, 5th month, 1st quarter, on the day chia-yin,.....the king ordered Shih Twei to assist Shih Ho Fu to be in charge of the horses." 「佳元年五月初吉甲寅 (1-5-A-CN51). 王呼內史尹册命師兌足師蘇父嗣左右走馬」。 The 1st day of the 5th month of the 1st year of the Kung-ho Regency was CN15. The difference then is more than 30 days. We may assume that between the 1st month and the 5th month, there was an intercalary month, turning the 6th month in Lee's calendar into the 5th month, the 1st day of which was CN47 keng-hsü 庚戌. The 5th day of the 5th month was then CN51.

VI. Fully dated records in Shu Ching

A. THE "WU CH'ENG" AND THE BAMBOO ANNALS CONCERNING THE CHOU CONQUEST

My article "Certain Dates of the Shang Period" states:

As for the date of the Chou conquest, although Mr. Karlgren's 1027 B.C. fits the *Bamboo Annals*, it will not fit the ancient documents in the *Shu Ching*. For instance, on the document, "Wu Ch'eng" 武成 ("The Successful Conclusion of the War"), the citations in the *History of the Former Han Dynasty* give, among various dated events in the year of the Chou conquest, this statement: 'In the first month, the day jen-ch'en (CN29) immediately followed the end of the moon's waning. The next day was kwei-ssü (CN30), when the king in the morning marched from Chou to attack and punish Shang'. If we turn to the calendar of the year 1027 B.C. as provided by Professor Tung, in the first month, jen-ch'en was the eleventh day. Since a full moon generally occurs near the fifteenth of the lunar month, how can the eleventh be said to be the day immediately following the end of the moon's waning?.....

24 Chalmers says: "We now give a few examples gathered from the 'Ch'un Ts'ew' of Confucius.....We find that the year B.C. 719 commenced on January 16;.....B.C. 605 on November 18; B.C. 583 on November 16; B.C. 556 on November 17; B.C. 540 on November 19; B.C. 529 on November 18; B.C. 526 on November 15". (*Op. cit.*, p.99)

Legge says: "It will be seen that during the *Ch'un Ts'ew* period these [intercalary] months were introduced very irregularly..... The most important thing to be observed in the table is the changing position of the first month, sometimes preceding, sometimes following, the winter solstice, without any apparent rule". (*Chinese Classics*, Vol. 5, Prolegomena, p.92.)

Fortunately, we learn from Mr. Tung that ninety-three years after the lunar eclipse of November 24, 1311 B.C., another occurred on the same day, keng-shen (CN57), in the same month; namely, the lunar eclipse of November 15/16, 1218 B.C. Moreover, the cyclical days in the months of 1111 B.C. reoccurred ninety-three years later in 1018 B.C. Thus, 1218 B.C. might have been the year of the eclipse in question, and 1018 B.C. the year of the Chou conquest. Will the latter date agree with the *Bamboo Annals*?

The *Bamboo Annals* contain a statement to the effect that Chou, in the eleventh year of King Wu, began to attack Shang. If we suppose this to have been 1018 B.C., then the year in which King Wen died and King Wu began to rule would be (1018 + 10) 1028 B.C. The following year, 1027 B.C., would be the first year which was wholly King Wu's – unlike 1028 B.C., which was in part his father's. Counting from 1027 B.C., formally King Wu's first year, to 771 B.C., King Yu's last year, we get an inclusive total of 257 years. There is a hitherto overlooked fragment of the *Bamboo Annals*, quoted in the *T'ung-chien Wai-chi* 通鑑外紀, which says, 'From King Wu to King Yu there were 257 years'.²⁵

The following is a list of the calendar for 1018 B.C. as reconstructed by Wu Ch'i-ch'ang and corroborated by Tung Tso-pin and Orient Lee:

i 57, ii 27, iii 56, iv 26, v 55, vi 25, vii 54, viii 24, ix 53, x 23, xi 52, xii 22.

James Legge says:

In the *Books of the early Han dynasty*, 律歷志, 第一, 下, compiled by Lew Hin, we find three quotations as from the 武成 .

The first agrees with the 1st par. of the chapter. – 「惟一月壬辰 (CN29) 旁死霸, 若翼日癸巳 (CN30), 武王乃朝步自周, 于征伐紂。」

The second.....「粵若來二月, 既死霸, 粵五日甲子 (CN1), 威劉商王紂。」“In the 2nd month, on the day chia-tzū (CN1), five days after the end of the moon's waning, King Wu already killed Chow, the king of Shang.”

Then comes the third quotation – 「惟四月既旁生霸, 粵六日庚戌, 武王燎于周廟, 翼日辛亥祀于天位, 粵五日乙卯, 乃以庶國祀孩于周廟。」“In the fourth month, on the day käng-seuh (CN47), the 6th after the 16th, King Woo made a fire in the ancestral temple of Chow. Next day, – the day sin-hae (CN48), – he sacrificed at the altar of Heaven; and five days after, – on the day yih-maou (CN52), – attended by the princes of the various states, he sacrificed and presented the heads of *Show* and his two concubines in the ancestral temple”.²⁶

According to Tung, the 1st and 2nd months were those of the Yin year, corresponding to the 2nd and 3rd months of the Chou year respectively. In our calendar, the 1st day of the 2nd month was keng-yin 庚寅 (CN27), the 4th day was kwei-szū 癸巳 (CN30); the 1st day of the 3rd month was chi-wei 己未 (CN56), the 6th day was chia-tzū 甲子 (CN1); the 1st day of the 4th month was chi-ch'ou 己丑 (CN26), the 22nd day keng-hsü 庚戌 (CN47), the 23rd day was hsin hai 辛亥 (CN48), the 27th day was yi-mao 乙卯 (CN52).

25 HJAS, Vol. 23, 1961, pp.109-111.

26 Chinese Classics, Vol. 3, p.310.

There is this further evidence. *Kuo Yü*, "*Chou Yü*" 國語「周語」 says:

While Wu Wang attacked Yin, the year [-star] (Jupiter) was in *Ch'un-huo* 鶉火 (Cancer-Leo).
「武王伐殷，歲在鶉火。」²⁷

Liu Hsin 劉歆 concluded by calculation that it was 1122 B.C. But the *Tso Chuan* (Duke Hsiang, 28th year) says:

Tsze Shin said,The Year [-star] (Jupiter) [ought to be] in Sing-ke (Sagittarius-Capricorn), and it has licitiously advanced into Hëueh-hëaou (Capricorn-Aquarius).「梓慎曰：...歲在星紀，而淫於玄枵。」²⁸

It was 545 B.C., when the year-star was in *hsing-chi* 星紀. In 550 B.C., the year-star should be in *ch'un-huo* 鶉火. The difference between 1018 B.C. and 550 B.C. is 468 years, which can be divided by 12.²⁹ Therefore, from the mind of the people of the Ch'un-ch'iu period (around 545 B.C.), in 1018 B.C., the year-star should be in *ch'un-huo*; although it actually was not in *ch'un-huo*, but in *ta-liang* 大梁 (Aries-Taurus), because the period of Jupiter was actually 11.8565 years, not 12 years.

B. THE SHAO KAO AND THE LO KAO

The Shao Kao (the Announcement of the Duke of Shaou) says:

In the second month, on the day Yih-we (CN32), six days after the full moon, the king early in the morning proceeded from Chow, and came to Fung. Thence the Grand-guardian went before the duke of Chow to inspect the localities, and in the third month, on the day Mow-shin (CN45), the third day after the first appearance of the new moon on Ping-woo (CN43), came in the morning to Lō. 惟二月既望，越六日乙未，王朝步自周，則至于豐。惟太保先周公相宅。越若來三月，惟丙午朏，越三日戊申，太保朝至于洛。（Legge, *Chinese Classics*, Vol. 3, pp.420, 421.）

The Lo Kao (the Announcement Concerning Lo) says:

On the day Mow-shin (CN5), the King in the new city performed the annual winter sacrifice,..... all in the 12th month. Then the duke of Chow greatly sustained the decree which Wän and Woo had received, through the space of seven years. 戊辰，王在新邑，烝。.....在十有二月，惟周公誕保文武受命，惟七年。³⁰

According to the calendar for 1010 B.C.:

Wu and Tung : i 41, ii 10, iii 40, iv 9, v 39, vi 8, vii 38, viii 7, ix 37, x 6, xi 36, xii 5.

Lee : i 41, ii 10, iii 40, iv 9, v 39, vi 8, vii 38, viii 8, ix 37, x 7, xi 36, xii 6.

27 Cf. Legge, *Chinese Classics*, Vol. 3, The Prolegomena, p.95.

28 Legge, *Chinese Classics*, Vol. 5, p.540.

29 1066 B.C., suggested by Shinjō Shinzō, 48 years earlier than 1018 B.C. can also fit the requirement.

30 Legge, *Ibid.*, pp.451-452.

The 1st day of the 2nd month was CN10, the 23rd day was *yi-wei* 乙未 (CN32); the 1st day of the 3rd month was CN40, the fourth day was *ping-wu* 丙午 (CN43); the 1st day of the 12th month was *wu-ch'en* 戊辰 (CN5). If we assume that *wu-ch'en* was the last day of the 12th month as Liu Hsin did, we should have an intercalary month before the 12th month and shift the consecutive large months. Therefore, the 1st day of the 3rd month should be shifted from CN40 to CN41 and consequently, the 3rd day was *ping-wu* (CN43). But I think it is not necessary to assume that *wu-ch'en* should be the last day of the year.

C. THE KU MING

The Ku Ming (The Testamentary Charge 顧命) says:

In the 4th month, on the 2nd (or:3rd) day, the king was not happy (i.e. ill). On the day *kia-tsi* (CN1), the king poured water over his face.....The next day, a *yi-ch'ou* (CN2) day, the king died.On the day *ting-mao* (CN4), order was given to make a document.....On the 7th day, a *kuei-yu* (CN10) day, the leader-premier ordered the officers to exact the materials. 惟四月，哉生魄，王不擇。甲子，王乃洮頰水 越翼日乙丑，王崩 丁卯，命作冊度 越七日癸酉，伯相命士須材。³¹

I assume that Ch'eng Wang died in the 24th year of his reign in 993 B.C. Here is the calendar for 933 B.C.:

Wu and Tung: i 2, ii 32, iii 1, iv 31, v 60, vi 30, vii 59, viii 29, ix 58, x 28, xi 57, xii 27.

Lee: i 2, ii 32, iii 1, iv 31, v 60, vi 30, vii 59, viii 29, ix 59, x 28, xi 58, xii 27.

Chou: i 2, ii 32, iii 1, iii 31, iv 60, v 30, vi 59.

If we shift the intercalary month in the next year to this year after the 3rd month, the 1st day of the 4th month was *kuei-hai* 癸亥 (CN60), the 2nd day was *chia-tzu* 甲子 (CN1), the 3rd day was *yi-ch'ou* 乙丑 (CN2), the 5th day was *ting-mao* 丁卯 (CN4), the 11th day was *kuei-yu* 癸酉 (CN10).

D. THE PI MING

The Pi Ming 畢命 (The Charge to the Duke of Peih as quoted by Liu Hsin in the *History of Former Han*) says:

Feng-hsing said:

In the sixth month of his twelfth year, the day of the new moon's appearance was *keng-wu* (CN7), the King ordered the Recorder Feng-hsing 豐刑曰：惟十有二年六月庚午朏，王命作策豐刑。³²

Since it contradicts the Group A inscriptions (Keng Ying Ting and Small Yü Ting), I have found that it cannot fit the calendar of 981 B.C. (the 12th year of K'ang Wang's reign).

31 Karlgren, *the Book of Documents*, 1950, pp.70, 71, Legge made a mistake by explaining "tsai sheng p'o 哉生魄" as "the 16th day of the month", cf. *Chinese Classics*, Vol. 3, p.544.

32 Cf. Legge, *Chinese Classics*, Vol. 3, p.570.

- 981 B.C. Wu: i 52, ii 21, iii 51, iv 20, *iv* 50, v 19, vi 49, vii 18, viii 48, ix 17, x 47, xi 17, xii 46.
 Tung: i 52, ii 21, iii 51, iv 20, v 50, vi 20, vii 49, viii 19, ix 48, x 18, xi 47, xii 17, *xii* 46.
 Lee: i 52, ii 21, iii 51, iv 20, v 50, vi 20, vii 49, viii 19, ix 48, x 18, xi 47, xii 17, xiii 46.

The 1st day of the 6th month was *jen-tzū* 壬子 (CN49), the 19th day was *keng-wu* 庚午 (CN7). But, according to the text, *fei* 胙 means the 2nd or 3rd day of a month.

VII. An Inscription referring to "The 19th year" of Ch'eng Wang's reign

The Huan Yu 鬲卣 says: "In the 19th year, the king was at Han 阡. Wang Chiang 王姜 ordered document-writer Huan to appease Yi Po 夷伯. Yi Po gave him cowry-shell money and linen. In order to commemorate Wang Chiang's benevolence, (Huan) makes the precious vessel for his deceased father Kuei 癸".

Ch'ien Tsun 趯尊 has an inscription very similar to Huan Yu's in calligraphical style, which says: "In the 13th month, on the day *hsin-mao* (CN28), the king was at Han. He enfeoffed Ch'ien a land called X 稜 and gave five pairs of cowry-shell money, to commemorate the king's benevolence, (Ch'ien) makes this precious vessel for Chi (結)".

Chung Tzu 中簋 says: "In the 13th month, on the day *keng-yin* (CN27), the king was in the Han Camp 寒餽. The king ordered the grand historiographer to bestow the land in Ke 夔 / on Chung 中/. The king said: 'Chung! These Ke people whom the grand historiographer was bestowed on you, were the servants during the reign of Wu Wang, now I bestow on you the land in Ke as your feoff.....'".³³

Kuo maintained that they were of the same year. He assigned them both to the "19th year of the Mandate".³⁴ As for the Mandate, W. Perceval Yetts says:

Western books of reference usually start the Chou dynasty from the defeat and death of the last Shang-Yin King, and here we conform to custom. Certainly overlapping of the two dynasties is thus avoided. Chinese opinion, however, is inclined to the view that the dynasty really began some 10 years before the conquest when the future King Wên, then Chief of the West, is reputed to have received the divine mandate. An inscription on a bronze cauldron, cast not long after that time, contains this sentence: 'The illustrious King Wên received the great mandate by heaven's favour, and it fell to the lot of King Wu, having succeeded /King/ Wên, to establish the state 丕顯玆王受天佑大命在玆王嗣玆作邦'. Often called the 'Large Yü Ting, 大盂鼎', this cauldron is said to have been unearthed early last century some 70 miles west of Ch'ang-an in Shensi together with the 'Small Yü Ting' which will be mentioned later.

The notion of the divine mandate forfeited by a dynasty through misrule and transferred to its successor may have been invented by the Chou to vindicate them in their conquest and so, reconcile former Shang-Yin subjects to the new regime. For years the Chou seem to have felt insecure and

33 Cf. Karlgren, "Yin and Chou in Chinese Bronzes", *BMFEA*, No. 8, 1936, p.30.

34 Cf. Lee, *op. cit.*, p.40.

the notion is echoed frequently in the classics, notably in the *To fang* 多方 of the *Shu Ching*. The instance just quoted from the cauldron is not the only one among bronze inscriptions. Stress on the mandate is echoed again in a method of counting years irrespective of individual reigns. For instance, the '11th year' assigned to the conquest in the *Shu Preface* and repeated by Ssü-ma Ch'ien, cannot mean the 11th year of King Wu's reign (Legge, *Chinese Classics*, III Proleg., 7; *Mém. hist.*, I 227; IV 38, 88). Nor can the '13th year' in the opening words of the *Great Fan* 洪範 be counted according to his reign. Two notations existed, dynastic and regnal, as certain early commentators perceived and as Wang Kuo-wei recently demonstrated. He lists examples of the dual reckoning for the 20 years just after the reputed mandate (*Kuan t'ang pieh chi* 觀堂別集, 「補遺」, 4-8).³⁵

I have suggested that 1018 B.C. was the 11th year of Wu Wang's reign or, in other words, the 11th year of the Mandate. Wen Wang received the Mandate in 1028 B.C. and died in the same year when Wu Wang became the king. Wu Wang died in the 13th year (1016 B.C.) and Ch'eng Wang was under the Regency of Chou Kung in the same year. The 19th year was 1010 B.C., the 7th year of Chou Kung's Regency. It explains very well why Wu Wang's and Ch'eng Wang's 1st year started from the year when they became the king. But 1010 B.C. does not fit the above-mentioned inscriptions.

Ch'en Meng-chia suggested that it was the 19th year of Ch'eng Wang's reign. Kuo Mo-jo and Ch'en Meng-chia suggested that Wang Chiang was Ch'eng Wang's consort, but I think that Wang Chiang was Ch'eng Wang's mother, i.e. Wu Wang's consort. Yi Chiang 邑姜 was Wu Wang's Consort (ap. *Tso Chuan*, Duke Chao, 10th year)³⁶ and Chiang T'ai-kung's 姜太公 daughter (ap. *Bamboo Annals*), was very powerful during Ch'eng Wang's reign, especially in the East. Therefore, it is meaningful that Ch'eng Wang, together with his mother, Wang Chiang, went to the East in his 19th year.

T'ang Lan suggested that it was the 19th year of Chao Wang's reign and Wang Chiang was Chao Wang's mother.³⁷ T'ang assumed that K'ang Kung was the temple of K'ang Wang. Since Ling Yi says that Ming Kung 明公 used a victim in K'ang Kung and Ling Kuei has mentioned Wang Chiang,³⁸ Wang Chiang must belong to the period after K'ang Wang. But on the contrary, K'ang Wang's honorary title might follow the palace K'ang, just as Chao Wang's and Mu Wang's titles might follow the terms "Chao 昭" and "Mu 穆", denoting the side of the shrine or spirit-tablet in the ancestral temple.³⁹ Since the Chung Tzu mentioned Wu Wang only, it probably belongs to the reign of Ch'eng Wang.

35 *Op. cit.*, p.xix.

36 Legge, *Chinese Classics*, Vol. 5, p.629.

37 Cf. T'ang Lan, "K'ang Kung (康宮), A Problem in the Chronology of Western Chou Bronzes", *Kao-ku Hsiieh-pao*, No. 1, 1962, pp.20-21, 30-31.

38 Cf. Karlgren, *op. cit.*, p.33, B22, B23.

39 Cf. Legge, *Chinese Classics*, Vol. 3, p.400, "Mu K'ao 穆考", and Vol. 4, p.591 "Chao K'ao 昭考".

Shirakawa Shizuka, 白川靜 tries to compromise between Ch'en and T'ang, assuming that Ch'ien Tsun belongs to Ch'eng Wang's reign, while Chung Tzu belongs to Chao Wang's reign, taking the 13th month, CN27, 28 as accidental.⁴⁰ I think Shirakawa's assumption is not conclusive, because Chung Tzu mentioned Wu Wang only and the 13th month, CN27, 28 should be connected.

In conclusion, the 19th year of Ch'eng Wang's reign was 998 B.C. For this year,

Wu: i 31, ii 1, iii 30, iv 60, v 29, vi, 59, vii 28, viii 58, ix 27, x 57, xi 27, xii 56, xiii 26.

Tung: i 31, ii 1, iii 30, iv 60, v 29, vi 59, vii 28, viii 58, ix 27, x 26, xi 56, xii 25.

Lee: i 31, ii 1, iii 30, iv 60, v 30, vi 59, vii 29, viii 58, ix 28, x 57, xi 27, xii 56, xiii 26.

The 1st of the 13th month was *chi-ch'ou* 己丑 (CN26), the 2nd day was *keng-yin* 庚寅 (CN27), the 3rd day was *hsin-mao* 辛卯 (CN28).

VIII. Fully dated inscriptions

An inscription with the year, month, quarter and cyclical name of the day is called a fully dated inscription. There are around 40 fully dated inscriptions of the Western Chou period. I try to group them according to various reigns. For the sake of saving space, I follow Lee's practice, e.g. "22-4-C-CN46" means: "In the 22nd year, 4th month, 3rd quarter, on the day *chi-yu*". Also, I refer to the page in Kuo Mo-jo's *Liang-Chou Chin-wen-tz'u Ta-hsi Kao-shih* 兩周金文辭大系考釋 (K), the number of inscriptions in Bernhard Karlgren's "Yin and Chou in Chinese Bronzes" (B) and the number of inscriptions in Shirakawa's *Kinbun Tsushaku* (S). However, scholars differ in opinion on the dating of the inscriptions. I refer to the opinions of Kuo Mo-jo, Wu Ch'i-ch'ang, Yung Keng, Ch'en Meng-chia, Tung Tso-pin, T'ang Lan and Shirakawa (abbreviated as K, W, Y, C, D, T, S respectively), e.g. "K, W, C: K'ang; D, S: Chao" means that, Kuo, Wu and Ch'en attributed it to K'ang Wang's reign and Tung and Shirakawa to Chao Wang's reign.

GROUP A. INSCRIPTIONS (NOS. 1-2) BELONGING TO K'ANG WANG'S REIGN (992-968 B.C.)

(1) Keng Ying Ting 庚嬴鼎: 佳廿又二年四月既望己酉 (22-4-C-CN46), (K 43, B 60, S 80)
— K, W, C: K'ang; T, S: Chao.

971 B.C. Wu: i 54, ii 23, iii 53, iv 22, v 52, vi 21, vii 51, viii 20, ix 50, x 19, xi 49, xii 18.

Tung: i 24, ii 53, iii 23, iv 52, v 22, vi 51, vii 21, viii 50, ix 20, x 49, xi 19, xii 48.

Lee: i 54, ii 23, iii 53, iv 22, v 52, vi 21, vii 51, viii 20, ix 50, x 19, xi 49, xii 19.

According to Wu and Lee, the 1st day of the 4th month was *yi-yu* 乙酉 (CN22), the 25th day was *chi-yu* 己酉 (CN46), 2 days later than the last day of the 3rd quarter.

(2) Small Yü Ting 小孟鼎: 佳八月既望, 辰在甲申 佳王廿又五祀. (25-8-C-CN21), (K 35, B 17, S 62) -- K, W, Y, C, T, S: K'ang; D: Ch'eng.

968 B.C. Wu: i 6, ii 36, iii 5, iv 35, v 4, vi 34, vii 3, viii 33, ix 2, x 32, xi 1, xi 31, xii 1.
Tung: i 7, ii 36, iii 6, iv 35, v 5, vi 34, vi 4, vii 33, viii 3, ix 32, x 2, xi 31, xii 1.
Lee: i 6, ii 36, iii 5, iv 35, v 4, vi 34, vii 4, viii 33, ix 3, x 32, xi 2, xii 31, xiii 1.

According to Tung, the 1st day of the 8th month was *ping-yin* 丙寅 (CN3), the 19th day was *chia-shen* 甲申 (CN21).

GROUP B. INSCRIPTIONS (NOS. 3, 4) BELONGING TO MU WANG'S REIGN (948-926 B.C.)

(3) Shih X Kuei 師頰簋:⁴¹ 佳王元年九月既望丁亥 (1-9-C-CN24), (S 152) -- W, D: Chao; S: Yi.

948 B.C. Wu: i 10, ii 39, iii 9, iv 38, v 8, vi 37, vii 7, viii 37, ix 6, x 36, xi 5, xii 35.
Tung: i 41, ii 10, iii 40, iv 9, v 39, vi 8, vii 38, viii 7, ix 37, x 6, xi 36, xii 5, xii 35.
Lee: i 10, ii 40, iii 9, iv 39, v 8, vi 38, vii 7, viii 37, ix 6, x 36, xi 5, xii 35.

According to Wu and Lee, the 1st day of the 9th month was *chi-szŭ* 己巳 (CN6), the 19th day was *ting-hai* 丁亥 (CN24).

(4) Hsiu P'an 休盤: 佳廿年正月既望甲戌, 王在周康宮. 旦, 王格大室, 即位, 金公右走馬休入門... 用作朕文考日丁障盤 (20-1-C-CN11), (K 152, B 198, S 146) -- K: Hsüan; W: Mu; C, D: Hsiao; S: Yi.

929 B.C. Wu: i 50, ii 19, iii 49, iv 18, v 48, vi 17, vii 47, viii 16, ix 46, x 15, xi 45, xii 14.
Tung: i 20, ii 50, iii 19, iv 49, v 19, vi 48, vii 18, viii 47, viii 17, ix 46, x 16, xi 45, xii 15.
Lee: i 50, ii 19, iii 49, iv 18, v 48, vi 17, vii 47, viii 16, ix 46, x 16, xi 45, xii 15.

According to Wu and Lee, the 1st day of the 1st month was *kuei-ch'ou* 癸丑 (CN50), the 22nd day was *chia-hsü* 甲戌 (CN11).

Hsiu P'an says: "In the 20th year, 1st month, 3rd quarter, on the day *chia-hsü* (CN11), the king was in K'ang Kung at Chou. In the morning, the king went to the Great Room and took his seat. Yi Kung assisted Hsiu the master of horses to enter the gate....in order to make a plan for my reverent deceased father Jih Ting (who died on the day *ting*)....."

Yi Kung was the same person as Yi Kung in *Kuai Po Kuei* 夬伯簋. The latter says: "In the 9th year, 9th month, on the day *chia-yin* 甲寅 (CN51), the king ordered Yi Kung to attack Mei X 眉戡.... My glorious ancestors Wên 玟 and Wu 玊....." In the early edition of *Ta-hsi*, Kuo attributed it

41 The pronunciation of the character 頰 is unknown.

to K'ang Wang's reign because the graphs for Wên and Wu were the same as those in the Large Yü Ting, with the radical 王 "jade". But later he found Yi Kung was the same person as Hsiu P'an and Chung 仲 was the same person as Nan Chung 南仲 in Wu Huei Ting 無車鼎, so he attributed both to Hsüan Wang's reign. But I think both were of earlier date for the reasons that: 1. The graph for "king" was written as 天, which appeared in earlier inscriptions. 2. The graphs for "Wên" and "Wu" were written with the radical 玉 "jade", which appeared in earlier inscriptions. 3. Hsiu's deceased father Jih Ting was so called because he died on the day *ting* 丁. It is after the practice of the people of the Shang Dynasty. This is why I attribute Hsiu P'an and Kuai Po Kuei to Mu Wang's reign.

GROUP C. INSCRIPTIONS (NOS. 5-10) BELONGING TO K'UNG WANG'S REIGN (925-911 B.C.)

(5) Shih Hu Kuei 師虎簋: 佳元年六月既望甲戌 (1-6-C-CN11), (K 73, B 82, S 104) -- K, Y, C, D, T: Kung; W: Hsiao.

(6) Hu Ting 昏鼎: 佳王元年六月既望乙亥 佳王四月既生霸, 辰在丁酉. (1-6-C-CN12, 4B-CN34), (K 96, B 40, S 135) -- K, W: Hsiao; Y, C, S: Yih; D, T: Kung.

(7) Wu Yi 吳彝: 佳二月初吉丁亥 佳王二祀. (2-2-A-CN24), (K 74, B 199, S 105) -- K: Hsiao; W: Yi; Y, D, T, S: Kung; C: Yih.

(8) Yi Chih 趯 解: 佳三月初吉乙卯 佳王二祀 (2-3-A-CN52), (K 83, B 173, S 107) -- K: Yih; W, Y, C, D, T: Kung.

(9) Shih Chu Kuei 師遽簋: 佳王三祀四月既生霸辛酉 (3-4-B-CN58), (K 83, B 173, S 100) -- K: Yih; W, Y, C, D, T: Kung.

925 B.C. Wu: i 57, ii 26, iii 56, iv 25, v 55, vi 24, vii 54, viii 23, ix 53, x 22, xi 52, xii 21.

Tung: i 57, ii 26, iii 56, iv 26, v 55, vi 25, vii 54, viii 24, ix 53, x 23, xi 52, xii 22.

Lee: i 57, ii 26, iii 56, iv 25, v 55, vi 24, vii 54, viii 23, ix 53, x 23, xi 52, xii 22.

Chou: i 27, ii 57, iii 26, iv 56, v 25, vi 55, vi 24, vii 54, viii 23, ix 53, x 22, xi 52, xii 22.

924 B.C. Wu: i 51, ii 20, iii 50, iv 20, iv 49, v 19, vi 48, vii 18, viii 47, ix 17, x 46, xi 16, xii 45.

Tung: i 51, ii 21, iii 50, iv 20, v 49, v 19, vi 49, vii 18, viii 48, ix 17, x 47, xi 16, xii 46.

Lee: i 51, ii 21, iii 50, iv 20, v 49, vi 19, vii 48, viii 18, ix 47, x 17, xi 46, xii 16, xiii 45.

Chou: i 51, ii 21, iii 50, iv 20, v 49, vi 19, vii 48, viii 18, ix 47, x 17, xi 46, xii 16.

923 B.C. Wu: i 15, ii 44, iii 14, iv 43, v 13, vi 43, vii 12, viii 42, ix 11, x 41, xi 10, xii 40.

Tung: i 15, ii 45, iii 14, iv 44, v 13, vi 43, vii 12, viii 42, ix 11, x 41, xi 11, xii 40.

Lee: i 15, ii 45, iii 14, iv 44, v 13, vi 43, vii 12, viii 42, ix 11, x 41, xi 10, xii 40.

Chou: i 45, ii 15, iii 45, iv 14, iv 44, v 13, vi 43, vii 12, viii 42, ix 11, x 41, xi 10, xii 40.

If we assume that in the 1st year (925 B.C.) of Kung Wang's reign, there was an intercalary month after the 6th month, and in the 3rd year (923 B.C.), there was another intercalary month

after the 4th month, then we can claim consistency for the first four inscriptions (5-8). For (5), in 925 B.C., the 1st day of the 6th month was *wu-wu* 戊午 (CN55), the 17th day was *chia-hsü* 甲戌 (CN11). For (6), in 925 B.C., the 18th day of the 6th month of the 1st year was *yi-hai* 乙亥 (CN12); in 924 B.C., the 1st day of the 4th month was *kuei-wei* 癸未 (CN20), the 15th day was *ting-yu* 丁酉 (CN34). For (7), in 924 B.C., the 1st day of the 2nd month was *chia-shen* 甲申 (CN21), the 4th day was *ting-hai* 丁亥 (CN24). For (8), in 924 B.C., the 1st day of the 3rd month was *kuei-ch'ou* 癸丑 (CN50), the 3rd day was *yi-mao* 乙卯 (CN52). For (9), in 923 B.C., the 1st day of the 4th month was *ting-wei* 丁未 (CN44), the 15th day was *hsin-yu* 辛酉 (CN58).

(10) Ch'io Ts'ao Ting 趙曹鼎 (二): 佳十又五年五月既生霸壬午, 彝王在周新宮 (15-5-B-CN19), (K 69, B 83, S 107) -- K, W, Y, C, D, T, S: Kung.

911 B.C. Wu: i 5, ii 35, iii 4, iv 34, v 4, vi 33, vii 3, viii 32, ix 2, x 31, xi 1, xi 30, xii 60.

Tung: i 6, ii 35, iii 5, iv 34, v 4, vi 33, vi 3, vii 32, viii 2, ix 32, x 1, xi 31, xii 60.

Lee: i 6, ii 35, iii 5, iv 34, v 4, vi 33, vii 3, viii 32, ix 2, x 31, xi 1, xii 30, xiii 60.

Chou: i 6, ii 36, iii 5, iv 35, v 5, vi 34, vii 4, viii 33, ix 3, x 32, xi 2, xi 31, xii 1.

If we assume that in the 15th year (911 B.C.) of Kung Wang's reign, the 1st day of the 4th month was not *ting-mao* 丁卯 (CN4), but *wu-ch'en* 戊辰 (CN5) because of different arrangements of the consecutive months, then the 15th day of the 4th month would be *jen-wu* 壬午 (CN19).

GROUP D. INSCRIPTIONS (NOS. 11-19) BELONGING TO HSIAO WANG'S REIGN (908-894 B.C.)

(11) Shih Ch'en Ting 師晨鼎: 佳三年三月初吉甲戌 (3-3-A-CN11), (K 115, B 111, S 125) -- K, W, Y, D: Li; C, S: Yih.

(12) Shih Yü Kuei 師餘簋: 佳三年三月初吉甲戌 (3-3-A-CN11), (K 116, B 112, S 124) -- K, W, Y, D: Li; C, S: Yih.

906 B.C. Wu: i 36, ii 6, iii 35, iv 5, v 34, vi 4, vii 34, viii 3, ix 33, x 2, xi 32, xii 1.

Tung: i 37, ii 6, iii 36, iv 5, v 35, vi 4, vii 34, viii 3, ix 33, x 2, xi 32, xii 2.

The 1st day of the 3rd month was *chi-szü* 己巳 (CN6), the 6th day was *chia-hsü* 甲戌 (CN11).

(13) Chien Kuei 諫簋: 佳五年三月初吉庚寅 (5-3-A-CN27), (K 117, B 110, S 127) -- K, W, Y: Li; C, S: Yih; D: Yi.

904 B.C. Wu: i 55, ii 24, iii 54, iv 23, v 53, vi 22, vii 52, viii 21, ix 51, x 20, xi 50, xii 19.

Tung: i 55, ii 24, iii 54, iv 24, v 53, vi 23, vii 52, viii 22, ix 51, x 21, xi 50, xii 20.

Lee: i 55, ii 24, iii 54, iv 24, v 53, vi 23, vii 52, viii 22, ix 51, x 21, xi 50, xii 20.

Chou: i 25, ii 55, iii 24, iii 54, iv 24, v 53, vi 23, vii 52, viii 22, ix 51, x 21, xi 50, xii 20.

If we adjust the intercalary month, the 1st day of the 3rd month was *ting-hai* 丁亥 (CN24), the 4th day was *keng-yin* 庚寅 (CN27).

(14) Mu Kuei 牧簋：佳王七年十又三月既生霸甲寅 (7-13-B-CN51), (K 75, B 80, S 104) -- K, Y: Kung; W, D: Hsiao.

903 B.C. Wu: i 49, ii 19, iii 48, iv 18, v 47, vi 17, vii 46, viii 16, ix 45, x 15, xi 44, xii 14, *xiii 43*.
Tung: i 49, ii 19, iii 48, iv 18, v 47, vi 17, vii 47, viii 16, *viii 46*, ix 15, x 45, xi 14, xii 44.
Lee: i 49, ii 19, iii 48, iv 18, v 47, vi 17, vii 46, viii 16, ix 45, x 15, xi 44, xii 14, *xiii 43*.
Chou: i 49, ii 19, iii 48, iv 18, v 47, vi 17, vii 46, viii 16, ix 45, x 15, xi 44, xii 14.

902 B.C. Wu: i 13, ii 42, iii 12, iv 41, v 11, vi 41, vii 10, viii 40, ix 9, x 39, xi 8, xii 38.
Tung: i 13, ii 43, iii 12, iv 42, v 11, vi 41, vii 10, viii 40, ix 9, x 39, xi 9, xii 38.
Lee: i 13, ii 43, iii 12, iv 42, v 11, vi 41, vii 10, viii 40, ix 9, x 39, xi 8, xii 38.
Chou: i 43, ii 13, iii 42, iv 12, v 41, vi 11, vii 41, viii 10, ix 40, x 9, xi 39, xii 8, *xiii 38*.

If we change the intercalary month of 903 B.C. to the end of 902 B.C., then the 1st day of the 13th month would be *hsin-ch'ou* 辛丑 (CN38), the 14th day would be *chia-yin* 甲寅 (CN51).

(15) Ta Kuei 大簋：佳十又二年三月既生霸丁亥 (12-2-B-CN24), (K 87, B 137, S 175) -- K, W: Yi; D: Hsiao; S: Li.

(16) Tsou Kuei 走簋：佳王十又二年三月既望庚寅 (12-3-C-CN27), (K 79, B 79, S 122) -- K, Y, C: Kung; W, D: Hsiao.

897 B.C. Wu: i 14, ii 44, iii 13, iv 43, v 12, vi 42, *vi 11*, vii 41, viii 11, ix 40, x 10, xi 39, xii 9.
Tung: i 14, ii 44, iii 13, iv 43, v 12, vi 42, vii 12, viii 41, ix 11, x 40, xi 10, xii 39.
Lee: i 14, ii 44, iii 13, iv 43, v 13, vi 42, vii 12, viii 41, ix 11, x 40, xi 10, xii 39, *xiii 9*.
Chou: i 14, ii 44, iii 13, *iii 43*, iv 12, v 42, vi 12, vii 41, viii 11, ix 40, x 10, xi 39, xii 9.

For (15), the 1st day of the 3rd month was *ping-tzu* 丙子 (CN13), the 12th day was *ting-hai* 丁亥 (CN24). For (16), the 15th day of the 3rd month was *keng-yin* 庚寅 (CN27).

(17) Wu Chi Kuei 無錫簋：佳十又三年正月初吉壬寅 (13-1-A-CN39), (K 120, B 89, S 128) -- K, Y: Li; W: Kung; C: Chao; D: Kung-ho; S: Yih.⁴²

(18) Wang Kuei 望簋：佳王十又三年六月初吉戊戌 (13-6-A-CN35), (K 80, B 202, S 129) -- K, T: Kung; W: Chao; D: Hsiao; S: Yih.

42 Kuo Mo-jo has suggested that Wu-chi in (17) is the same person as the historiographer of the Interior Wu-chi 內史無錫 in Kuo Ts'ung Hsü, which belongs to the 25th year of Yi Wang's reign (869 B.C.), 29 years later than (17) Wu Chi Kuei. Wu Ch'i-ch'ang and Tung Tso-pin have suggested that Wu Chi Kuei belongs to Hsüan Wang's reign (815 B.C.), 54 years later than 869 B.C. It is less reasonable to assume that one person might have served at the court for 54 years than for 29 years. Ch'en Meng-chia has suggested that Wu Chi Kuei belongs to Chao Wang's reign because he has connected the war against the Southern Barbarians recorded in Wu Chi Kuei with Chao Wang's campaign against Ch'u 楚. Shirakawa has assigned it to Yih Wang's 懿王 reign because he thinks that the war against the Southern Barbarians might have occurred in all kings' reigns in the Western Chou period.

896 B.C. Wu: i 38, ii 8, iii 37, iv 7, v 36, vi 6, vii 35, viii 5, ix 34, x 4, xi 33, xii 3.
 Tung: i 9, ii 39, ii 8, iii 38, iv 7, v 37, vi 6, vii 36, viii 5, ix 35, x 4, xi 34, xii 3.
 Lee: i 38, ii 8, iii 37, iv 7, v 36, vi 6, vii 36, viii 5, ix 35, x 4, xi 34, xii 3.
 Chou: i 38, ii 8, iii 37, iv 7, v 36, vi 6, vi 35, vii 5, viii 34, ix 4, x 33, xi 3, xii 33.

For (17), the 1st day of the 1st month was *hsin-ch'ou* 辛丑 (CN38), the 2nd day was *jen-yin* 壬寅 (CN39). For (18), the 1st day of the 6th month was *wu-hsü* 戊戌 (CN35), if we shift the intercalary month.

(19) Ta Ting 大鼎: 佳十又五年三月既霸丁亥 (15-3-B or D-24), (K 88, B 138, S 176) -- K, W: Yih; D: Hsiao; S: Li.

894 B.C. Wu: i 27, ii 56, ii 26, iii 55, iv 25, v 55, vi 24, vii 54, viii 23, ix 53, x 22, xi 52, xii 21.
 Tung: i 57, ii 26, iii 56, iv 25, v 55, vi 24, vii 54, viii 23, ix 53, x 23, xi 52, xii 22.
 Lee: i 27, ii 57, iii 26, iv 56, v 25, vi 55, vii 24, viii 54, ix 23, x 53, xi 22, xii 52, xiii 21.

According to Tung, the 1st day of the 3rd month was *chi-wei* 己未 (CN56), the 30th day was *ting-hai* 丁亥 (CN24). We may assume that the character 死 should be added after 既.

GROUP E. INSCRIPTIONS (NOS. 20-25) BELONGING TO YI WANG'S REIGN (893-860 B.C.)

(20) Tai Shih Tso Kuei 大師盧簋: 正月既望甲午 佳十又二年 (12-1-C-CN31), (S 126) -- C, S: Yih; D: Yi.

882 B.C. Wu: i 47, ii 17, iii 46, iv 16, v 45, vi 15, vii 44, viii 14, ix 43, x 13, xi 42, xii 12.
 Tung: i 47, ii 17, iii 46, iv 16, v 45, vi 15, vii 45, viii 14, ix 44, x 13, xi 43, xii 12.
 Lee: i 47, ii 17, iii 46, iv 16, v 45, vi 15, vii 44, viii 14, ix 43, x 13, xi 42, xii 12.
 Chou: i 17, ii 47, iii 16, iv 46, v 15, vi 45, vii 14, viii 44, ix 13, x 43, xi 12, xii 42.

The 1st day of the 1st month was *keng-ch'en* 庚辰 (CN17), the 15th day was *chia-wu* 甲午 (CN31).

(21) Po K'e Hu 伯克壺: 佳十又六年七月既生霸乙未 (16-7-B-CN32), (K 110, B 175, S 170) -- K, S: Yi; W, Y: Li; D: Hsiao.

(22) K'e Chung 克鐘: 佳十又六年九月初吉庚寅 (16-9-A-CN27), (K 112, B 96, S 171) -- K, S: Yi; W, Y: Li; D: Kung; T: Hsüan.

878 B.C. Wu: i 54, ii 24, iii 53, iv 23, v 52, vi 22, vi 51, vii 21, viii 50, ix 20, x 49, xi 19, xii 48.
 Tung: i 24, ii 53, iii 23, iv 52, v 22, vi 52, vii 21, viii 51, ix 20, x 50, xi 19, xii 49.
 Lee: i 54, ii 24, iii 53, iv 23, v 52, vi 22, vii 51, viii 21, ix 50, x 20, xi 49, xii 19, xiii 49.

For (21), according to Wu and Tung, the 1st day of the 7th month was *chia-shen* 甲申 (CN21), the 12th day was *yi-wei* 乙未 (CN32). For (22), according to Wu and Tung, the 1st day of the 9th month was *kuei-wei* 癸未 (CN20), the 8th day was *keng-yin* 庚寅 (CN27).

(23) Yüan P'an 袁盤：佳廿又八年五月既望庚寅 (28-5-C-CN27), (K 126, B 144, S 177) -- K, W, Y, T, S: Li; D: Yi.

866 B.C. Wu: i 14, ii 44, iii 13, iv 43, v 12, vi 42, vii 11, viii 41, ix 10, x 40, xi 9, xii 39.

Tung: i 14, ii 44, iii 14, iv 43, v 13, vi 42, vii 12, viii 41, ix 11, x 40, xi 10, xii 39.

Lee: i 14, ii 44, iii 13, iv 43, v 12, vi 42, vii 11, viii 41, ix 11, x 40, xi 10, xii 39.

According to Wu and Lee, the 1st day of the 5th month was *yi-hai* 乙亥 (CN12), the 16th day was *keng-yin* 庚寅 (CN27).

(24) Yi Kuei 伊籛：佳王廿又九年正月既望丁亥 (29-1-C-CN24), (K 125, B 92, S 169) -- K, W, Y: Li; C, D, S: Yi.

865 B.C. Wu: i 8, ii 38, iii 8, iv 37, v 7, vi 36, vii 6, viii 35, ix 5, x 34, xi 4, xii 33, xiii 3.

Tung: i 9, ii 38, iii 8, iv 37, v 7, vi 36, vii 6, viii 36, ix 5, ix 35, x 4, xi 34, xii 3.

Lee: i 9, ii 38, iii 8, iv 37, v 7, vi 36, vii 6, viii 35, ix 5, x 34, xi 4, xii 33, xiii 3.

The 1st day of the 1st month was *jen-shen* 壬申 (CN9), the 16th day was *ting-hai* 丁亥 (CN24). Kuo deciphered "29" as "27", but Tung deciphered it as "29".

(25) Kuo Yu Ts'ung Ting 鬲攸从鼎：佳卅又一 (二) 年三月初吉壬辰 (31 or 32-3-A-CN29), (K 126, B 93, S 180) -- K, W, Y, D, T, S: Li.

863 B.C. Wu: i 27, ii 56, iii 26, iv 55, v 25, vi 54, vii 24, viii 53, ix 23, x 53, xi 22, xii 52.

Tung: i 27, ii 57, iii 26, iv 56, v 25, vi 55, vii 24, viii 54, ix 23, x 53, xi 22, xii 52.

Lee: i 27, ii 56, iii 26, iv 56, v 25, vi 55, vii 24, viii 54, ix 23, x 53, xi 22, xii 52.

The 1st day of the 3rd month was *chi-ch'ou* 己丑 (CN26), the 4th day was *jen-ch'en* 壬辰 (CN29). Kuo Mo-jo deciphered "31" as "32", but Wu and Tung deciphered it as "31". The 32nd year was 862 B.C.

862 B.C. Wu: i 21, ii 51, iii 20, iv 50, v 19, vi 49, vii 18, viii 48, ix 17, ix 47, x 16, xi 17, xii 15.

Tung: i 21, ii 51, iii 21, iv 50, v 20, vi 49, vi 19, vii 48, viii 18, ix 47, x 17, xi 46, xii 16.

Lee: i 21, ii 51, iii 20, iv 50, v 19, vi 49, vii 18, viii 48, ix 18, x 47, xi 17, xii 46, xiii 16.

According to Tung, the 1st day of 3rd month was *chia-shen* 甲申 (CN21), the 9th day was *jen-ch'en* 壬辰 (CN29).

GROUP F. INSCRIPTIONS (NOS. 26-29) BELONGING TO LI WANG'S REIGN (859-842 B.C.)

(26) Shih Hsün Kuei 師旬簋：佳元年二月既望庚寅 (1-2-C-CN27), (K 139, B 204, S 183) --

K, Y: Hsüan; W, D: K'ang;⁴³ S: Kung-ho.

(27a) Shih Shih Kuei (a) 師虢簋(一): 佳王元年四月既生霸, 王在滅戾, 甲寅, 王格廟, 即位... (1-4-B ... -CN51), (S 140) -- K: Li; S: Yi.

859 B.C. Wu: i 34, ii 3, iii 33, iv 2, v 32, vi 1, vi 31, vii 60, viii 30, ix 60, x 29, xi 59, xii 28.

Tung: i 34, ii 4, ii 33, iii 3, iv 32, v 2, vi 31, vii 1, viii 30, ix 60, x 29, xi 51, xii 28.

Lee: i 34, ii 3, iii 33, iv 3, v 32, vi 2, vii 31, viii 1, ix 30, x 60, xi 29, xii 59, xiii 28.

For (26), according to Tung, the 1st day of the 2nd month was *ting-mao* 丁卯 (CN4), the 24th day was *keng-yin* 庚寅 (CN27). For (27a), according to Tung, the 1st day of the 4th month was *yi-wei* 乙未 (CN32), the 20th day was *chia-yin* 甲寅 (CN51), which belongs to the 3rd quarter (C).

(27b) Shih Shih Kuei (b) 師虢簋(二): 佳王五年九月既生霸壬午 (5-9-B-CN19), (S 141). -- K: Li; S: Yi.

855 B.C. Wu: i 10, ii 40, iii 9, iv 39, v 8, vi 38, vii 7, viii 37, ix 7, x 36, xi 6, xii 35.

Tung: i 11, ii 40, iii 10, iv 39, v 9, vi 38, vii 8, viii 37, ix 7, x 36, xi 6, xii 35.

Lee: i 10, ii 40, iii 10, iv 39, v 9, vi 38, vii 8, viii 37, ix 7, x 36, xi 6, xii 35.

The 1st day of the 9th month was *keng-wu* 庚午 (CN7), the 13th day was *jen-wu* 壬午 (CN19).⁴⁴

43 For 匚, *Ta-hsi*, following Sung Scholars, has deciphered it as 匚. But, according to a vessel Hsün Kuei 匚簋 unearthed in 1959, it should be deciphered as 匚 = 詢 *hsün* (cf. Wen-wu 文物 1960.2 p.5, in Kuo Mo-jo's article 明叔簋及匚簋考釋). Most scholars have connected Shih Hsün Kuei with Mao Kung Ting because the contents of the inscriptions are similar. Wu Ch'i-ch'ang and Tung Tso-pin, following the scholars of Ch'ing Dynasty, have assigned both to K'ang Wang's reign, while Kuo Mo-jo has assigned them to Hsüan Wang's reign because the type and decoration of the vessel Mao Kung Ting belong to the later part of Western Chou and the contents of both inscriptions might have been connected with Li Wang's flight to Chih 焱 and Hsüan Wang's restoration. Shirakawa has connected both inscriptions with the Kung-ho Regency because at that time Hsüan Wang might have been under the regency of Kung-ho or Kung Po Ho 共伯和 and Shih Hsün and Mao Kung might have been serving at the court during the Kung-ho Regency (BIHP XXXVI). T'ang Lan, in his preface to the *Shan-hsi-sheng Ts'ang Ch'ing-t'ung-ch'i T'u-lu* 陝西省藏青銅器圖錄, 1960, has connected Shih Hsün Kuei with Yü Ting 禹鼎 because both have similar sentences lamenting the catastrophe which fell from Heaven and has assigned both Shih Hsün Kuei and Mao Kung Ting to Li Wang's reign. I concur and assign Shih Hsün Kuei to Li Wang's reign.

44 (27a) Shih Shih Kuei (a) says: "In the king's 1st year, 4th month, 3rd quarter, the king was in Yü Chü 滅戾. On the day *chia-yin* 甲寅 (CN51), the king went to the temple. Ch'ih Kung 齊公 assisted Shih Shih to take his position in the middle of the court. The king called the chief document-writer K'e 克 to appoint Shih Shih"

(27b) Shih Shih Kuei (b) says: "In the king's 5th year, 9th month, 2nd quarter, on the day *jen-wu* 壬午 (CN19), the king said: 'Shih Shih! I order you to proceed to chase the enemy in Ch'i 齊....'" Kuo Mo-jo has suggested that Ch'ih Kung is Ch'ih Shu 遲叔 in (24) Yi Kuei 伊簋 (865 B.C.) and K'e is the same person as K'e in (29) K'e Hsü 克盨 (842 B.C.), (22) K'e Chung 克鐘 (878 B.C.) and K'e Ting 克鼎. He has assigned Shih Shih Kuei to Li Wang's reign (cf. Kuo Mo-jo: "Epigraphical Notes on a Group of Bronzes Unearthed at Chang Chia P'o, Ch'ang An, Shensi", *Kao-ku Hsueh-pao*, 1962, No. 1, p.4). Shirakawa has assigned Shih Shih Kuei to Yi Wang's reign, because he has connected the event "to proceed to chase the enemy in Ch'i" with Yi Wang's killing the marquis of Ch'i (cf. BIHP, XXXVI).

(28) Po Shih Fu Ting 伯碩父鼎：佳六年八月初吉己巳 (6-8-A-CN6), (Hsüeh Shang-kung 10.7).

854 B.C. Wu: i 5, ii 34, iii 4, iv 33, v 3, vi 32, vii 2, viii 31, ix 1, x 30, xi 60, xi 30, xii 57.
 Tung: i 5, ii 35, iii 4, iv 34, v 3, vi 33, vii 2, vii 32, viii 1, ix 31, x 60, xi 30, xii 59.
 Lee: i 5, ii 34, iii 4, iv 33, v 3, vi 33, vii 2, viii 32, ix 1, x 31, xi 60, xii 30, xiii 59.

According to Tung, the 1st day of the 8th month was *chia-tzū* 甲子 (CN1), the 6th day was *chi-szū* 己巳 (CN6).

(29) K'e Hsü 克盨：佳十又八年十又二月初吉庚寅 (18-12-A-CN27), (K 123, B 90, S 166) -- K, W, Y, T: Li; C, S: Yi.

842 B.C. Wu: i 25, ii 54, iii 24, iv 53, v 23, vi 52, vii 22, viii 51, ix 21, x 51, xi 20, xii 50.
 Tung: i 25, ii 55, iii 24, iv 54, v 23, vi 53, vii 22, viii 52, ix 21, x 51, xi 20, xii 50.
 Lee: i 25, ii 54, iii 24, iv 54, v 23, vi 53, vii 22, viii 52, ix 21, x 51, xi 20, xii 50.
 Chou: i 55, ii 25, iii 54, iv 24, v 53, vi 23, vii 52, viii 22, ix 51, x 21, xi 51, xii 20, xii 50.

If we shift the intercalary month, the 1st day of the 12th month was *kuei-wei* 癸未 (CN20), the 8th day was *keng-yin* 庚寅 (CN27).

GROUP G. INSCRIPTIONS (NOS. 30-32) BELONGING TO KUNG-HO REGENCY (841-828 B.C.)

(30) Shih Huei Kuei 師餽簋：佳王元年正月初吉丁亥，自蘇父若^𠄎 (1-1-A-CN24), (K 114, B 99, S 186) -- K, D: Li; W: Kung; Y, S: Kung-ho.

(31) Shih Tsei Kuei (a) 師兌簋 (一)：佳元年五月初吉甲寅，王在周，格康廟，即位。同仲右師兌入門立中廷。王呼內史尹册命師兌足師蘇父^綱左右走馬，五邑走馬 ... 兌拜稽首^敵對揚天子丕顯魯休，用作皇祖^執公^釐簋 ... (1-5-A-CN51), (K154, B 101, S 187) -- K, W, Y: Yu, S: Kung-ho.

841 B.C. Wu: i 19, ii 49, iii 18, iv 48, v 17, vi 47, vii 16, viii 46, ix 15, x 45, xi 14, xii 44.
 Tung: i 19, ii 49, iii 19, iv 48, v 18, vi 47, vii 17, viii 46, ix 16, x 45, xi 15, xii 44.
 Lee: i 19, ii 49, iii 18, iv 48, v 17, vi 47, vii 17, viii 46, ix 16, x 45, xi 15, xii 44.
 Chou: i 19, ii 49, iii 18, iv 48, iv 17, v 47, vi 17, vii 46, viii 16, ix 45, x 15, xi 44, xii 14.

For (30), the 1st day of the 1st month was *jen-wu* 壬午 (CN19), the 6th day was *ting-hai* 丁亥 (CN24). For (31), the 1st day of the 5th month was *keng-hsü* 庚戌 (CN47), the 5th day was *chia-yin* 甲寅 (CN51), if we shift the intercalary month.

(32) Shih Li Kuei 師釐簋：師蘇父^殺釐叔市^人告于王，佳十又一年九月初吉丁亥，王在周，格于大室，即位。幸^禱生入右師釐，王若^𠄎 ... 錫汝叔市 ... (11-9-A-CN24), (K 149, B 105, S 189) -- K, W, Y: Hsüan; D: Yih; S: Kung-ho.

813 B.C. Wu, Tung and Lee: i 21, ii 51, iii 20, iv 50, v 19, vi 49, vii 18, viii 48, ix 17, x 47, xi 16, xii 46.

Chou: i 52, ii 21, iii 51, iv 20, v 50 v 19, vi 49, vii 18, viii 48, ix 17, x 47, xi 16, xii 46.

The 1st day of the 5th month was *jen-tzū* 壬子 (CN49), the 3rd day was *chia-yin* 甲寅 (CN51). The inscription says:

Shih Ho-fu bestowed (段=胙) white knee covers on Li, who, holding them up in both hands (夙=季) reported to the king. In the 11th year, 9th month, 1st quarter, on the day *ting-hai* (CN24), the king was in Chou; he went to the Great Room and took his seat; the steward Tiao Sheng entered and assisted Shih Li. The king said thus: I bestow on you white knee covers

Kuo Mo-jo and Shirakawa interpreted the first sentence as: "Shih Ho-fu died (段=殂), Li, wearing white knee covers, was terrified (夙=恐) and reported to the king". But it is wrong. Here I follow Yung Keng's interpretation. Since Shih Ho-fu was Kung Po Ho 共伯和, the Regent, he could use the expression "jo yüe" ("said thus") as the king or Chou Kung the Regent did, and his order might be endorsed by the king (later called Hsüan Wang). Karlgren says:

The connecting links between these inscriptions are as follows: Ho-fu, called either Po Ho-fu or Shi Ho-fu (just as Yung-fu was called either Po Yung-fu or Shi Yung-fu in inscr. B47-54), occurs in B99 / 師教簋 /, 100 / 井仁安鐘 /, 101 / 師兌簋(一) /, 102 / 師兌簋(二) /, 105 / 師榮簋 /, Tiao Sheng and Shao Po Hu both occur in B98 and 104. Tiao Sheng recurs in B105, and so connects these two with the Ho-fu series. Shi Twei further connects B101 and 102. B103 has the same name Hu as B40 / 留鼎 / above, and hence Kuo dates it together with that inscription, but that is quite erroneous. The script type is very much later. It is dedicated to the same "father Li Kung" as B102, and the script hand is identical; there can be no doubt, to our mind, that the inscription belongs here. One more Hu (士 shi Hu) in B96 / 克鐘 / is probably equally another person, the graph of the name being different.

A date for the series is furnished by the name Shao Po Hu, i.e. Hu, prince of Shao. In the *Shi King*, ode Kiang Han, is mentioned a 召虎 Shao Hu, and Mao Heng (2nd c. B.C.), in his famous commentary, which embodies a great amount of late Chou lore, identifies this Shao Hu with prince 穆 Mu of Shao, who was a prominent man under both Li Wang (878-842) and Süan Wang (827-782). "The 5th" and "the 6th" years (B98 and 104) must therefore refer to 823 and 822 B.C. (or possibly 837 and 836, the 5th and 6th years of the Kung-ho interregnum between Li Wang and Süan Wang). B101 and 102 (with 103) must be somewhat later than the rest, since Ho-fu there is spoken of as deceased.⁴⁵

Karlgren made a mistake by saying that Ho-fu was deceased in Shih Twei Kuei. The inscription says:

In the 1st year, 5th month, 1st quarter, on the day *chia-yin* (CN51), the king was in Chou; he went to K'ang Wang's temple and took his seat. T'ung Chung assisted Shih Twei to enter the gate and stood in the middle of the court. The king called the historiographer of the Interior to appoint Shih Twei to be in charge of horses I, Twei, kneeling down, presume to signal the illustrious good grace of the Son of Heaven, and have made my august grandfather Ch'eng Kung's vessel

45 "Yin and Chou in Chinese Bronzes", *BMFEA*, No. 8, pp.41-42.

The graph 足 *tsu* was misinterpreted by Karlgren as 世 “deceased”. Kuo Mo-jo misinterpreted the graph 足 as “to follow, replace”. Shirakawa interpreted it as 疋 = 胥 *hsü* “to assist”⁴⁶ I think Shirakawa is right in translating 足 as 助 “to assist”, but it is not necessary to decipher 足 as 疋.

Another Shih Twei Kuei says:

In the 3rd year, 2nd month, 1st quarter, on the day *ting-hai*, the king was in Chou; he went to the Great Temple and took his seat. X Po 毀伯 assisted Shih Twei (as above); the king called ...: I have appointed you to assist Shih Ho-fu to be in charge of horses ...

Kuo Mo-jo pointed out that this date in the inscription was in contradiction to that quoted above. Shirakawa suggested that the first Shih Twei Kuei might belong to Kung-ho Regency, while the second one might belong to Hsüan Wang's reign. Since the king was the same, therefore, the first person singular was used in both inscriptions,⁴⁷ I follow Shirakawa's suggestion.

GROUP H. INSCRIPTIONS (NOS. 33-36) BELONGING TO HSÜAN WANG'S REIGN (827-782 B.C.)

(33) Shih Twei Kuei (b) 師兌簋 (二): 隹三年二月初吉丁亥, 王在周, 格大廟, 即位. 毀伯右師兌入門立中廷. 王呼內史尹册命師兌: 余既命汝足師蘇父鬲左右走馬 (3-2-A-CN24), (K 29, B 102, S 188) -- K, W, Y, D: Yu; S: Kung-ho.

(34) Sung Ting 頌鼎: 隹三年五月既死霸甲戌 (3-5-D-CN11), (K 72, B 116, S 137) -- K: Kung; W, Y: Hsüan; T: Li; D: Yih; S: Hsiao.

825 B.C. Wu: i 46, ii 16, iii 45, iv 15, v 44, vi 14, vii 43, viii 13, ix 43, x 12, xi 42, xii 11.

Tung: i 46, ii 16, iii 45, iv 15, v 44, vi 14, vii 43, viii 13, ix 42, x 12, xi 41, xii 11.

Lee: i 46, ii 16, iii 45, iv 15, v 45, vi 14, vii 44, viii 13, ix 43, x 12, xi 42, xii 11.

For (33), the 1st day of the 2nd month was *chi-mao* 己卯 (CN16), the 9th day was *ting-hai* 丁亥 (CN24). For (34), according to Lee, the 1st day of the 5th month was *wu-shen* 戊申 (CN45), the 27th day was *chia-hsiu* 甲戌 (CN11).

(35) Hsi Chia P'an 兮甲盤: 隹五年三月既死霸庚寅 (5-3-D-CN27), (K 143, B 205, S 181) -- K, W, Y, C, S: Hsüan; D: Yi.

823 B.C. Wu: i 5, ii 34, iii 4, iv 33, v 3, vi 32, vii 2, viii 31, ix 1, x 30, xi 60, xii 29.

Tung: i 4, ii 34, iii 3, iv 33, v 3, vi 32, vii 2, viii 31, ix 1, x 30, xi 60, xii 29.

Lee: i 5, ii 34, iii 4, iv 33, v 3, vi 32, vii 2, viii 31, ix 1, x 30, xi 60, xii 30.

46 “Dating Some Western Chou Bronzes”, *BHHP*, Vol. xxxvi, p. 153.

47 *Ibid.*, p. 154.

According to Wu and Lee, the 1st day of the 3rd month was *ting-mao* 丁卯 (CN4), the 24th day was *keng-yin* 庚寅 (CN27).

(36) Kuo Chi Tzŭ Po P'an 虢季子白盤：佳十又二年正月初吉丁亥 王格周廟，宣廟爰饗 (12-1-A-CN24), (K 103, B 107, S 192) --- K: Yi; W. Y. T. D, S: Hsüan.

816 B.C. Wu: i 24, ii 54, iii 23, iv 53, v 22, vi 52, vii 21, viii 51, ix 20, x 50, xi 19, xi 49, xii 19.
Tung: i 24, ii 54, iii 23, iv 53, v 22, vi 52, vii 21, vii 51, viii 20, ix 50, x 19, xi 49, xii 18.
Lee: i 24, ii 54, iii 23, iv 53, v 22, vi 52, vii 22, viii 51, ix 21, x 50, xi 20, xii 49, xiii 19.

The 1st day of the 1st month was *ting-hai* 丁亥 (CN24).

GROUP I. INSCRIPTIONS (NOS. 33-34) BELONGING TO YU WANG'S REIGN (781-771 B.C.)

(37) Tso Chung 柞鐘：佳王三年四月初吉甲寅 (3-4-A-CN51), (S198) --- K: Yi or Li;⁴⁸ S: Yu.

779 B.C. Wu: i 49, ii 19, iii 48, iv 18, v 47, vi 17, vii 47, viii 16, ix 46, x 15, xi 45, xii 14.
Tung: i 49, ii 18, iii 48, iv 18, v 47, vi 17, vii 46, viii 16, ix 45, x 15, xi 44, xii 14.
Lee: i 19, ii 19, iii 49, iv 18, v 48, vi 17, vii 47, viii 16, ix 46, x 15, xi 45, xii 14.
Chou: i 20, ii 49, iii 19, iv 49, iv 18, v 48, vi 17, vii 47, viii 16, ix 46, x 15, xi 45, xii 14.

If we shift the intercalary month, the 1st day of the 4th month was *jen-tzŭ* (CN49), the 3rd day of the 4th month was *chia-yin* 甲寅 (CN51).

GROUP J. INSCRIPTIONS WHICH CAN NOT BE FITTED INTO THE CALENDAR (NOS. 38-40)

(38) Shan Fu Shan Ting 善夫山鼎：佳卅又七年正月初吉庚戌 (37-1-A-CN47), (*Wen-wu* 文物 1965.7, S 154) --- *Wen-wu*: Hsüan; S: Yi.

791 B.C. Wu: i 29, ii 59, iii 28, iv 58, iv 27, v 57, vi 26, vii 56, viii 25, ix 55, x 25, xi 54, xii 24.
Tung: i 59, ii 28, iii 28, iv 27, v 57, vi 26, vii 56, viii 25, ix 55, x 24, xi 54, xii 23.
Lee: i 29, ii 59, iii 28, iv 58, v 28, vi 57, vii 27, viii 56, ix 26, x 55, xi 25, xii 54, xiii 24.

According to Wu and Lee, the 1st day of the 1st month was *keng-yin* 庚寅 (CN27), the 21st day was *keng-hsü* 庚戌 (CN47), which belongs to the 3rd quarter (C). The inscription can not be fitted into the calendar.

(39) P'o Chü Sheng Hu 番菊生壺：佳廿又六年十月初吉己卯，番菊生鑄滕壺，用滕_午元子孟妃_弔，子子孫孫永寶用 (26-10-A-CN16), (K 134, S 159) --- K: Li; W: K'ang; D: Hsiao; S: Yi.

48 Cf. Kuo Mo-jo: "Epigraphical Notes on a Group of Bronzes Unearthed at Ch'i Chia Ts'un" in *Fu-feng Ch'i-chia-ts'un Ch'ing-t'ung-ch'i-ch'ün* 扶風齊家村青銅器群, 1963, pp.2-6.

Kuo Mo-jo connected it with P'o Sheng Kuei 番生簋 (K 133) and identified P'o Chü Sheng with P'o Sheng, but I do not know whether he is right.

If the inscription belongs to Yi Wang's reign, the 26th year would be 868 B.C.

868 B.C. Wu: i 56, ii 25, iii 55, iv 24, v 54, vi 23, vii 53, viii 23, ix 52, x 22, xi 51, xii 21.

Tung: i 56, ii 26, iii 55, iv 25, v 54, vi 24, vii 53, viii 23, ix 52, x 22, xi 51, xii 21, *xii 51*.

Lee: i 56, ii 26, iii 55, iv 25, v 54, vi 24, vii 53, viii 23, ix 52, x 22, xi 51, xii 21.

The 1st day of the 10th month was CN22. If we change the intercalary month, the 1st day of the 10th month would be CN51, the 26th day would be *chi-mao* CN16, which belongs to the 4th quarter D. The inscription cannot be fitted into the calendar.

Karlgren says:

It is doubtful what state or sub-state this P'o was. It might be the P'o which belonged to Ch'u: *Shi' Ki*; Wu *Shi' Kia* (Chavannes IV 24) says that 504 B.C. a Wu army took the city 番 P'o of Ch'u; in Ch'u *Shi' Kia* this event is dated in 505. I do not know why Chavannes reads P'an; the correct reading of the character in this sense is surely P'o.

C 108 Li. '番君 the ruler of P'o, X Po, himself made'. K'ia 17:12, drawing T'ao, Sü Shang 46; also Shan 3:24.

C 109 Ting. '番仲吳生 P'o Chung Wu Sheng ('Second brother from P'o, Wu shen') made'. Kün 2/2:59, drawing Shan 2:66,49

I do not know whether P'o Chü Sheng is connected with C 108, C 109.

(40) San Chi Kuei 散季簋: 佳王四年八月初吉丁亥, 散季肇作朕王母叔姜寶簋, 散季其萬年子子孫孫永寶 (4-8-A-CN24), (Hsüeh Shang-kung 14.1) -- W: K'ang; D: Hsiao.

Since this was recorded by Sung scholars, we cannot determine its authenticity. It fits the calendar of the 4th year of Ch'eng Wang's reign only, but I do not know whether it belongs to Ch'eng Wang's reign or not.

(41) Po Ho Ting 伯和鼎: 佳王命元年正月初吉丁亥, 伯和父若曰乃稽首敢對揚皇君休用乍其萬年子子孫孫永寶用 (1-1-A-CN24), (*Hsi-ch'ing chia-pien* 西清續鑑甲編 1.9, *yi pien* 乙編 1.19)

It is a forgery following (30) Shih Huei Kuei 師穀簋 above.

IX. Conclusion

In this article, I try to follow the quotations from the *Bamboo Annals*:

1. From Wu Wang to Yu Wang, there were 257 years – 1027-771 B.C.
2. In the 11th year of Wu Wang, Chou began to attack Shang – 1018 B.C.
3. During the reigns of Ch'eng and K'ang, the world was tranquil and punishments were not inflicted for 40 years and more – 1016-968 B.C. (49 years).
4. From Chou's receiving of the mandate until Mu Wang there were 100 years – 1028-926 B.C. (103 years).
5. In the 19th year, Chao Wang's six armies perished in the Han – 949 B.C.

Besides, I also try to follow the records in the *Shu Ching*:

6. For the date of the Chou conquest, 1018 B.C. suggested by me can fit the record in the Wu Ch'eng, while 1027 B.C. suggested by others cannot.
7. For the 7th year of Chou Kung's regency, 1010 B.C. can fit the records in the Shao Kao and Lo Kao.
8. For the date of Ch'eng Wang's death, 993 B.C. can fit the record in the Ku Ming.
9. The record in the Pi Ming has been rejected because it is in contradiction with the records in bronze inscriptions.

For the records in the *Shih Chi*, I have adopted the following:

10. My assumption that Li Wang had reigned 18 years fits the records in the Ch'i Shih Chia, the Wei Shih Chia and the Ch'en Shih Chia.
11. From the Kung-ho Regency to Yu Wang, there were 71 years (Kung-ho: 14 years, Hsüan Wang: 46 years; Yu Wang: 11 years).

For the records in the bronze inscriptions, I have suggested:

12. According to the Huan Yu 鬲卣, Ch'eng Wang had reigned not less than 19 years.
13. According to the Small Yü Ting 小孟鼎 (No.2), K'ang Wang had reigned not less than 25 years.
14. According to the Ch'io Ts'ao Ting 趙曹鼎 (No.10), Kung Wang had reigned not less than 15 years.
15. According to the Kuo Yu Ts'ung Ting 鬲攸从鼎 (No.25), Yi Wang had reigned not less than 32 years.
16. Around 40 fully dated bronze inscriptions have been attributed to 8 reigns. More than 90% of the fully dated bronze inscriptions can be fitted into the calendar.

The following is a list of the reign lengths of the kings of the Western Chou Dynasty with reference to the records in the *Shu Ching*, the *Bamboo Annals* and the bronze inscriptions.

1. Wu Wang's reign, 13 years (1028-1016 B.C.): Cf. (I), (II), (VI), (XII).
2. Ch'eng Wang's reign, 24 years (1016-993 B.C.): Cf. (III), (VII), (VIII).
3. K'ang Wang's reign, 25 years (992-968 B.C.): Cf. (III), (IX), (XIII).
Bronze Inscriptions, Group A:
 - (1) Keng Ying Ting 庚嬴鼎 22-4-C-CN46 (971 B.C.)
 - (2) Small Yü Ting 小孟鼎 25-8-C-CN21 (968 B.C.)
4. Chao Wang's reign, 19 years (967-949 B.C.): Cf. (V).
5. Mu Wang's reign, 23 years (948-926 B.C.): Cf. (IV).
Bronze inscriptions, Group B:
 - (3) Shih X Kuei 師頰簋 1-9-C-CN24 (948 B.C.)
 - (4) Hsiu P'an 休盤 20-1-C-CN11 (929 B.C.)
6. Kung Wang's reign, 15 years (925-911 B.C.): Cf. (XIV).
Bronze inscriptions, Group C:
 - (5) Shih Hu Kuei 師虎簋 1-6-C-CN11 (925 B.C.)
 - (6) Hu Ting 盂鼎 1-6-C-CN12 (925 B.C.)
 - (7) Wu Yi 吳彝 2-2-A-CN24 (924 B.C.)
 - (8) Yi Chih 趯觶 2-3-A-CN52 (924 B.C.)
 - (9) Shih Chü Kuei 師遽簋 3-4-B-CN58 (923 B.C.)
 - (10) Ch'io Ts'ao Ting 趙曹鼎 (二) 15-5-B-CN19 (911 B.C.)
7. Yih Wang's reign, 2 years (910-909 B.C.)
8. Hsiao Wang's reign, 15 years (908-894 B.C.):
Bronze inscriptions, Group D:
 - (11) Shih Ch'en Ting 師晨鼎 3-3-A-CN11 (906 B.C.)
 - (12) Shih Yü Kuei 師隸簋 3-3-A-CN11 (906 B.C.)
 - (13) Chien Kuei 諫簋 5-3-A-CN27 (904 B.C.)
 - (14) Mu Kuei 牧簋 7-13-B-CN51 (902 B.C.)
 - (15) Ta Kuei 大簋 12-3-B-CN24 (897 B.C.)
 - (16) Tsou Kuei 走簋 12-3-C-CN27 (897 B.C.)
 - (17) Wu Chi Kuei 無錫簋 13-1-A-CN39 (896 B.C.)
 - (18) Wang Kuei 望簋 13-6-A-CN35 (896 B.C.)
 - (19) Ta Ting 大鼎 15-3-B or D-24 (894 B.C.)
9. Yi Wang's Reign, 34 years (893-860 B.C.): Cf. (XV).
Bronze inscriptions, Group E:
 - (20) Tai Shih Tso Kuei 大師虘簋 12-1-C-CN31 (882 B.C.)
 - (21) Po K'e Hu 伯克壺 16-7-B-CN32 (878 B.C.)
 - (22) K'e Chung 克鐘 16-9-A-CN27 (878 B.C.)
 - (23) Yüan P'an 袁盤 28-5-C-CN27 (866 B.C.)
 - (24) Yi Kuei 伊簋 29-1-C-CN24 (865 B.C.)
 - (25) Kuo Yu Ts'ung Ting 鬲攸从鼎 31 or 32-3-A-CN29 (863 or 862 B.C.)
 - (39) P'o Chü Sheng Hu 番匊生壺 26-10-A-CN16 (868 B.C.?)⁵⁰

50 (39) belongs to Group J.

- (26) Shih Hsün Kuei 師匄簋 1-2-C-CN27 (859 B.C.)
 (27a) Shih Shih Kuei (a) 師夔簋 (一) 1-4-B-...CN51 (859 B.C.)
 (28) Po Shih Fu Ting 伯碩父鼎 6-8-A-CN6 (854 B.C.)
 (29) K'e Hsu 克盨 18-12-A-CN27 (842 B.C.)
11. Kung-ho Regency, 14 years (841-828 B.C.): Cf. (XI).
 Bronze inscriptions, Group G:
 (30) Shih Hwei Kuei 師毀簋 1-1-A-CN24 (841 B.C.)
 (31) Shih Twei Kuei (a) 師兌簋 (一) 1-5-A-CN51 (841 B.C.)
 (32) Shih Li Kuei 師釐簋 11-9-A-CN24 (831 B.C.)
12. Hsüan Wang's reign, 46 years (827-782 B.C.):
 Bronze inscriptions, Group H:
 (33) Shih Twei Kuei (b) 師兌簋 (二) 3-2-A-CN24 (825 B.C.)
 (34) Sung Ting 頌鼎 3-5-D-CN11 (825 B.C.)
 (35) Hsi Chia P'an 兮甲盤 5-3-D-CN27 (823 B.C.)
 (36) Kuo Chi Tzù Po P'an 虢季子白盤 12-1-A-CN24 (816 B.C.)
 (38) Shan Fu Shan Ting 善夫山鼎 37-1-A-CN47 (791 B.C. ?)⁵¹
13. Yu Wang's reign, 11 years (781-771 B.C.):
 Bronze inscriptions, Group I:
 (37) Tso Chung 柞鐘 3-4-A-CN51 (779 B.C.)

51 (38) belongs to Group I.