

THE TWENTY-EIGHT LUNAR MANSIONS OF CHINA

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THE TWENTY-EIGHT LUNAR MANSIONS OF CHINA

(中国の二十八宿)

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(英 語)

Abstract: This paper attempts to place the development of the Chinese system of Twenty-Eight Lunar Mansions (二十八宿) in a multi-cultural framework, within which, contributions from cultures outside of China may be recognized. It systematically compares the Chinese system with similar systems from Babylonia, Arabia, and India. The results of such a comparison not only suggest an early date for its development, but also a significant level of input from, most likely, a Middle Eastern source. Significantly, the data suggest an awareness, on the part of the ancient Chinese, of completely arbitrary groupings of stars (the twelve constellations of the Middle Eastern Zodiac), as well as their equally arbitrary symbolic associations. The paper also attempts to elucidate the graphic and organizational relationship between the Chinese system of lunar mansions and (1.) the twelve Earthly Branches (地支) and (2.) the ten Heavenly Stems (天干).

Key words: China, Lunar calendar, Lunar mansions, Zodiac.

0. INTRODUCTION

The time it takes the Moon to circle the Earth is 29 days, 12 hours, and 44 minutes. However, the time it takes the moon to return to the same (fixed-) star position amounts to some 28 days. In China, it is the latter period that was and is of greater significance. The *Erh-Shih-Pa-Hsui* (-Kung), the Twenty-Eight-Inns (Mansions), 二十八宿 (宮), is the usual term in (Mandarin) Chinese, and includes 28 names for each day of such a month. In East Asia, what is not commonly known is that other such systems existed and persist in other parts of the world. In the Middle East, for example, the Babylonians had such a system, and now the Arabs maintain the *Manâzil-aq-Qamar* (Mansions of the Moon). Likewise, the Indians of the Subcontinent maintain the *NakSatra* (Bright-Star) system.

Such systems were also known to the Greeks and Romans. Indeed, the moon was the main focus of attention for perhaps all peoples. Apart from the obvious phases of the moon, the specific location of the moon as it made its appearance at night during the different times of the year also attracted the attention of observers. It

was noticed that the moon appeared in certain parts of the sky that were also associated with the appearance of the rising Sun. These parts of the sky included twelve areas in which the sun appeared in certain seasons. The sun rising in that part of the sky associated with what came to be known as the constellation Pisces now marks the Spring Equinox; its appearance in Virgo marks the Autumn Equinox, Gemini marks the Summer Solstice, Sagittarius, the Winter Solstice. Thus, the sun, also, is viewed from a fixed-star perspective, like the moon. Additionally, because of the Earth's wobble on its axis, the twelve constellations (and others, as well) appear to shift their positions, about a constellation every 2160 years; this is the so-called "precession" of the equinoxes. The Spring Equinox will fall in Pisces until about AD 2300; until AD 140 it fell in Aries; and until BC 2020 it fell in Taurus. This is useful in dating the various lunar and solar calendric systems created through the ages.

Both the moon and the sun appear in association with constellations that lie along a path that represents an extension of the Earth's equator, the so-called celestial equator, or equinoctial circle, in China, referred to as the Yellow Way (黄道). So, the "precession" involves the gradual shifting of the arbitrarily grouped constellations along this path. At present, the 12 major constellations are seen on the following dates and involve the following events, some noted in both China and elsewhere, and some noted only in China. The dates do not agree with the usual astrological ones because of the above mentioned shift or "precession" (Walker, 1988: 285).

EVENT	DATE	POSITION OF RISING SUN/DATES
Spring Equinox (春分)	21, 22 Mar.	Pisces (Psc) / 19 Mar.-15 Apr.
Start of Summer (立夏)	about 5 May	Aries (Ari) / 16 Apr.-15 May
		Taurus (Tau) / 16 May-15 June
Summer Solstice (夏至)	21, 22 June	Gemini (Gem) / 16 June-15 July
Start of Autumn (立秋)	about 7 Aug.	Cancer (Cnc) / 16 July-15 Aug.
		Leo (Leo) / 16 Aug.-15 Sep.
Autumn Equinox (秋分)	21, 22 Sep.	Virgo (Vir) / 16 Sep.-15 Oct.
Start of Winter (立冬)	about 7 Nov.	Libra (Lib) / 16 Oct.-15 Nov.
		Scorpio (Sco) / 16 Nov.-15 Dec.
Winter Solstice (冬至)	21, 22 Dec.	Sagittarius (Sgr) / 16 Dec.-18 Jan.
Start of Spring (立春)	about 5 Feb.	Capricorn (Cap) / *19 Jan.-18 Feb.
		Aquarius (Aqr) / 19 Feb.-18 Mar.

*Note that the first Chinese lunar month (寅月) begins in this period, with the appearance of the first new moon.

A major problem facing ancient peoples was to find a way to coordinate the various movements of the moon with those of the sun, that is, lunar and solar calendars. The first calendars were lunar; later ones emphasized the movements of the sun. This was altogether quite reasonable; it was necessary to know the time for planting, a primary concern of agriculturalists. The lunar calendar became associated with ceremonies originating from different forms of worship of the moon, knowledge of the moon also being of primary concern to fishermen who had to deal with ocean tides; farmers, too, paid special attention to the phases of the moon. Still, in the end, solar interests prevailed. One area of continued interest is China, but it is not the only, or even the most famous area.

One of the most active areas of lunar calendar use, and where the moon is still of prime importance is the Middle East, among Islamic peoples. One reason for this lies in the ancient importance of the Arabian moon-goddess, Al-Lat (or Al-Llat), in Babylonia called Allatu, interest in whom stimulated a detailed study of the moon (Walker, 1983: 22). This interest was perhaps carried over to the present worship of Allah, which also emphasizes careful observation of the moon, for religious purposes. In India, also, we see a continued interest, primarily among those scheduling religious rites (particularly the Soma celebrations).

The lunar mansion system developed by the Chinese represents a mixture of lunar and solar interests; the Chinese, like the Greeks and Hebrews, were well-aware of the Metonic Cycle. Its development also reflects input from outside sources. Positions 4, 11, 18, and 25, referred to by the character 密, *miao* (close, dense; secret), mark the days of the sun (日), that is Sundays, which is a practice thought to have been borrowed from the Persians (Mayers, 1874: 379). Likewise, the associations between the Twelve Earthly Branches (地支) and twelve animals (rat, ox, tiger, etc.) is not ancient and is thought to have borrowed from the Tartars (Mongolians? Turks?) some time during the T'ang dynasty (Mayers, 1874: 372). As this paper will show, other aspects of the Chinese Twenty-Eight Mansions may have been at least influenced by, if not borrowed from, the Middle East and/or India. The Chinese, throughout their history, did not hesitate to make use of foreign, astronomic (and astrological) expertise, as is evidenced by the prominent positions attained by Arabs and Europeans (notably, by

Jesuits) in the Chinese civil service.

1. THE NAMES AND POSITIONS OF THE MANSIONS

The names and positions of the twenty-eight Mansions were found in sources perhaps not generally available (especially those related to the Middle Eastern and Indian systems). Those of the Chinese system represent a merger of data from Mathews (1966), Fenn (1942), Mayers (1874), and Murakami (1966). The data for the Babylonian system come from Epping (1889), and for the Arabian system from Alfonso (1867) and Brennand (1896). Data for the Indian system come from Roy (1970?). Appendix I presents the names, and App. II presents the positions of the lunar mansions, using standard astronomical nomenclature (and abbreviations). App. I uses Chinese mansion number 1. (the position of Spica, α Virgo) as a beginning point. It should be mentioned that the Chinese, Arabian, and Indian data do not include all the star positions for each mansion, just those stars that are common to the different systems; the list of stars in the Babylonian system is complete. App. I demonstrates that, indeed, the four systems are comparable on a point-for-point basis. This table also shows the great similarity between the Chinese and Arabian systems, with the Arabian system showing greater similarity to the Chinese than the Babylonian system. Also, one can see particular points of similarity between the Chinese and Indian systems.

2. THE MEANINGS OF THE NAMES OF THE MANSIONS

App. III sheds some more light on certain similarities between the Chinese and Arabian systems. Chinese positions 1., 5., and 17. (meaning *horn*, *heart*, and *belly*) match exactly the meanings for Arabian positions 14., 18., and 2. Since the positions also match, the similarities do not seem fortuitous. What App. III also suggests is that the Chinese names for the lunar Mansions once served to *describe* constellations that were not formally recognized by the Chinese (until relatively recent times). The following diagram, taken from Murakami (1966: 48), demonstrates this more clearly. In the diagram, there are two constellations: on the right is Scorpio and on the left is Sagittarius. Starting from the right side of Scorpio, we see, in the head of Scorpio, Chinese mansion number 4. (房 *room*), to the left is mansion number 5. (心 *heart*), and down and to the left is mansion number 6. (尾 *tail*). Moving to Sagittarius and

beginning on the right, we are able to see mansion number 7. (箕 *sieve*), and then further to the left, mansion number 8. (斗 *dipper*). Dotted lines indicate connections between the otherwise separate Chinese mansions, and thereby show their relationship to the two constellations. Also note the similarity in design of mansion number 8. and another commonly known constellation, Ursa Major, also known as the Big Dipper, which in Chinese is called the North Dipper (北斗); this is an example of a similarity that may stem either from cultural diffusion or merely because two groups happened to see a dipper in such configurations.

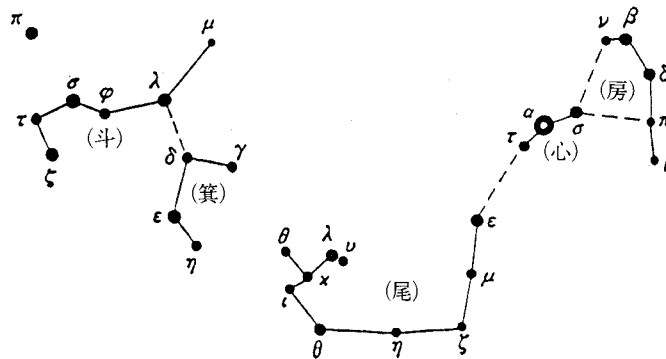


Diagram 1: Sagittarius (left) and Scorpio (right)

A relationship between the Chinese and Arabian (also modern Western) lunar mansions/constellations is evident and suggests that, at some point in their history, the Chinese were well aware of two Middle Eastern constellations. We can not assume that the Chinese were merely aware of the particular locations; they were also aware of the ancient symbolic associations developed by cultures to the west, otherwise certain of the names chosen (having exactly the same location in the sky) would most likely not be the same. They are, instead, quite accurate in their description of completely arbitrary groupings of stars into constellations by peoples of other cultures.

3. THE CHINESE EARTHLY BRANCHES AND THE WESTERN ZODIAC

The Lunar Mansions are connected with the lunar calendar, and consequently, with the system of lunar months. Thirteen lunar months (of 28 days) will result in 364 days, which is close to the number of days in a solar year. For this reason, many ancient peoples had names for thirteen months. The Babylonians, Assyrians, and Hebrews

elected to chose one month and repeat it every two to three years. The Chinese elected to repeat different months every two to three years. The Arabs, on the other hand, elected to maintain a system which is quite different. The Arabs decided to create a system of 12 lunar months, but with a lunar year of 354 or 355 days (12 months of 29.5 days). Thus, lunar calenders can take a variety of forms. In the end, we can see that it was the Babylonians, Assyrians, Hebrews, and the Chinese, who, by their use of repeated months, most clearly reflect an interest in coordinating lunar and solar interests in recognizing an 18.61 year Metonic Cycle. The various lunar mansion systems also clearly entered the picture. App. IV and App. V not only serve to indicate those differences, but also some previously unnoticed similarities. Notice the use of the elements of their lunar mansion system by the Indians in the naming of their months, beginning with *caitra* (which lasts from mid-March to mid-April, that is, with the sun in Pisces). The Chinese, on the other hand, chose to use elements of the 12 Branches. These Branches later (during the T'ang dynasty) became associated with the following: rat, ox, tiger, rabbit/hare, dragon, snake, horse, sheep, monkey, chicken, dog and boar. In App. IV those instances of use of branch/zodiac names (which appear to have similar functions) are noted by the use of italics. App. V indicates a similarity in the ordering of the elements of the lunar Mansions and the zodiac. Again, there appear to be significantly more similarities between the Chinese and Arabian systems than the Chinese and Indian systems.

4. THE RELATIONSHIP BETWEEN THE EARTHLY BRANCHES AND THE HEAVENLY STEMS

The Chinese calendric system emphasizes the use of 12 Earthly Branches and 10 Heavenly Stems. It appears that the elements of these two groups are also related in a systematic fashion to the Twenty-Eight Mansions. App. VI and App. VII suggest a previously unrecognized relationship (based on the form of the Chinese characters, and by their sounds only in a limited or as yet unclear way). App. VII extends our understanding of the lunar mansions. It also suggests more questions that have to be addressed in future research. One is whether the 10 Stems are in some way equivalent to decans (10-day solar weeks, $\times 36 = 360$ days). Another question centers on the significance of the arrangement; the table is interesting because it appears to reveal a logical ordering of the elements, but just what does the ordering mean? Since the Chinese

system appears to have been influenced by some Middle Eastern culture, most likely a Semitic one, is there some relationship between the Chinese ordering of the 28 mansions and the alphabetical numbering systems of the Semites? The Semites used the 22 letters of their alphabet to represent 28 mathematical units: the first 9 letters to represent the numbers 1-9, the next 9 letters to represent the decades 10-90, the last 4 letters and the final forms of 5 other letters to represent the centuries 100-900, and a variant of the first letter (aleph) to represent 1000, thus giving 28 separate number symbols. On the other hand, if we add the number of Chinese Branches and Stems together ($12+10$), we get 22, the number of letters in the Semitic alphabets. Interestingly, the Arabic alphabet consists of precisely 28 letters. There very well may be some, as yet unknown, relationship between the Chinese calendric system and the Semitic alphabetic/mathematical system, especially, between the Chinese sub-systems of Branches and Stems (this will be the focus of investigation in my next paper). For now, I will only say that I do not believe that it is only a matter of chance that the standard Semitic (alphabetic) mathematical systems begin and end with a form of the letter *aleph*; this letter is derived from a pictograph which is thought to represent the head of a bull (Taurus). Thus, it may represent the starting and ending points of an ancient form of a lunar mansion system. If it does, in fact, represent such an ancient system, then, it may be possible to compare the early forms of the letters of the Semitic alphabet and the early forms of the elements of the Chinese Mansions and sub-systems of Earthly Branches and Heavenly Stems, and thus provide a means to directly compare the Middle Eastern writing systems (to which the present Latin-based English alphabet is related) and the Chinese script.

5. CONCLUSIONS

App. II and App. III are interesting for several reasons: The Babylonian system reflects the most primitive form, and is most likely the oldest of the four systems. It appears that the Chinese system agrees with the Babylonian, in naming, in exactly those positions (20, 21./22., etc.) that may be oldest. The distribution pattern of the Babylonian system (at least positions 20-28) also explains the (later) Arabian system. Could it be that the Chinese gained knowledge about the Middle Eastern systems from the Babylonians or their agents? It may be best to leave further conclusions to the readers of this paper.

The purpose of this paper was, primarily, to stimulate interest in a wonderfully rich and complex creation of ancient peoples. It also demonstrates the interdependence of different peoples; the discoveries of one group should and usually do spread to other groups, to their cultural enrichment. It also points to the general unreliability of any claim of cultural independence.

It may be of interest to note that even such a notion as that of a mythical rabbit/hare's form being visible on the moon is one that is common to many peoples: in India, one of the names of the Moon is *çacin*, meaning, 'that which is marked by the Hare'; the ancient Celts also saw an image of a rabbit (Walker, 1988: 377), as did the Aztecs. Interestingly, the Greeks and Romans associated their respective moon-goddesses, Hecate and Diana, with the hare. It may be that this seemingly frivolous note is not, in fact, so frivolous; it very well may be tied to the shaping of the lunar Mansion system, especially, in the light of mansion number 18. (昴) and Branch number 4. (卯), which appear to be of prime importance. It may be that lunar mansion 18. indicates a stellar position of more ancient significance (Taurus); it may indicate the mansion in which the sun once appeared at the Spring Equinox. Since this could have occurred only between BC 4180 and BC 2020, it suggests a rather great age for the Chinese lunar mansion system (or, the one it was modelled after). Even today, many cultures associate this event, near Easter-time, with a mythological rabbit (the Easter Bunny), one of the primary symbols of various moon-goddesses.

A P P E N D I X I

CHINESE	BABYLONIA	ARABIAN	INDIAN
# Name	# Name	# Name	# Name
1. 角 chüeh (カク)	20. saça-çirû	14. simâk-al-a'zal	12. citrâ
2. 亢 kang (コウ)	21. nûru-çaçûtu	15. Gafr	13. svâtî
3. 底 ti (テイ)	22. nûru-çailtânu	16. zubânayn	14. viçâkhâ
4. 房 fang (ボウ)	23. qâbuçariçu-aqrabi	17. iklil	15. anurâdhâ
5. 心 hsin (シン)	24. hurru	18. qalb	16. jyeshTha
6. 尾 wei (ビ)	25. kaççudçakatar-pa	19. çawla	17. mûla
7. 箕 ch'i (キ)	26. qarnu-çahû	20. na'âim	18. pûrv-âshâDhâ
8. 斗 tou (ト)	27. maharçahina-çahû	21. balda	19. uttar-âshâDhâ
9. 牛 niu (ギウウ)	28. arkatçahina-çahû	22. sa'd-ad-dâbiH	20. abhijit
10. 女 nü (ジョ)	1. kullat-nûnu	23. sa'd bula'	21. çravaNa
11. 虚 hsü (キョ)	2. mahrûçariçu-ku	24. sa'd-as-su'ûd	22. dhanishThâ
12. 危 wei (キ)	3. arkûçariçu-ku	25. sa'd-al-ahhbiya	23. çatabhishaj
13. 室 shih (シツ)	4. temennu	26. farG-al-awwal	24. pûrva-bhâdrapâda
14. 壁 pi (ヘキ)	5. pidnu	27. farG-ath-thâni	25. uttara-bhâdrapâda
15. 奎 kwei (ケイ)	6. çurnarkabtiçailtânu	28. baTn-al-Hût	26. revatî
16. 婁 lou (ロウ)	7. çurnarkabtiçaçûtu	1. çaraTayn	27. acvinî
17. 胃 wei (イ)	8. mahrûçapuu-maçmaçu	2. buTayn	28. bharaNi
18. 昂 mao (ミョウ)	9. arkûçapuu-maçmaçu	3. thurayyâ	1. kRittikâ
19. 畢 pi (ヒツ)	10. maçmaçu-çari'û	4. dabarân	2. rohiNi
20. 觜 tsui (シ)	11. maçmaçu-mahrû	5. haq'a	3. mRigaçiras
21. 參 ts'an (シン)	12. maçmaçu-arkû	6. han'a	4. âdrâ
22. 井 ching (セイ)	13. arkûçanangaruçaçûtu	7. dhirâ'	5. punavasû
23. 鬼 kwei (キ)	14. riçu-a	8. nathra	6. puShya
24. 柳 liu (リュウ)	15. çarru	9. Tarf	7. âçleshâ
25. 星 hsing (セイ)	16. mâruçaarkat-çarru	10. jab-ha	8. maghâ
26. 張 chang (チョウ)	17. zibbat(?) -a	11. zubra	9. pûrva-phalguni
27. 翼 yi (ヨク)	18. çêpuarkûça-a	12. Sarfa	10. uttara-phalguni
28. 軫 chin (シン)	19. çurmahrû-çirû	13. awwâ'	11. hasta

A P P E N D I X II

CHINESE		BABYLONIA		ARABIAN		INDIAN	
#	Position	#	Position	#	Position	#	Position
1. α	Vir	20.	α Vir	14. α	Vir	12. α	Vir
2. $\phi \epsilon \chi$	Vir			15. $\phi \epsilon \chi$	Vir	13.	Vir
3. $\alpha \beta \gamma \iota$	Lib	21. / 22.	α / β Lib	16. $\alpha \beta \gamma \iota$	Lib	14. $\alpha \beta \gamma \iota$	Lib
4. $\beta \delta \chi$	Sco	23.	$\beta \delta$ Sco	17. $\beta \delta \chi$	Sco	15.	Sco
5. α	Sco	24.	α Sco	18. α	Sco	16. α	Sco
6. λ	Sco	25.	Oph	19. λ	Sco	17.	Sco
7. $\gamma \delta \epsilon \eta$	Sgr			20. $\gamma \delta \epsilon \eta$	Sgr	18.	Sgr
8. $\phi \rho$	Sgr			21. $\phi \rho$	Sgr	19.	Sgr
9. $\alpha \beta$	Cap	26. / 27. / 28.	$\alpha \beta / \gamma / \delta$ Cap	22. $\alpha \beta$	Cap	20. α	Lyr
10. $\epsilon \mu \nu$	Aqr			23. $\epsilon \mu \nu$	Aqr	21. α	Aql
11. β	Aqr			24. β	Aqr	22.	Del
12. α	Aqr			25. α	Aqr	23.	Aqr
13. $\alpha \beta$	Peg			26. $\alpha \beta$	Peg	24. α	Peg
14. α And / γ	Peg			27. α And / γ	Peg	25.	And
15. β And /	Psc	1.	η Psc	28. β And		26.	Psc
16. $\alpha \beta \gamma$	Ari	2. / 3. /	β / α Ari	1. $\alpha \beta \gamma$	Ari	27. α	Ari
17. Muscae-	Ari			2. Muscae-	Ari	28. Muscae-	Ari
18. Pleiades-	Tau	4.	Pleiades- Tau	3. Pleiades-	Tau	1. Pleiades	Tau
19. $\alpha \beta \delta \epsilon$	Tau	5. / 6. / 7.	$\alpha / \beta / \zeta$ Tau	4. $\alpha \beta \delta \epsilon$	Tau	2. $\alpha \beta \delta \epsilon$	Tau
20. $\lambda \phi$	Ori			5. $\lambda \phi$	Ori	3. λ	Ori
21. α	Ori	8. / 9. / 10.	$\eta / \mu / \gamma$ Gem	6. $\eta \mu \gamma$	Gem	4. α	Ori
22.	Gem	11. / 12.	α / β Gem	7. $\alpha \beta$	Gem	5. β	Gem
23. $\gamma \delta$	Cnc	13.	δ Cnc	8. $\gamma \delta$	Cnc	6.	Cnc
24.	Hya	14.	ϵ Leo	9.	Cnc / Leo	7.	Hya
25.	Hya	15.	α Leo	10. α	Leo	8. α	Leo
26.	Hya	16.	ρ Leo	11. δ	Leo	9. $\delta ?$	Leo
27.	Hya	17.	β Leo	12. β	Leo	10. β	Leo
28.	Crv	18. / 19.	β / γ Vir	13. $\beta \gamma$	Vir	11.	Crv / Leo

A P P E N D I X III

CHINESE	ARABIAN	INDIAN
# Meaning / Associations	# Meaning	# Meaning
1. 角 horn = spike of Virgo?	14. spike (of Virgo)	12.
2. 亢 neck = neck of Virgo?	15.	13.
3. 底 bottom	16.	14.
4. 房 room = head of Scorpio?	17. crown (= head, of Sco.)	15.
5. 心 heart = heart of Scorpio?	18. heart (of Scorpio)	16.
6. 尾 tail = tail of Scorpio?	19.	17.
7. 箕 sieve	20.	18.
8. 斗 dipper (→北斗, Big Dipper)	21.	19.
9. 牛 ox	22.	20.
10. 女 woman = Akka→Aquarius? ¹	23.	21.
11. 虚 emptiness	24.	22.
12. 危 danger	25.	23.
13. 室 room	26.	24.
14. 壁 wall	27.	25.
15. 奎 astride = astride Pegasus?	28.	26.
16. 婁 mound = head of Aries?	1.	27.
17. 胃 belly = belly of Aries?	2. belly (of Aries)	28.
18. 昴 Pleiades	3. Pleiades	1. Pleiades
19. 畢 end = end of a year?	4.	2.
20. 觜 point/tip = head of Orion?	5.	3. -head/start of year
21. 參 mixed	6.	4.
22. 井 well	7.	5.
23. 鬼 ghost	8.	6.
24. 柳 willow	9.	7.
25. 星 star	10.	8.
26. 張 extended	11.	9.
27. 翼 wings	12.	10.
28. 軫 chariot floorboard	13.	11.

¹ The old woman, a water-drawer, who was the prototype of Aquarius. In India, related to *akkā* 'mother'; in Rome, to *Acca*; and in Greece, to *Akkō*, the mother of certain gods (Walker, 1983: 15,16). *Akka* was also the mother of the Akkadian people (near Babylonia). II

A P P E N D I X IV

CHINESE			BABYL.	ASSYR.	HEBREW	ARABIAN	INDIAN		
#	Branch	Meaning	#	Meaning	Name of Zodiac Sign				
1.	子 <i>tzu</i>	child	1.	ram	ku	enmesara	toleh	Hamal	meSa
2.	丑 <i>ch'ou</i>	claws/fingers	2.	bull	tete	gudanna	çaur	thaur	vRisha
3.	寅 <i>yin</i>	arrow+mortar	3.	twins	maçmaçu	<i>tuâmu</i>	<i>theomin</i>	jauzâ'	mithuna
4.	卯 <i>mao</i>	(horse) bit	4.	crab	nangaru	<i>allul</i>	sartann	sarTân	cataka
5.	辰 <i>ch'en</i>	shell (dipper)	5.	lion	<i>a(ru)</i>	urgula	<i>arieh</i>	asad	siNha
6.	巳 <i>szu</i>	snake	6.	virgin	çirû	<i>ab-sin</i>	betolah	sumbula	kanyâ
7.	午 <i>wu</i>	pestle	7.	scales	nûru	zibanitu	moznam	mizân	tulâ
8.	未 <i>wei</i>	grain (rice?)	8.	scorpion	aqrabu	aqrabu	âqrav	aqrab	vRçcika
9.	申 <i>shen</i>	lightning/rib	9.	archer	pa	pabilsag	qaçoth	qawwâs	dhanus
10.	酉 <i>yu</i>	wine pot	10.	goat	çahû	çuhurmas	guedi	jadî	makara
11.	戌 <i>hsü</i>	halberd	11.	(water-)	gu	guanna	deli	dalw	kumbha
12.	亥 <i>hai</i>	pig	12.	(fish)	<i>nûnu</i>	<i>nunçamê</i>	daghim	Hût	mîna

CHINESE		BABYL./ASSYR./HEBREW		ARABIAN		INDIAN	
#	Month	#	Month	#	Month	#	Month
1.	寅月 <i>yin</i>	1.	nisannu nisân	4.	nisân	1.	caitra
2.	卯月 <i>mao</i>	2.	<i>airu</i> <i>iyyâr</i>	5.	<i>ayyar</i>	2.	vaiçâkhâ
3.	辰月 <i>ch'en</i>	3.	simannu sivan	6.	Hazîrân	3.	jyeSTha
4.	巳月 <i>szu</i>	4.	* <i>dumu-zi</i> <i>tammûs</i>	7.	<i>tamûz</i>	4.	âSâDha
5.	午月 <i>wu</i>	5.	<i>abu</i> âbh	8.	<i>âb</i>	5.	çrâvaNa
6.	未月 <i>wei</i>	6.	ulûlu I <i>elûl</i>	9.	<i>ailûl</i>	6.	bhadra
			<i>ulûlu II</i>				
7.	申月 <i>shen</i>	7.	tiçritu tiçrî	10.	tiçrîn-al-awwal	7.	âçvina
8.	酉月 <i>yu</i>	8.	<i>arah-samna</i> <i>marHe-çwân</i>	11.	tiçrîn-ath-thânî	8.	kâttika
9.	戌月 <i>hsü</i>	9.	kislîmu kislêw	12.	kânûn-al-awwal	9.	mârgaçirSa
10.	亥月 <i>hai</i>	10.	Tebitu têbhêth	1.	kânûn-ath-thânî	10.	pauSa
11.	子月 <i>tsu</i>	11.	çabâTu çebhâT	2.	çubâT	11.	mâgha
12.	丑月 <i>ch'ou</i>	12.	adaru I adhâr	3.	adâr	12.	<i>phâlguna</i>
			<i>adaru II</i> <i>va-adhâr</i>				

A P P E N D I X V

CHINESE		ARABIC/*Hebrew		SANSKRIT	
# Mansion	# Month	# Mansion	# Zodiac	# Mansion	# Month
1.	7.	14.		12. citrâ	1. caitra
2.	6.	15.		13.	
3.	5.	16. zubânayn		14. viçâkhâ	2. vaiçâkhâ
4. 房 fang	4. 巳 szu	17.	8. aqrab	15.	
5.	3.	18.		16. jyeshTha	3. jyeSTha
6.	2. →	19. çawla	2. *çaur	17.	
7.	1.	20. na'aïm ¹		18. âshâDhâ	4. âSâDha
8.	12.	21.		19. âshâDhâ	
9.	11.	22.		20.	
10.	10.	23.		21. çravaNa	5. çrâvaNa
11. 虚 hsü	9. 戌 hsü	24.		22.	
12.	8. →	25. ahhbiya	8. aqrab	23.	
13.	7.	26.		24. bhâdrapâda	6. bhâdra
14.	6.	27.		25. bhâdrapâda	
15.	5.	28. -hût	12. hût	26.	
16.	4. →	1. sharaTayn	4. sarTân	27. açvinî	7. âçvina
17.	3.	2.		28.	
18. 昴 mao	2. 卯 mao →	3. thurayyâ	2. thaur	1. kRittikâ	8. kârttika
19.	1.	4.		2.	
20.	12.	5.		3. mRigaçiras	9. mârگاçirSa
21.	11.	6.	3. *theomin	4.	
22.	10.	7.		5.	
23.	9.	8.	4. sartan	6. puShya	10. pauSa
24.	8.	9.		7.	
25. 星 hsing	7. 申 shen	10.	5. *arieh	8. maghâ	11. mâgha
26.	6.	11.		9. phalgunî	12. phâlguna
27.	5.	12. Sarfa ²		10. phalguni	
28.	4.	13.		11.	

¹ na'aïm may be related to (Persian) *nimasp*, Sagittarius.

² Sarfa (and the month *çubâT*) may be related to Babylonian *çarru* (Mansion 15.)

A P P E N D I X VI

# Branch (地支)	# Stem	# Stem
1. 子 tzu (シ) =	9. 壬 jen	
2. 丑 ch'ou (チュウ) =	(9. 壬 jen)	
3. 寅 yin (イン) =	(3. 丙 ping)	
4. 卯 mao (ボウ) =	4. 丁 ting	
5. 辰 ch'en (シン) =	(5. 戊 wu/mou)	
6. 巳 szu (シ) =	6. 己 chi	2. 乙 yi
7. 午 wu (ゴ) =	(7. 庚 keng)	8. 辛 hsin (干 kan (カン))
8. 未 wei (ミ) =	(8. 辛 hsin)	7. 庚 keng
9. 申 shen (シン) =	1. 甲 chia	
10. 酉 yu (ユウ) =	3. 丙 ping	(10. 癸 kuei) (天 t'ien (テン))
11. 戌 hsü (ジュツ) =	5. 戊 wu/mou	
12. 亥 hai (ガイ) =	7. 庚 keng	

# Stem (天干)	# Branch	# Branch	# Branch
1. 甲 chia (コウ) =	9. 申 shen	2. 丑 ch'ou	
2. 乙 yi (オツ) =			6. 巳 szu
3. 丙 ping (ヘイ) =	10. 酉 yu	3. 寅 yin	
4. 丁 ting (テイ) =		4. 卯 mao	
5. 戊 wu/mou (ボウ) =	11. 戌 hsü	5. 辰 ch'en	
6. 己 chi (キ) =		6. 巳 szu	
7. 庚 keng (コウ) =	12. 亥 hai	(7. 午 wu)	8. 未 wei
8. 辛 hsin (シン) =		(8. 未 wei)	7. 午 wu
9. 壬 jen (ニン) =	1. 子 tzu		(2. 丑 ch'ou)
10. 癸 kuei (キ) =		10. 酉 yu	

Note: Do 地 (土) and 支 (十) signify upward (上) movement from Earth?

Do 天 (二) and 干 signify downward (下) movement from Heaven?

A P P E N D I X VII

# Mansion (二十八宿)	# Sun Day (密, 太陽曆)	# Month (月, 太陰曆)	# Branch (地支)	# Stem (天干)
1. 角 →		7. 申	9. 申	1. 甲
2. 亢 (一→)		6. 未	8. 未	(8. 辛) (一)
3. 底 (广→)		5. 午	7. 午	(7. 庚) (广)
4. 房 (尸→)	4. 房=日曜日	4. 巳	6. 巳	6. 己
5. 心 →		3. 辰	5. 辰	5. 戊
6. 尾		2. 卯	4. 卯	4. 丁
7. 箕 (其→)		1. 寅	3. 寅	3. 丙
8. 斗 (十→)		12. 丑	2. 丑	1. 甲
9. 牛 →		11. 子	1. 子	9. 壬
10. 女 →		10. 亥	12. 亥	7. 庚
11. 虚 (虎→)	11. 虚=日曜日	9. 戌	11. 戌	5. 戊
12. 危		8. 酉	10. 酉	3. 丙
13. 室 (十→)		7. 申	9. 申	1. 甲
14. 壁 (辛→)		6. 未	8. 未	(8. 辛)
15. 奎 (十→)		5. 午	7. 午	8. 辛
16. 婁		4. 巳	6. 巳	6. 己
17. 胃		3. 辰	5. 辰	5. 戊
18. 昂 (卯→)	18. 昂=日曜日	2. 卯	4. 卯	4. 丁
19. 畢 (華→)		1. 寅	3. 寅	3. 丙
20. 觜 (角→)		12. 丑	2. 丑	1. 甲
21. 參 (三→)		11. 子	1. 子	9. 壬
22. 井 →		10. 亥	12. 亥	7. 庚
23. 鬼 (心→)		9. 戌	11. 戌	5. 戊
24. 柳		8. 酉	10. 酉	3. 丙
25. 星 (日→)	25. 星=日曜日	7. 申	9. 申	1. 甲
26. 張 (長→)		6. 未	8. 未	7. 庚
27. 翼 (異→)		5. 午	7. 午	(7. 庚)
28. 軫		4. 巳	6. 巳	6. 己

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