

The Twenty-Eight Lunar Mansions of China (Part Three: A Possible Relationship with the Ancient Central-American Calendar)

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The Twenty-Eight Lunar Mansions of China

(Part Three: A Possible Relationship with the Ancient Central-American Calendar)

中国の二十八宿

(第三部 古代中米暦の関係の可能性)

David Byron KELLEY, Ph.D.

English

ABSTRACT: In this paper, a continuation of two earlier comparative studies of the Chinese, Indian, Arabian, and Babylonian lunar mansion systems, I attempt to demonstrate that a relationship exists between the 28 asterisms of the Chinese lunar-mansion system (and the associated 12-element Chinese zodiac system) and the ancient calendar system of Central America, especially the 20 day-names of the Aztec calendar and the 19 month-names of the Mayan calendar. It is shown that the 28 Chinese asterisms act as key elements in the Chinese calendar system, by serving as both individual day names and as the basis for a division of the sky into 12 zodiacal zones. Although the names of the 28 asterisms, with one exception, do not themselves denote animals, an associated system of 28 animal names link the asterisms with the 12 elements of the Chinese zodiac, which do denote 12 different animals. It is this associated system of 28 animals, divided into roughly into 12 types (for example, 2 types of scaly animals, 2 types of felines, etc., along with various admixtures of characteristics) which can best be compared with the roughly 10 types of animals associated with the Aztec day-names and the Mayan month-names. It is demonstrated that the distribution of the names for days and months, in both the Chinese and Central-American calendar systems is not random, and that the names not only denote similar, if not identical animals, but also that the names occur in similar, if not identical order. The common ordering of animal names is not immediately apparent, but can be revealed only after the elements of the two systems are put within a common framework of certain astronomical events, which, as it turns out, are associated with the movements of the planets Venus and Mars.

KEY WORDS: Chinese Calendar, Central-American Calendar, Lunar Mansions, Chinese Zodiac

I. INTRODUCTION

In two previous papers on the 28 lunar mansions of China, I have dealt with the positions of the 28 asterisms along the celestial equator and ecliptic. Please refer to Appendix 1 for data on this aspect of the Chinese mansion system. As can be seen from an inspection of this appendix, the majority of the stars in the Chinese system have correspondences in the three other systems with regard to their positions. Yet, if one considers the meanings of the names of the Chinese mansions and compares these meanings with those of the Indian, Arabian, or Babylonian mansions, there are only two correspondences: Chinese mansion #5/16 (心) 'heart' corresponds to Arabian mansion #18 (Qalb) 'heart', and Chinese mansion #17/28 (胃) 'stomach' somewhat corresponds to Arabian mansion #2 (BuTayn) 'small belly', leading one to assume that there is little connection among the various systems in terms of their interpretations of the shapes or configurations of the various asterisms, and thus, that the various systems represent rather independent cultural developments. However, if one investigates the zodiacal systems associated with each mansion system, we see that the Indian, Arabian, and Babylonian zodiacal designations for the 12 divisions into which most of the 28 mansions can be grouped, correspond in their meanings so as to suggest a common cultural development, or diffusion. Table 1 should clarify this.

| INDIAN ZODIAC REFERENTS & MANSION #s | | | | | | | | | | | | | | | | |
|--|------|------|-------|------|-----|-------|-----|----------------|---------|----------|--------|--------------------|-------|-----|-----|------|
| 27,28 | 1, 2 | 3, 4 | 5 | 6 | 7 | 8-10 | 11 | 12 | 14 | 15-17 | 18, 19 | — | 23 | 24 | 25 | 26 |
| 1, 2 | 3, 4 | 5, 6 | 7 | 8 | 9 | 10-12 | 13 | 14 | 16 | 17-19 | 20, 21 | — | 25 | 26 | 27 | 28 |
| Ram | Bull | | Pair | Crab | | Lion | | Girl | Balance | Scorpion | Bow | (Deer) Antelope | Pot | | | Fish |
| Ari | Tau | Ori | Gem | Cnc | Hya | Leo | Cvr | Vir | Lib | Sco | Sgr | Cap | Aqr | Peg | And | Psc |
| Ram (Dog) | Bull | | Twins | Crab | | Lion | | Girl /Grain | Balance | Scorpion | Archer | Antelope /Goat | Pail | | | Fish |
| 1, 2 | 3, 4 | 5 | 6, 7 | 8 | | 9-12 | | 13-15 | 16 | 17-19 | 20, 21 | 22 | 23-25 | 26 | 27 | 28 |
| 2, 3 | 4-7 | — | 8-12 | 13 | | 14-17 | | 18-20 | 21, 22 | 23, 24 | — | 26-28 | — | | | 1 |
| ARABIAN & BABYLONIAN ZODIAC REFERENTS & MANSION #s | | | | | | | | | | | | | | | | |

Table 1

In Table 1, the doubled Indian mansion numbers refer to two systems of numbering the mansions. The system thought to be older is on the top, and the system thought to be newer (closer to the Arabian) is below. Also, note the absence of certain asterisms, for example Orion and Pegasus, in the zodiacal divisions, and the lack of any asterism representing

Capricorn in the Indian mansion system and the absence of any asterism representing either Sagittarius or Aquarius in the Babylonian mansion system. In spite of these differences, it can be seen that the similarity of the three zodiacal systems serve to reinforce the idea that some kind of cross-cultural contact was involved in the naming of the zodiacal groupings of the various asterisms. If we investigate the associated Chinese zodiacal referents, however, we see almost no correspondence, except in the case of 'dog'. Table 2 should clarify this.

| CHINESE ZODIAC REFERENTS & MANSION #s | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---------|--------|--------|-------|-------|--------|--------|-------|--------|----------------|--------|-----|-----|-----|-----|-------|----|----|----|
| 16 | 17 | 18, 19 | 20, 21 | 22 | 23 | 24→26 | 27 | 28 | 1, 2 | 3 | 4, 5 | 6 | 7 | 8 | 9 | 10→12 | 13 | 14 | 15 |
| 27 | 28 | 1, 2 | 3, 4 | 5 | 6 | 7→9 | 10 | 11 | 12, 13 | 14 | 15, 16 | 17 | 18 | 19 | 20 | 21→23 | 24 | 25 | 26 |
| Dog | Chicken | Monkey | Sheep | Horse | Snake | Dragon | Rabbit | Tiger | Ox | Rat~ master | Pig | Dog | | | | | | | |
| 戌 | 酉 | 申 | 未 | 午 | 巳 | 辰 | 卯 | 寅 | 丑 | 子 | 亥 | 戌 | | | | | | | |
| ⑪ | ⑩ | ⑨ | ⑧ | ⑦ | ⑥ | ⑤ | ④ | ③ | ② | ① | ⑫ | ⑪ | | | | | | | |
| Ari | Tau | Ori | Gen | Cnc | Hya | Crt | Crv | Vir | Lib | Sco | Sgr | Cap | Aqr | Peg | And | Psc | | | |

Table 2

In Table 2, the doubled Chinese mansion numbers refer to two different numbering systems. The top numbers indicate the most common order of the mansions found in recent Chinese and Japanese books, including Mathews' (1943) dictionary of the Chinese language. However, Gangooly's reprinted (1989) text on Indian, Arabian and Chinese astronomy uses another system, with the first mansion being located at the Pleiades, instead of at α Virgo. Gangooly refers to the use of the numbering system commencing at the Pleiades by M. Biot, but gives no citation. Other than this, it is unclear upon what authority he uses this system. However, Saussure, in his (1967) book also uses Gangooly's system, and so, on the basis of its use by a number of Western scholars, I include this numbering system, which, fortuitously or not, (and I think not) agrees with the older of the two Indian numbering schemes.

Table 2 also includes circled numbers, representing the order of the 12 elements of the Chinese zodiac, formally known as the 12 Earthly Branches (地支), which are in reverse order when compared to the order of the mansions. Why they are so is still not perfectly clear, although Feuchtwang (1974) thought that "when they are correlated with the [mansions]... they are given in opposite order... because they retain their terrestrial directional significance and must therefore be mirrored if coordinated with heavenly bodies." If so, then the Mexican day-names also seem to be mirrored.

II. CHINESE & MEXICAN DAYS

The ancient calendar system of Central America, utilized by the Aztecs, Zapotecs, Mayas, and other groups, seemed to me to offer the most potential in my quest for systems that are comparable to the Chinese system. Although it is different in many respects, it offered a range of zodiac-like elements which I could play with. I say 'play', because this is really what it amounted to at first. Knowing nothing about the Central-American calendar, but armed with a little knowledge about the Chinese calendar, I began to compare this Chinese element with that Mexican element until a few pieces began to fall into various kinds of patterns and the elements began to become somewhat less foreign. One of the first patterns which appeared to hold some promise is presented in Table 3, and utilizes the full range of 28 animals associated with the 28 Chinese lunar mansions, as well as certain Mexican day-names.

| 28 CHINESE ANIMAL REFERENTS & MANSION #s | | | | | | | | | | | | | | | | | | | | |
|--|------------------------------|----------------|-----------------------|----------------------------|----------------|------------------------|---------------------------|-------------------|-------------------------------------|--------------------------------|---------------------------|-------------------------|-----|-----|-----|-------|----|----|----|--|
| 16 | 17 | 18, 19 | 20, 21 | 22 | 23 | 24-26 | 27 | 28 | 1, 2 | 3 | 4, 5 | 6 | 7 | 8 | 9 | 10-12 | 13 | 14 | 15 | |
| 27 | 28 | 1, 2 | 3, 4 | 5 | 6 | 7-9 | 10 | 11 | 12, 13 | 14 | 15, 16 | 17 | 18 | 19 | 20 | 21-23 | 24 | 25 | 26 | |
| Dog | Pheasant Chicken/ crow | Monkey /Ape | Wild Dog/ Sheep | Roebuck /Horse/ Deer | Snake/ Worm | Dragon I/ Dragon II | Badger/ Rabbit/ Fox | Tiger/ Leopard | HSIAI-CHAI (Horned Lizard)/Ox | Bat/Rat- master/ Swallow | Pig/ Tapir | Wolf | | | | | | | | |
| 狗 | 雉/雞/鳥 | 猴/猿 | 犴/羊 | 獐/馬/鹿 | 蛇/蚓 | 蛟/龍 | 貉/兔/狐 | 虎/豹 | 獬/牛 | 蝠/鼠/燕 | 猪/獐 | 狼 | | | | | | | | |
| ⑪ | ⑩ | ⑨ | ⑧ | ⑦ | ⑥ | ⑤ | ④ | ③ | ② | ① | ⑫ | ⑪ | | | | | | | | |
| Ari | Tau | Ori | Gem | Cnc | Hya | Crt | Crv | Vir | Lib | Scor | Sgr | Cap | Aqr | Peg | And | Psc | | | | |
| | Turkey/ Eagle | Monkey | Dog | Deer | Snake | Dragon | Rabbit | Death | Lizard/ (Horned EHECATL) | | (Pig- nosed) TLALOC | | | | | | | | | |
| | Crow/ Eagle | Monkey | Dog | Deer | Snake | Crocodile | | Death | Iguana/ | | (Pig- nosed) COCIJO | | | | | | | | | |
| | | Monkey | Dog | | Snake | | | Death | | | Lord/ Master | (Pig- nosed) CHAC | | | | | | | | |
| | ⑬/⑮ | ⑪ | ⑩ | ⑦ | ⑤ | ① | ③ | ⑥ | ④/② | ② | ⑬ | | | | | | | | | |
| AZTEC/ZAPOTEC/MAYAN DAY NAMES & NUMBERS | | | | | | | | | | | | | | | | | | | | |

Table 3

Table 3 lists the same 12 Chinese zodiacal elements as presented in Table 2, but augments these by including the complete list of animals from which the 12 various types of animals were extracted. Both systems of Chinese mansion numbering are included, along with the

common order of the 12 Zodiacal elements (showing reversed ordering, as mentioned before). The major constellations in which we find the Chinese mansions are also noted. As for the Mexican ('Mexican' here and throughout this paper refers to the general area, not the country) data, we see three groups of day-names, with the top group representing the meanings of the Aztec day-names, the middle group the Zapotec day-names and the bottom group the Mayan day-names. It should be mentioned that the Mexican day names are not generally given any astronomical significance; they simply function as convenient names for the 20 days of any of the 18 regular months, as well as the one special month of five days. The particular name and its meaning may vary from group to group in Central America, but the same number of days are invariably used. At first glance, it may seem strange for me to compare the names of Chinese asterisms and Mexican day-names, but, in fact, the Chinese asterisms also function as day-names in the Chinese calendar system, much as the seven days of the week in the Western and other calendars do. For example, in our English calendar, the use of Sun-day and Mon-day do not hold any astrological significance as far as the Sun and Mo(o)n are concerned; they simply function as convenient terms when denoting this or that day in a week. Likewise, the 28 Chinese mansions came to be used to specify the elements of a set of 28 elements.

As for the names of the animals, something should be said about Chinese mansion #8/19, and the animal referent, Hsiai-Chai (獬豸). The Hsiai-Chai is a mythical legged reptile, possessing a single horn, which it uses to dispatch those who do not tell the truth. To me, that sounded a bit like a singled-horned iguana and so I associated it with the fourth Axtex day-name, Cuetzpalin, 'lizard', and, with the second Aztec day-name, Ehecatl, 'wind', whose pictograph is a single-horned reptile. Next, we go to Mexican day-name #19, which I associated with the long-nosed raingod of the Mayas, Aztecs, and the Zapotecs. Strictly speaking, the day-name means '(fire-)rain' in Nahuatl, 'cloudy' in Zapotec, and 'storm' in the Mayan language; yet, because the Aztecs used a representation of their raingod for the pictoglyph standing for this day, and since the Mayan glyphs for their raingod portray it as being so pig-like, I felt it was appropriate to compare it with the Chinese 'pig', which, in the Chinese system of thought, being the quintessential water-beast, is also strongly associated with rain. Next, I would like to deal with the Chinese dragon, which I will discuss more in a later section. It is a mythical animal packed full of connotations, too many, in fact, to mention here. What is interesting is to see Chinese mansion #1/12, the scaly dragon (蛟), also supposedly a mythical legged reptile, occasionally glossed as 'crocodile', a very real

creature, much like the Zapotec Day-name, Chilla, 'crocodile', also quite likely a real creature. And yet, the Aztecs, I believe, thought of their Cipactli in mythical terms, and as a kind of 'Earth Monster'. Also, because the Aztec pictograph so closely resembles a dragon, for those Chinese who have seen it, that I felt some justification in comparing the Chinese and Aztec 'Dragons'. Lastly, I would like to deal with Chinese mansion #11/22, and 'sage' or its animal referent 'Rat'~'master'. The Chinese character for the Earthly Branch (Zodiac sign) associated with this mansion is 子, which, as the first Zodiac sign, means 'Rat'. However, it has at least three other meanings: 'son' or 'child', 'seed' or 'core-element', and 'master'. The third meaning is of interest, because it is seen in the Chinese appellation for Confucius, K'ung-Tzu (孔子) 'Master K'ung'. In the case of Mexican Day-name #20, I use the Mayan version, Ahau, which I am told means 'Lord' or 'Master', or 'Captain', as we see in the Mayan appellation: Ik Ahau, 'Black Lord/Master/Captain', perhaps the Mayan equivalent of the Chinese 'Dark Warrior' (玄武), the master of the Chinese north celestial quarter.

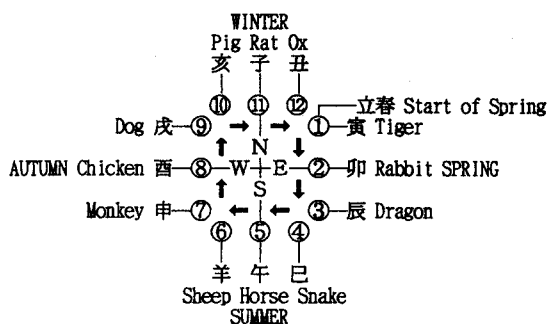
In Table 3, not only do we see a fairly common set of animals used, but also a sequencing of the elements in the same reversed order as the elements of the Chinese zodiac. We can also see a general division of the Mexican day-names into two groups falling to the right and left of the center line, with even numbered days falling generally to the right and odd numbered days falling generally to the left of that center line. Because of this division into even and odd numbered days, I included 'Death' in the column under Chinese Tiger/Leopard, even though there is no match in terms of meaning. Also of interest is the indication that the 28 Chinese mansions may be comparable to 20 Mexican day-names plus 8 repeated day-names. This suggested that I was not dealing with 20 Mexican day-names which were equivalent to 28 Chinese mansions/day-names, but that I could compare 28 Mexican day-names (= 20+8) in a sequence with 28 Chinese mansions, and that the Mexican day-name series once was astronomically relevant, just as the Chinese day-names still are.

III. CHINESE & MEXICAN MONTHS

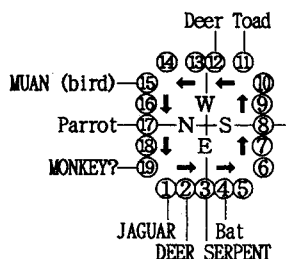
As for the 18 Mexican months and the meanings of their names, I was confronted by something which was much more difficult to understand. Again, I was armed with the knowledge that the Chinese used two kinds of months: a variable set of 12 to 13 months/year, each beginning with a New Moon, and a less variable set of 12 months/year, each

beginning at a solar juncture such as the 'Start of Spring' (立春), with the mid-point of each of these months marking a solar juncture such as the 'Spring Equinox' (春分). The solar months, tied as they are to the tropical year of 365. 2422 days in the modern Chinese calendar occur regularly from year to year, beginning on approximately the same days. In the end, I decided to use the latter solar-month system for comparison, since it also utilizes the 12 Chinese Zodiac elements, although in a changed order, with the first Zodiac element, Tzu (子) 'Rat~master', shifting to the 11th month position (十一月節), and the 3rd Zodiac element, Yin (寅) 'Tiger', shifting to the 1st month position (正月節). The designations for the solar months should not be confused with similar lunar-month designations (正月, etc.). For example, in 1995, the first solar month (or 'season') begins on February 4th with the Start of Spring (立春), while the first lunar month begins on January 31st with the new moon.

When we look at the various names and meanings of the Mexican months, we do not see the degree of agreement in terms of naming that we saw the case of the day-names (i.e. day #5 signified 'snake' in the Aztec, Zapotec, and Mayan systems). For purposes of comparison I elected to use the Mayan month names to the exclusion of all others. I did so because it is probably the one best understood, and because the list of deities associated with the Mayan months show some agreement with the Chinese animal-names. Among these deities are included a number which refer to animals, including some seen in connection with the day-names. Since the Mayas referred to a specific month by using either the glyph for the month itself, or, one for its associated deities, I felt justified in including these data in my comparisons. For example, the first Mayan month, Pop 'mat', has as its presiding deity, Balam 'Jaguar'. This is interesting, of course, because the first Chinese month means 'Tiger', and so, discovering this, I felt even more justified in selecting the Chinese solar months (or seasons) to use in my comparative study. Perhaps even more important is the fact that the number of days accounted for in the 12 Chinese solar months amounts to a little more than 365 days in the modern Chinese calendar, almost the same as the total number days accounted for by the Mexican months. In the Diagrams 1 and 2, I present a limited comparison of the Chinese and Mexican (Mayan) month names. The Mexican data include the meaning of the presiding deity in capital letters and the meanings of the months in lower-case letters. The Chinese data are set within a framework which notes the cardinal directions and the seasons. The Mexican data are also set in such a framework, although it should be noted that the justification for placing particular months in a particular directional slot will come later in the paper.



CHINESE SEQUENCE OF MONTHS
Diagram 1



MAYAN SEQUENCE OF MONTHS
Diagram 2

In the diagrams, we see that both Chinese and Mexican months proceed from a starting point in the East, which, in the case of the modern Chinese months usually occurs around February 4th (立春) ‘Start of Spring’. Both systems of months proceed from the East to the South (Summer), then, to the West (Autumn), and finally, to the North (Winter), over a period of 365 days. Note that I have set the two cycles of months going in opposite directions, although the meanings of the few month names that seem to show some agreement are not reversed. For example, we see Chinese month #7 ‘MONKEY’ and Mayan month #19 Uayeb, which some consider to represent ‘MONKEY’ (as well as the North Star), are in comparable positions. Likewise, we see Chinese month #8 ‘Chicken’ and Mayan month #17 ‘Parrot’, Chinese month #4 ‘Snake’ and Mayan month #3 ‘SERPENT’, and Chinese months #5 & #6 ‘Sheep’ & ‘Horse’ and Mayan month #2 ‘DEER’, all in similar, if not identical, positions. The following section of the paper should help to clarify why I chose the particular directional framework used for the Mayan data.

IV. CHINESE & MEXICAN DIRECTIONAL COLORS

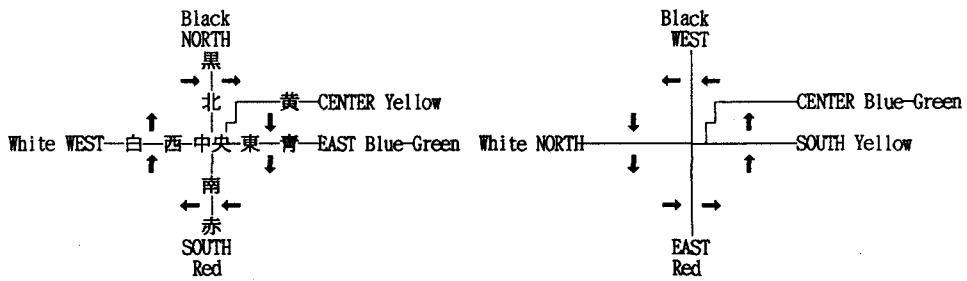
In Asia, at least two groups utilize a system whereby each of the 4 cardinal directions, and a fifth direction: the center, are associated with 5 distinct colors. These include the Indians and the Chinese. In the Americas, many groups also have directional color schemes,

| | | | | | |
|---------|------------------|---------------|------------------|---------------|--------------------|
| CHINESE | EAST: Blue-Green | SOUTH: Red | WEST: White | NORTH: Black | CENTER: Yellow |
| INDIAN | EAST: Red | SOUTH: Yellow | WEST: Blue | NORTH: Black | CENTER: White |
| MAYAN | EAST: Red | SOUTH: Yellow | WEST: Black | NORTH: White | CENTER: Blue-Green |
| AZTEC | EAST: Red | SOUTH: Blue | WEST: White | NORTH: Black | CENTER: Green |
| ZUNI | EAST: White | SOUTH: Red | WEST: Blue-Green | NORTH: Yellow | CENTER: — |
| APACHE | EAST: Black | SOUTH: White | WEST: Green | NORTH: Yellow | CENTER: — |

Table 4

although there may be much divergence in terms of what color is associated with which direction. This divergence can be seen more clearly in Table 4.

As regards the data in Table 4, only the 5 directional colors of the Maya match the 5 Chinese colors. Furthermore, the 5 directions with which they are associated form a color and direction complex which is most easily comparable with that of the Chinese. That is to say, only the Chinese and Mayan systems share the colors: Blue-Green, Red, Black, White, and Yellow, in the same order, and through the same directions: directions: East → South → West → North (→ Center), although the starting-points are different. It should be noted that both the Chinese and Mayan peoples are notable for their common use of a term for Blue-Green (actually quite close to the our color turquoise) and points to one more characteristic shared by the Chinese and the Mayas. Diagrams 3 and 4 should clarify the nature of the general patterns related to directional colors shared by the two groups.



5 CHINESE COLORS & DIRECTIONS

Diagram 3

5 MAYAN COLORS & DIRECTIONS

Diagram 4

In Diagrams 3 and 4, we see that the two color-direction schemes are, indeed, different, but that the difference is of such a nature that it points to the overriding similarities between the two schemes. This patterned difference was the basis upon which I made the framework for the Mayan data related to the months which were presented in the previous section. As such, it seems to serve to validate the correspondences in namiDiagrams 3 and 4g involving the Chinese and Mayan months.

Of some interest in Diagrams 3 and 4 is the color for the abstract direction: Center and its associated color in the two schemes. In the case of the Chinese scheme, there seems to be an indication of some confusion with the cardinal direction: East and the color: Blue-Green. The same confusion seems to exist in the Mayan scheme, between the abstract direction: Center and the color: Blue-Green and the cardinal direction: South and the color: Yellow. Perhaps the confusion is only in my mind, but I came to think that hidden within the Chinese

cardinal direction: East, there is a bit of the color: yellow, and, hidden within the Mayan cardinal direction: South, there is a bit of the color Blue-Green. I came to feel this because of the nature of the Chinese character for East (東), which is composed of two elements: 木 'tree' and 日 'Sun'. If these two elements are considered to be symbols denoting greenness and yellowness, then what two better symbols could be chosen than a 'blue-green' tree and a 'yellow' sun? We can also investigate the Mayan glyph for South, which is called Noholin in the Yucatec dialect. This glyph clearly includes an element which is identical to the Mayan glyph for the 'Center', and also stands for the color: Blue-Green. Thus, I think it would not be too far-fetched to consider that a joint South-Center concept was involved in the development of both the Chinese and Mayan color-direction schemes.

If we look back at Diagram 1, we can see something which may be relevant to the problem of the direction and color for the Center. Chinese month #4 'Dragon' is seen to be in a position that is comparable with Mayan months #7 Yaxkin '(Center/Blue-Green) Sun'. In China, the dragon represents, jointly, two of the five animals associated with the Star Palaces or Quarters (星宮). These mythical animals include: the Blue-Green Dragon (青龍) of the East, the Vermilion Sparrow (朱雀) of the South, the White Tiger (白虎) of the West, the Dark Warrior (玄武) or Black Tortoise (黑龜) of the North, and the Yellow Dragon (黃龍) of the Center. The dual nature of the Dragon is perhaps a reflection of the complex nature of the Chinese direction for South, which may possibly include a Center/Blue-Green aspect. As for Mayan month #7, Yaxkin, as well as Mayan month #7, Yax, both in the Mayan South Quarter, we see a conscious attempt by the Mayas to associate Center/Blue-Green with South/Yellow, just as the Chinese seemed to be doing. But, why attach a color to a direction in the first place?

It seems that in both schemes, the center signifies the ideas of home and the place best known to a people, while the other directions may signify more distant places, but known to be the place where another people or climate, or special substances are found. Such being the case, we see the yellow (loess) soil of northern China, for which it is quite famous, set against the green (jungle) foliage of Mayan territory in our quest for justification as to why one color over another was selected for the direction: Center, in the two areas. It also explains why Blue-Green lost out in China, and Yellow lost out among the Mayas, as far as the direction: Center is concerned. As for the other directions, in China, the associations of East/Blue-Green/Woodlands, (or Ocean), South/Red/Fiery Hot Tropical Lands, West/White/Metal-rich Snowy Mountains, and North/Black/Swampy Steppe Lands may hold

some significance; while, in the case of the heartland of the Mayas in Guatemala, the associations of East/Red/Rising Sun/Spring, South/Yellow/Ripened Maize/Summer, West/Black/Swampy Lands (where there is the most rainfall), and North/White/Barren Limestone Lands may hold some significance. One thing is clear, however, no single concept, other than time, had more impact on the basic design of the Chinese calendric system than that of color. The same is perhaps true of the Mayas, and so, I have allotted considerable space in this paper to deal with it.

V. CHINESE & MEXICAN TIME

As mentioned earlier, the Chinese utilized both lunar and solar months in their calendar. The Mexicans, on the other hand, utilized only solar months. This is not to say, however, that the Mexicans were uninterested in the movements of our nearest celestial neighbor. In fact, the Mexican calendar reflects (I use the present tense, because it is still being used) a strong interest in 13-day periods of time, which may share the same basis as the Chinese approximately 13-day period of prominence of each of the 28 'lunar' mansions. This is in spite of the fact that the term 'lunar mansions' is a misnomer for 'Asterisms', which are as useful in marking the movement of the Sun, Venus, or, Mars, as they are the movements of the Moon. The Chinese 13-day period arises from the fact that each of the 28 Asterisms are at their zenith in the night sky during a period of some 13 days. Although it is easy to multiply 13 days by 28 Asterisms, and arrive at the figure of 364 days, a 364-day period is rather useless in astronomical calculations, if one is trying to calculate a solar year. This is because a solar (or tropical) year amounts to some 365 and one-quarter days, during which time the 28 mansions make exactly one circuit through the sky (just as the 12 major constellations do in the Western calendar. If so, then why the fascination with a 13-day period? The answer may lie in how the 13 days can be used in various calculations.

The Mayas are renowned for the precision of the calendar system they created. If they wanted to calculate the number of complete days that passed after a specified number of lunations had occurred, they could use different formulas to do this, depending on the length of the period covered. For example, if they wished to find the number of days that had passed during 17 lunations, they would divide the lunations into groups of 6 lunations, 5 lunations, and 6 lunations, and assign values to the groups of: 177 days, 148 days, and 177 days, respectively, resulting in a figure of 502 days (the actual figure is 502.02 days). This formula could be used to calculate the number of days in up to 850 lunations, by simply

dividing the number of lunations by 17 and using 502 days per 17 lunations. For more than 850 lunations, they used the formula of 25,101 days per 850 lunations. These formulas are discussed in a number of books, including Morley's (1915) text on Mayan glyphs; yet, they sometimes miss the fact that 502 days per 17 lunations can also be interpreted as 502 days per 38 mansions (of 13 days each) plus 8 days, or 38 and 8/13ths mansions. Because any lunation calculation can be so interpreted, we should be aware of the utility of such fractions of 13 in lunar calculations by peoples who had not yet developed the decimal point (or, vigesimal point). Just as fractions of 12 are useful in solar (and other) calculations, so too, are fractions of 13 useful in lunar (and other) calculations.

In the last paragraph, I considered one lunar mansion period as being exactly 13 days long. Yet, twenty-eight 13-day periods gives us only 364 days, and we know from Appendix 1 that the 28 mansions lie along the ecliptic. This means that a particular mansion must appear on approximately the same date each year (disallowing the Precession of the Equinoxes, and leap years for a moment). If so, then the period of prominence of each mansion must be greater than 13 days. And, if the Tropical year amounts to 365 days, 5 hours, 48 minutes and 46 seconds, then, simple mathematics tells us that each mansion-period should amount to some 13.0445 days. But, as it turns out, this is not the case. It is not the case because the Chinese and the Indians (and the Koreans and Japanese) also utilized a 27-mansion system. Why they did (and do) so has never been satisfactorily explained. Some scholars think it is because 365.25 divided by 27 is an easier calculation than 365.25 divided by 28, which may be quite true. However, I think the proper answer lies in a combination of the two figures (i.e. 28 and 27 mansions per year), whereby there are really $27\frac{1}{2}$ mansions per year. Given the unevenness in the distribution of the mansions along the ecliptic, and the nearly identical positions of such Chinese mansion #20/3 and mansion #21/4, this is not an unreasonable assumption. If it is true (and I intend to demonstrate that it is, indeed, true), and if we break the fraction by doubling the years, we arrive at 55 mansions per 2-year period. And then, given the precise length of the Tropical Year, we arrive at a figure of 13.2859 days per mansion-period. If we assume, however, that the ancients rounded off the number of days per year to 365, we could conceivably arrive at a figure of 13.2727 days per mansion (i.e. $365 \div 27\frac{1}{2} = 13.2727$). Given the figure of 13.2727 days per mansion, it is possible to say:

$$\begin{aligned} 27\frac{1}{2} \text{ mansions equals } & 365 \text{ days,} \\ 55 \text{ mansions equals } & 730 \text{ days,} \end{aligned}$$

- 110 mansions equals 1,460 days, and
 220 mansions equals 2,920 days.

But, which of the two values (13.2859 or 13.2727 days per mansion) for the mansion-period is correct? As it turns out, there may be a way to determine this, given the fact that 2,920 days is equal to about 5 Venus years of 583.9069 (or, approximately 584) days each. In the Mayan Madrid Codex, we see 220 day-name glyphs in 4 rows of 55 glyphs each. Among other things, the 220 glyphs represent 220 Mayan periods 'Weeks', usually of 13 days each; but, because they are the elements of a 'Venus Calendar', we know that they actually represent 2,920 days, or approximately 5 Venus years. If this is so in the Mayan calendar system, then, why not assume it is also true in the Chinese calendar system, where each mansion is also supposed to represent a 13-day period? If we use the figure of 13.2859, we would arrive at a figure of 2,922.898 days for the 220 day-names cum mansions, while, if we use the figure of 13.2727, we would arrive at the figure of 2,919.994 days. When compared to the actual figure of 2,919.5345 days for 5 Venus years, we see that the figure of 13.2727 days per mansion is much closer. And so, it seems that both the Chinese and Mayas could attach either a 13-day or a 13.2727-day value to each of their mansion/day-names, with the former value being of use in lunar calculations, and the latter value in solar or planetary calculations.

But, what is the evidence that the Chinese were concerned at all with a Venus year? The answer may lie in the Chinese Lo-pan (羅板), or any such 'circular board', or diagram, that coordinate the elements of the 12 Chinese zodiac, or Earthly branches (地支), eight of the 10 Heavenly Stems (天干), four of the 8 Trigrams (八卦), and the 28 lunar mansions (宿). Please see Appendix 2 for a diagram related to this matter. In this diagram, we see basically four sections: (1) an outer ring, where the 28 Chinese lunar mansions are numbered according to the system whereby mansion #1 is at the Pleiades, (2) a second ring placed located next closest to the outer ring, where the 12 Earthly Branches (地支) (the 12 Zodiac elements), eight of the 10 Heavenly Stems (天干), and four of the 8 Trigrams (八卦) are located, (3) the innermost section, where the actual positions of each mansion are noted in an actual star-chart, and (4) the four corners of the diagram, which represents the Four Quarters (四宮) of the Chinese cosmos and the Four Animals (四獸) or the Four Deities (四神) controlling that cosmos.

In Appendix 2, an attempt has been made to show a 2-year period with 55 mansions. If we begin with the large #1 (= mansion #18/1), and count the first 28 mansions, we come back to

mansion #1. From there, if we continue to count, but use the smaller numbers placed further apart (to represent the slightly greater period of time for each of 27 mansions during the second year), we again arrive at mansion #1, after we have completed the 55th mansion. Mansion #1 is set in the middle of the two Heavenly Stems #7 and #8 (庚 and 辛), which denote the prominence of the planet Venus in this quarter (and the element: Metal). Yet, how do we know that this had any significance to the ancients Chinese? After all, we could have started with mansion #8, centered between two Heavenly Stems #3 and #4 (丙 and 丁) which denote the prominence of Mars, and had the same result. We know there is something special about mansion #1, and the Pleiades, again, because of the Mayan Madrid (Tro-Cortesianus) Codex. To understand what I mean, please see Appendix 3.

VI. THE MAYAN 'MADRID CODEX'

In Appendix 3, we see a chart which presents data from six pages of the Mayan Madrid Codex, which is included within the hatch-marked section of the chart. The hatch-marked area is divided into six sections, representing six pages from the codex. The data taken directly from the codex is presented on the right side of this section, and consists of a series of numbers. The numbers stand for specific day-name glyphs; for example, #1 stands for the first Mayan day-name, Imix, #2 stands for the second Mayan day-name, Ik, etc. This section of the codex is unusual because, in the Mexican calendar system, day-names are usually preceded by some number from 1-13. So, let this be clear, in my charts, the numbers I use in connection with the Mexican day-names always refer to their order of sequence, just as the two numbering systems for the Chinese mansions always refer to their order of sequence. On the left side of the hatch-marked section, we see the meanings of certain of the Mexican day-names, almost all referring to animals, and, as in the chart in Part II of this paper, most broadly represented by the Aztec day-name meanings. Within the hatch-marked section, we also see that the numbers of the day-names selected for comparison are circled; and so, we see that the 16th Mexican day-name number is circled, and to the left, the English meaning of the Aztec name for this day, 'Turkey', is presented.

We now look at the sequencing of the Chinese data (all seen before), and see that groups of mansions are separated so as to spread it out over a 2-year period involving 55 mansions, before we again reach Chinese mansion #18/1 again, and the whole series repeats itself. Also note the column with the data on the 12 Earthly Branches (地支), where we see that the Branches are divided into two groups, one having even-numbered Branches (the top

half) and the other one having odd-numbered Branches (the bottom half). This even-odd division is very similar to what was seen in Table 3 in Part II of the paper. Another similarity, apart from the names of the animals is the commencement of both the Chinese and Mexican series with the first Chinese mansion (used in Appendix 2) and the first Mexican day-name. Also note that the sequence begins with Venus, has Venus at the midway point (at the end of the first year), and ends with Venus in the Chinese system. Given that one purpose of the Mayan chart was to mark the passage of Venus over an 8 solar-year period (or, 5 Venus years), I do not think there can be any question but that Chinese mansion #18/1, Chicken, was the starting-point of a 2-year cycle somehow meant to denote the movements of the planet Venus.

Something should be mentioned about how I came to consider such a book as the Madrid Codex in the first place. The fact of the matter is that I had independently come to place the Chinese and Mayan day-names in a framework which almost exactly mirrored the basic framework for the data on the six pages of the Madrid Codex presented in Appendix 3. By trial and error, over a 2-year period, using the premise that 28 Chinese mansions equaled 20+8 Mexican 'mansions', it was possible to come up with the same numbers as those seen in Appendix 3. I am not going to present this data here, because it only prepared me to be receptive to the data in the Madrid Codex. I will, however, mention that my own analysis included 5 lines of Chinese mansions (not 4). Once having converted the Mayan day-names to numbers, and then having laid out the Chinese data on a common gridwork, it seemed that the Chinese and Mayan data were comparable. This is in spite of the fact that I was, and still am, almost totally ignorant about the Mexican calendar, with my only acquaintance with the Madrid Codex being one page of a (1976) book by Peter Tompkins. On the other hand, almost all of what I know about the Aztec, Zapotec, and Mayan day-names has come from a guide accompanying a chart of the Aztec 'Calendar Stone', written in 1984 by Tomas Filsinger.

VII. REFINING THE DATA

Appendix 3 is perhaps fine, as far as it goes, in pointing out some rough patterns of similitude in the Chinese and Mexican data. However, in an attempt to put a finer edge on things, I found that I could see more if I refined the data. I did this by adding a bit more depth to the astronomical data. You see, what I think we actually had in Appendix 3 were point-defined data. That is to say, the data were designed to pick out a specific point in the

sky and say that mansion so-and-so is going to be there at a particular point in time. Yet, it does not tell us much about the size of the mansion/asterism. To acquire this space-defined data, I doubled the amount of data per mansion, as I think the ancient Chinese and Mexican once may have done. Appendix 4 should clarify what I mean.

In Appendix 4, we see the same animal-referents as in Appendix 3, but presented in a framework which defines the space occupied by each asterism. The Madrid Codex data has been repeated, so as to form a combined day-name number series. The shift seen in the two central (Mayan) columns of numbers creates this space. The idea for making the shift comes from the pairing of the Heavenly Stems (天干) seen in Appendix 2, whereby a space defining the prominence of each planet was marked out. At the same time, slightly better animal-referent matching is seen between the Chinese and Mexican data. For example, Chinese 'Rabbit' matches Mexican (Aztec) 'Rabbit', as does Chinese 'Tiger' and Mexican 'Jaguar', and Chinese 'Sheep' and Mexican 'Deer'. As for Chinese 'Pig' and 'Dog', we see that they form a complex of two animals, matching Mexican (Aztec) 'Tlaloc' (the pig-nosed Rain-god) and 'Dog'. This may be explained by looking at the Chinese character: 獬 'Tapir', which, although glossed as such in some books, is also defined as a 'long-nosed hunting dog' in some dictionaries, while the modern character for 'Tapir', 獬, originally referred to a mythical long-nosed canine creature. Table 5 should clarify some details about Appendix 4.

| ⑩ 酉 | ⑨ 未 | ⑧ 巳 | ⑦ 卯 | ⑥ 丑 | ⑤ 亥 ④ 戌 | ③ 申 | ② 午 | ① 辰 | ⑩ 寅 | ⑨ 子 |
|---------|-------|-------|--------|------------|-------------|--------|-------|--------|--------|--------|
| CHICKEN | SHEEP | SNAKE | RABBIT | HSIAI-CHAI | (PIG)DOG | MONKEY | HORSE | DRAGON | TIGER | MASTER |
| TURKEY | DEER | SNAKE | RABBIT | LIZARD | (TLALOC)DOG | MONKEY | DEER | DRAGON | JAGUAR | MASTER |
| ⑩ ⑩ | ⑨ | ⑧ | ⑦ | ⑥ | ⑤ ④ | ③ | ② | ① | ⑩ | ⑨ |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 1 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 1 | 2 | 3 |
| 16 | 17 | 18 | 19 | 20 | 1 | 2 | 3 | 4 | 5 | 6 |
| 18 | 19 | 20 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 1 |
| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 1 | 2 | 3 | 4 |
| 16 | 17 | 18 | 19 | 20 | 1 | 2 | 3 | 4 | 5 | 6 |
| 19 | 20 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Table 5

As can be seen in Table 5, the 30 particular sets selected from the day-name number series originally presented in Appendix 4 form a new number-series that points to some very systematic relationship, but one which I do not understand, because I just do not understand the nature of the Venus calendar well enough. At any rate, two of these new series are indicated by dark-and light-colored arrows. The first series (with dark arrows) begins with Mexican day-name #6 (Aztec: 'Death', Zapotec: 'Death', and Mayan: 'Death'), and the second series (with light arrows) begins with Mexican day-name #16 (Aztec: 'Turkey', Zapotec: 'Crow', Mayan: 'Wax'). Like the other series not highlighted, they form recursive series, which reflect the perpetual nature of the system. It has been made perpetual by the inclusion of a shift in the series, perhaps best reflected at the margin of DEER-DRAGON. Note also the fact that the vertically arranged numbers constitute 30 paired sets. If one excludes the one set at the DEER-DRAGON margin, for which there is no representative day-name, we are left with 29 'Active' sets. Then, if we notice that all eleven divisions of vertically arranged sets in the top-half, except one, have only one day-name (number), I am led to be rather suspicious of the set of three listed under RABBIT. And so, if we exclude one of the paired sets with ⑧, we would be left with 28 paired vertical sets, which would suggest a 28-element (or, 28-mansion) system at some stage in the development of the Mexican system. If we look at the Chinese animal-referents for mansion #s 3/14 through 5/16: 'Badger-Rabbit-Fox', we can see some justification for associating the Chinese 'Badger and Fox' with Mexican day-name #10: 'Dog'; and, we see that the top-center set (5-10-15-20), indeed, included Mexican day-name #10, 'Dog'. But, rabbit seems to have been retained for the sake of some kind of parity.

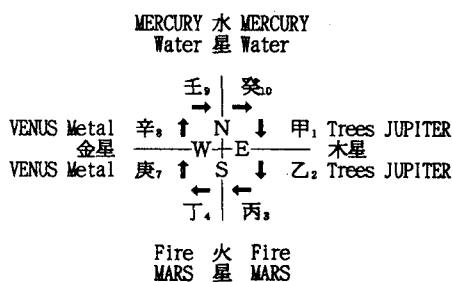
VIII. CHINESE & MEXICAN MONTHS, RECONSIDERED

In Part III. of this paper I dealt briefly with Chinese and Mexican months. But, as was the case with the Chinese and Mexican day-names, the lack of consistency in the patterns of comparison, led me to consider refining, or reconsidering, the data. In order to refine the data on the months, I took an approach which was suggested by the extraction of certain 'Active' sets from the day-names number series presented in Appendix 4. Using this approach, I found that if I extracted sets based on the simple concept of regularly extracting every fourth set, I would be in some way mimicking what I did in Appendix 4. And, by doing so, I found some interesting things, presented in Appendix 5.

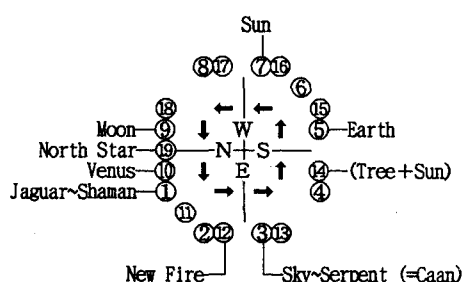
In Appendix 5, we see the results of an initial reduction of the data as described above. This part of the data, consisting of data from Chinese mansion #18/1 through #16/27 (or, 19 lines), is presented in the central portion of Appendix 5. Above mansion #18/1, I extended the pattern with five more lines of data, and below mansion #16/27, I extended the pattern with eight more lines of data. Since the central core of 19 lines reminded me of the 18 Mexican months of 20 days each plus a nineteenth month of 5 days, I tried comparing the Chinese & Mexican animal-referents to see if any pattern emerged. One did, as can be seen from Appendix 5. What emerged was a series of Chinese months, placed within three large blocks representing one year each. When I doubled the Mexican data, and placed it in a slightly shifted manner next to the Chinese data, I also obtained three large blocks with 19 Mexican months per block, again, representing three years.

First, note the similarities evident in the Directional-Color schemes of the Chinese and the Mayas. Also of interest is the actual name (not the animal-referent name) of Chinese mansion #19/2, which would have fallen just after mansion #18/1 if it had not been skipped over because the methodology used for Appendix 5. Mansion #19/2 (畢) means 'to end', and may have signalled 'the end' of an older Chinese cycle which once might have fallen near the margin of Mayan months #19 and #1.

Perhaps more important is the correlations which emerged between the Chinese and Mayan planetary referencing. For example, we see Mayan month #10, Yax 'Venus' located in the same quarter as the Chinese Heavenly Stems #7 庚 and #8 辛, both referring also to Venus. Also, we see Mayan month #12, associated with the god of the New Fire (and 'deer') located in the same quarter as the Chinese Heavenly Stems #3 丙 and #4 丁, both referring to Mars (and 'Fire'). Diagrams 6 and 7 present data suggestive of similarities in Chinese and Mexican planetary referencing.

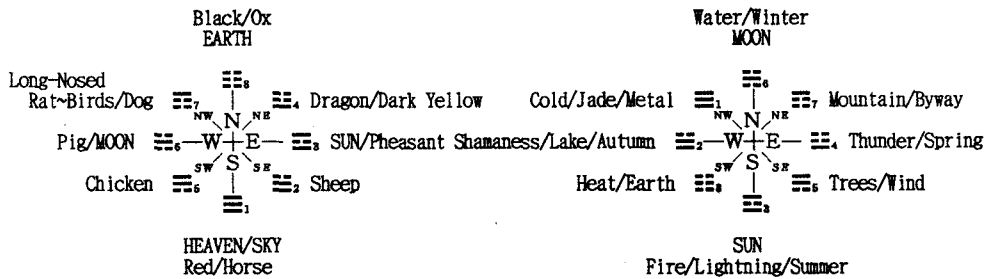


8 (of 10) CHINESE HEAVENLY STEMS
Diagram 5



MAYAN SEQUENCE OF MONTHS
Diagram 6

In Diagrams 7 and 8, I present data on one of the most difficult components of the Chinese calendar, the 8 Trigrams (八卦). Four of them, #8, #5, #7, and #1, were seen in Appendix 2, marking the cross-quarter directions: Southwest, Southeast, Northeast, and Northwest, respectively. The four trigrams seen in Appendix 2 represent half of the 8 elements in a series called the Later Heaven (後天) Sequence. There is another series of 8 trigrams, called the Former Heaven (先天) Sequence, with the eight elements of each sequence marking the four cardinal and four cross-quarter directions. The name 'Trigram', itself, is suggestive of the configuration of each trigram; each is composed of three lines, with the line either being solid or broken into two parts. Diagrams 7 and 8 present the two Sequences, the relevant directions, and their principal attributes.



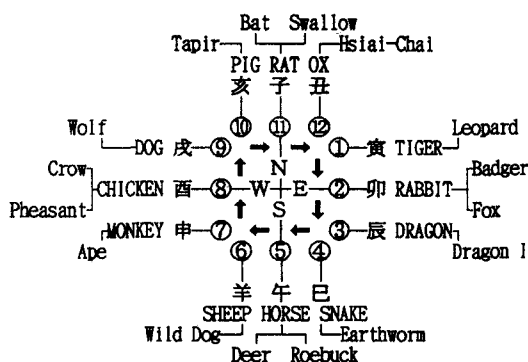
CHINESE FORMER HEAVEN SEQUENCE CHINESE LATER HEAVEN SEQUENCE
Diagram 7 Diagram 8

In Diagrams 7 and 8, we can see an indication of a separation in the use of the attributes commonly assigned to the 8 trigrams. In other words, although each of the 8 trigrams has several attributes, they seem to manifest certain of these characteristics more forcefully when placed with one or the other sequence. For example, the animal, color, and planetary attributes seem to be most evidently of importance in the Former Heaven sequencing of the trigrams, while the season, climate, and element attributes seem to be most evidently of importance in the Later Heaven sequencing of the trigrams. It was upon this basis that I associated the various attributes with one Chinese sequence or the other.

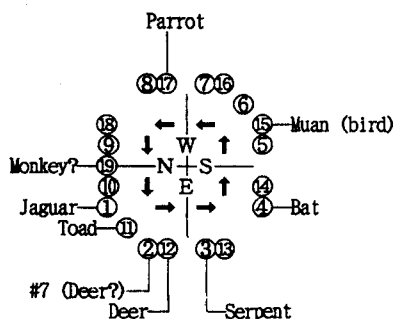
If we then compare the Chinese data in Diagrams 5, 7, and 8 with the Mayan data in Diagram 6, we see that Mayan months: #9, Chen 'Moon', and #14, Kankin (whose glyph is composed of Tree + Sun), seem to correspond to the Former Heaven sequencing of the attributes: Moon and Sun. If we remember our discussion of the Yellow (Earth) Dragon, we see that Mayan month #5, Tzec 'Earth', corresponds with the attributes of 'Dark Yellow & Dragon', also found in the Former Heaven sequence. So too, does Mayan month #3, Zip 'God of the Serpent' → Caan 'Celestial Serpent~Sky', correspond to the Former Heaven

attribute of 'Heaven/Sky'. The two color attributes: Red (South) and Black (North) also seen in the Former Heaven sequence also agree (as seen in Part IV) with the Mayan colors associated with the East and the West, respectively. Also, we see some degree of agreement in the Later Heaven attribute of 'Fire' and the curious attribute of 'Shamaness', usually noted as a 'Spiritual Medium' or 'Witch' (巫), which agrees with Mayan months #12, Ceh 'God of the New Fire' and #1 'God of the Jaguar', with Mayan 'Jaguar' = 'Shaman'. All of the correspondences may point to some kind of relationship between the two systems, which is, as yet, still unclear.

Going back now to the Chinese and Mexican animal-referents, the Diagrams 9 and 10 are suggestive.



CHINESE SEQUENCE OF MONTHS
Diagram 9



MAYAN SEQUENCE OF MONTHS
Diagram 10

In diagram 9, I present the major Chinese animal-referents associated with both the mansions and Earthly Branch components of the Chinese calendar system. In diagram 10, we see a new sequencing of the Mayan months which emerged from the application of the methodology described earlier, the results of which are presented in Appendix 5. Perhaps the first thing that can be seen in Diagram 10 is that the Mayan months do not fall in a regular sequence proceeding from month ① to ② to ③, etc. to ⑱. I do not understand this, myself. However, what may be reflected in the sequencing is an older sequencing, which was later changed to the one we saw in Diagram 2. When we look at the animal-referents, both sequences seem to produce patterns of correspondence with the Chinese animal-referents which are indicative of some connection. As regards the patterns emerging from a comparison of Diagram 9 and Diagram 10, we can see the same correspondence between Chinese 'Roebuck/Horse/Deer' and Mayan month #12, 'Deer' that was noted earlier, in connection with Diagram 2, except that it does not fall in the Mayan west quarter (with

connotations of a connection with Chinese 'Ox', in the Chinese north quarter), but, along with Mayan month #2, associated with 'the God of #7', they fall exclusively within the Mayan east quarter (= Chinese south quarter). Now, if by 'the God of #7', '#7' refers to Mexican day-name #7, which, in the Aztec, Zapotec, and Mayan day-name systems, are denoted by 'Deer', we may postulate a set, composed of Mayan month #12 and #2 both referring to 'Deer' that makes both numerical and semantic sense. You see, I think the mathematical pairing of 1-11 and 2-12 and 3-13, etc., seen in Appendix 5 is indicative of the same kind of mentality as seen in the Chinese trigram sequences, where attributes thought to be exact opposites are placed exactly opposite one another in the two sequences. In other words, I am talking about a dualistic philosophy manifested in both the Chinese and Mexican calendar systems.

In the Chinese system, we also see that the Ox of the North can be paired with the Horse (Roebuck/Deer) of the South. This may be comparable with the occurrence of (#12) Deer of the West seen in Diagram 2 and the more reasonable (red, #12) Deer of the East seen in Diagram 10. Likewise, the Chinese Chicken (Pheasant/Crow) of the West can be somehow paired with the Bat or Swallow of the North, just as the Mayan Muan (bird) of the North (or perhaps West) seen in Diagram 2 and the Muan (bird) of the South seen in Diagram 10 may be comparable. These animal-referent sets, although not composed of opposites, is indicative of some kind of relationship between quarters, and should be factored into our analysis of Chinese-Mexican correspondence. But, what evidence is there that the '#7', in Mayan month #2 'God of #7', has any relation with Aztec day-name #7 'Deer', and that a #12-#2 set ever existed? To answer this question, I played with the idea of a Chinese-Mexican connection centered in the Chinese south quarter of the sky and the Mayan east quarter of the sky. What I found was of some interest and will be dealt with in the next part of this paper.

IX. MARS

In Appendix 6, we see an attempt to wed the patterns which emerged in Appendix 4 and Appendix 5. In other words, I wanted to show the relationship between the Chinese Mexican mansion/day-names and months on one chart. To do this, I had to select a starting-point and three units of time. For Appendix 6, I chose Chinese mansion #23/6, whose animal referent is 'Sheep' (Earthly Branch #8 未, or Chinese Solar month #6 未), as a starting-point. I chose this point because, as mentioned just above, I could test any possible

relationship between Chinese ‘Sheep-Horse’ and Mayan months #12 and #2. For units of time, I selected a 13-day mansion/day-name period (or one Mexican Week’), a 30-day Chinese solar month period, and a 20-day Mexican month period. I assumed that three Chinese months of 30 days each (or 90 days) equaled four and a half Mexican months of 20 days each (or 90 days). I then set the beginning point at zero-days and started the whole thing rolling. Of course, I also monitored the combined day-name number series during each 13-day period. Lastly, in order to detect any relationship between the Chinese and Mexican animal-referent names and also between the Mexican day-names and month-names, I used a system of dark and light-colored circles. The light-colored circles indicate Chinese-Mexican (basically Aztec) animal-referent correspondences, while the light-colored circles indicate the Aztec-Mayan day-name and month-name correspondences.

The combined day-name number series is interesting because, even though it utilizes the very same numbers as seen in Appendix 4, it takes into account the alternating 28 and 27 mansion scheme in a way which differs from what was done in Appendix 4. The two shaded areas seen in Appendix 6 indicate two special 14-day periods which allow for the whole system to become perpetual, while, at the same time, strictly maintaining the day-name number series seen in Appendix 4. This strategy allows for a continuous string of Mexican day-name numbers to match a parallel string of Chinese mansion numbers (using the second Chinese numbering system for the mansions). Thus, we see Appendix 6 beginning with Chinese mansion #23/‘6’ and ending with mansion #26/‘9’, while the Mexican day-name number series beginning with (1-16)11-‘6’ and ending with (19-14)‘6’(4).

I allowed the patterns to emerge until I again reached Chinese mansion 23/6 ‘Sheep’. But then, the pattern which emerged was so fascinating that I decided to continue the process until I again reached Chinese mansion #23/6, and then again until I reached the end of Chinese mansion #26/9. I am glad I did, because what emerged from it all was the following:

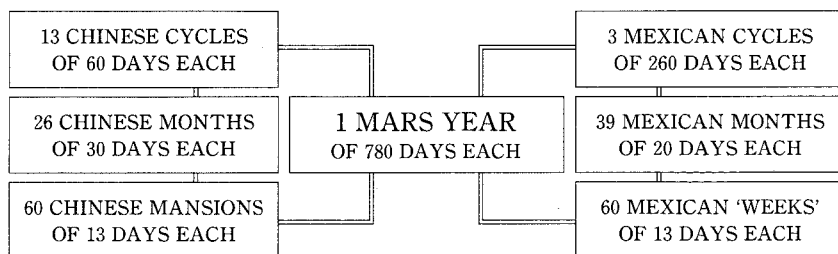


Table 6

Because I commenced Appendix 6 with a starting-point at what I assumed was the beginning of Chinese mansion #23/6, it ended on the 11th day of mansion #26/9. I did so because I was focussing on the Sheep-Horse area for reasons presented above. Accordingly, we ended up in the middle of Mayan month #3 dedicated to the 'God of the Serpent'; however, it can easily be seen that if I had commenced with Chinese mansion 22/5 'Wild Dog', which are paired animal referents in the Chinese system, we would have ended up in Mayan month #12 'Deer'. What I think is important is that the beginning and end-points of the Mars Year both fall within the Chinese south quarter of the sky associated with Mars. That we ended up in Serpent is only a minor methodological blip as far as the system as a whole is concerned. However, it is interesting that, if we count out the mansions using Appendix 2, as we did in before in connection with the 55 mansions and Venus, we arrive at mansion #27/10 'Snake', which would correspond to Mayan month #3, dedicated to the 'God of the Serpent'. Even so, I think I should have started at some point in Chinese mansion #22/5. But, one might ask, why use a 13-day period when it comes to Mars, but a longer, 13.2727-day period when it comes to Venus? I think it has to do with the uneven distribution and size of the mansions/asterisms. Starting in some places would require one or the other period to get to one or another asterism. At the present time, that is the best I can come up with. As regards Appendix 6, also note that it strongly suggests the possibility that the 12 Chinese solar months originally cover a 365-day period (not a 365, 2416-day period), and so, unlike the modern Chinese calendar, months began on days which were not tied to the solar year! Also, it appears that 11 of the Chinese months had 30 days, while one month has 35 days.

Now I would like to go to the matters of the Mexican 260-day period and the Chinese 60-day period. As can be seen from Appendix 6, and an inspection of the day-counts (noted using numbers that are perhaps a bit too small), a methodology such as the one I used, as a matter of course, generates points at 105 and 260-day intervals where the margins of the Chinese mansions and the Mexican months line up. In Appendix 6, this occurs at day-count 260, at the margin of Chinese mansions #14/25 and #15/26 ('Pig' and 'Dog'). At day-count 365, or 105 days later, at the margin of Chinese mansions #22/5 and #23/6 it occurs again. Then, at day-count 625, or 260 days later, at the margin of Chinese mansions #14/25 and #15/26 ('Pig' and 'Dog', it occurs again. And finally, at day-count 730, or 105 days later, at the margin of Chinese mansions #22/5 and #23/6, it occurs a final time. However, it should be noted that, at day-counts 300 and 665, at the margin of Chinese mansions #17/28 and

#18/1, there is also a point where the margins of the Chinese mansions and the Mexican months line up. At any rate, the 260-day Sacred Year of the Mexican calendar seems, from Appendix 6, to have originated simply from the mechanics of the Mexican calendar system, where mansion/day-name co-alignment occurs at day-counts: 260 (+105=) 365 (+260=) 625 (+105=) 730. A 260-day period also emerges from the simple fact that 20 mansions were used in Mexico; in other words, that $20/28$ equals $260/364$.

Now, as regards the Chinese 60-day period, we see something which is every bit as tied to Chinese culture as the 260-day Sacred Year is to Mexican culture. In the case of the Mexican Sacred Year, we know that it represents the culmination of the joining of two series: the 13-day 'Week' and the 20 day-names ($13 \times 20 = 260$). Likewise, the Chinese 60-day period represents the culmination of the joining of two series: the 10-day Chinese 'Week', represented by the 10 Heavenly Stems (天干), and the elements of the Chinese Zodiac, also known as the 12 Earthly Branches (地支). It might seem that the Chinese cycle should be 120 days long, because $10 \times 12 = 120$; yet, because 6 cycles of 10 Heavenly Stems equals 60, and 5 cycles of 12 Earthly Branches also equals 60, the smallest common multiple is 60, rather than 120. Remembering the two extra day-counts: 300 and 665, it may be that the Chinese utilized co-alignment at day-counts: 300 (+65=) 365 (+300=) 665 (+65=) 730. Also, we must remember that we have seen the figure of 730 days before; it was seen in Table 4, and represents two 365-day periods, or 55 mansions. Here, however, it occurs at the end of 56 mansions. So, again, we are left with the question of why do we see a 13-day mansion-period sometimes, and at other times, a 13.2727-day mansion period, which I speculated upon two paragraphs above.

X. CORRELATING THE CHINESE & MEXICAN CALENDARS

All the research presented in this paper may seem, to some at least, an amateurish exercise, which is too speculative to warrant serious consideration. That it is amateurish there is no question. But, whether or not it warrants serious, or any other kind of consideration, should perhaps wait a bit. For me, the matter of correlation represents either the proof of gross error, or, strong evidence that the similarities outlined in this paper may hold some validity. Yet, how can one attempt such a thing? One way may possibly be to show that Chinese dates and Mexican dates are in some way correlatable. In order to show that this is, to a limited extent, possible, please look at Appendix 7.

Appendix 7 presents a correlation of two Chinese solar months and three Mayan solar months. The data include a series of Chinese Heavenly Stem and Earthly Branch denominations for each of the 30 days of each of two Chinese months. Underneath the Chinese data, we see a series of Mayan days in each of the three Mayan months. So, for example, the first day of the first month would be referred to by the combination: 甲子, with the first element being the first of the 10 Chinese Heavenly Stems (甲), and the second element being the first of the 12 Earthly Branches (子). This series serves to mark each day by a unique combination of Stem & Branch sign which culminates on the last day of the second Chinese month; from the first day of the third month the series repeats itself, and so the two Chinese months also represent one 60-day cycle. As can be seen, the Mayan day-numbers (0-19) form a series which are quite compatible with the Chinese days. For example we can see that two Chinese 'Weeks' of 10 days (Stems) each correspond to one Mayan month. We also see that every other Chinese Stem matches a specific Mayan day-number, or to put it another way, every Chinese Stem can be identified with one of two Mayan day-numbers; for example, the first Stem (甲) consistently lines up with Mayan day-numbers: 0 or 10. For any 360-day period this would hold true, but at the end of a 360-day period (or, 6 Chinese 60-day periods, or 18 Mayan months), the Mayans added a special 5-day month which would throw the simple pattern of agreement off by 5 days, but the Chinese Stem-Branch combinations just keeps going on and on. So, for correlative purposes, the Chinese Stem & Branch and Mexican day-number & month name are not of very much use, or at least, are not so readily useful.

If we now go to Appendix 8, we see another element found in both Chinese and Mexican dates: the Chinese mansion-name assigned to each day, and the Mexican day-name assigned to each day. In the case of this element, which I have attempted to demonstrate in this paper are comparable, we see something which is set in an unbroken series, and as such, may be of use in finding a correlation. An inspection of Appendix 8 shows us one Chinese series of 28 Chinese mansions, to which is attached two numbering systems discussed earlier. As for the starting point for these mansions, I have chosen the order commencing with mansion #1/12, which is commonly used in China and other countries in Asia today. As for the Mexican day-names, I have simply set them in a series which reflects the assumption that 28 Chinese mansions equals 20+8 Mexican day-names. Accordingly, 7 cycles of 20 day-names would have to occur until a specific Chinese-Mexican mansion/day-name combination reoccurred; these 7 cycles of 20 day-names have been lined up

against the 28 Chinese mansions, forming 5 lines of Mexican day-names which would be equivalent to the 28 Chinese mansions over any 140-day period. Thus, a Chinese mansion should be equivalent to one of 5 possible Mexican day-names for any given date.

Because most references to Mexican dates carry us back some hundreds of years, it was necessary to find Mayan dates falling in more recent times. Fortunately, these are available, although rather hard to come by. The situation concerning Chinese dates is quite different, with traditional dates being found in any number of books which are published on a regular basis. The following dates, along with their Christian Calendar and Julian Day (JD) equivalents will serve as test examples.

| | | CHINA | | | MEXICO | | |
|-------------|--------------|------------------|-----------------------------|---------------------|-------------------|--------------------|-------------------|
| | | Month-Day 月 日 | Stem-Branch 干(#)支(#) | Mansions 宿(#s) | Long-Count | Day#/Day-Name(#) | Day#/Month(#) |
| JD 244 8102 | Jul 29, 1990 | 6月 8日 | 乙(2)未(8) | 昴: 18/1 | 12. 18. 17. 4. 19 | 13 Cauac | ⑲: 12 Xul (#6) |
| JD 244 8115 | Aug 11, 1990 | 6月 21日 | 戊(5)申(9) | 氏: 3/14 | 12. 18. 17. 5. 12 | 13 Eb | ⑳: 5 Yaxkin (#7) |
| JD 244 8128 | Aug 24, 1990 | 7月 5日 | 辛(8)酉(10) | 婁: 16/27 | 12. 18. 17. 6. 5 | 13 Chiochan | ㉑: 18 Yaxkin (#7) |
| JD 244 8141 | Sep 6, 1990 | 7月 18日 | 甲(1)戌(11) | 角: 1/12 | 12. 18. 17. 6. 18 | 13 Etz'nab | ㉒: 11 Mol (#8) |
| JD 244 8154 | Sep 19, 1990 | 8月 1日 | 丁(4)亥(12) | 壁: 14/25 | 12. 18. 17. 7. 11 | 13 Chuen | ㉓: 4 Chen (#9) |
| JD 244 8167 | Oct 2, 1990 | 8月 14日 | 庚(7)子(1) | 翼: 27/10 | 12. 18. 17. 8. 4 | 13 Kan | ㉔: 17 Chen (#9) |
| JD 244 8180 | Oct 15, 1990 | 8月 27日 | 癸(10)丑(2) | 危: 12/23 | 12. 18. 17. 8. 17 | 13 Caban | ㉕: 10 Yax (#10) |

Table 7

In Table 7, we see two hatch-marked areas containing Chinese mansion numbers and Mexican day-name numbers. We can also see that, for the date: July 29, 1990, Chinese mansion #18/1 lines up with Mexican (Mayan) day-name Cauac (#19). If we now go back to Appendix 8, we see that the circled 19 does, indeed, fall under Chinese mansion #18/1 (of course, because I started the Mexican series with #2 under Chinese mansion #1/12). Thus, it seems that I have justified my starting the series as I did, and that either the Chinese calendar gained one mansion or the Mexican calendar lost one day-name. Of course, there is also the distinct possibility that my dates are in error. Assuming they are not, then the gain or loss of a mansion/day-name is a possibility, and that the traditional numbering system (system 1) used for the Chinese mansions is, in fact, correct. However, if we go back to Appendix 6, we will see that the combined day-name number-series always generated paired numbers such as seen in: 1-16-11-6, in fact, the numerical data found in the Madrid Codex is also of this kind. If so, then the second Chinese numbering system may be hidden in the highlighted sections of Appendix 8, with the second Chinese number series: 12-13-14-15-16, etc. being indicated by the Mexican equivalents: 2-3-4-5-6, etc. If so, then there has been no lost or gain of even a single mansion, and the two calendars are synchronized as regards

this element in their dates. It is also interesting to note that the 11th Mayan day name, Chuen 'Monkey', was considered to be the first day created, not the eleventh, suggesting an older ordering with watches the second Chinese numbering system. At any rate, the most obvious correlative pattern seems to be Chinese mansion #1/12 lining up with Mayan day-name #2.

XI. CONCLUSIONS

I will leave it to others, who are experts, to answer the myriad cultural and other related questions that come to mind as a result of this research. I just do not know enough about the movements of ancient peoples, the kinds of contacts they had, or anything about the time-periods involved. However, I will just say, that I believe a strong connection of some sort must have existed between certain groups in East Asia and Central America. Calendars of the sophistication of those in China and Mexico are a manifestation of high civilization, and the degree of similarity seen simply can not be the result of a few contacts over a brief period of years; it suggests a long and intensively active period of communication.

There are also some things I would like to mention about the analysis of the data presented in this paper. Heretofore, what has appeared in the literature on the Central-American calendar has been almost totally untouched by the comparative process, unless we include research which presents rather outrageous speculations of the kind which can never be substantiated. Research has been pursued within a vacuum, and from a perspective which, in effect, excludes any possibility of data from outside the Americas from entering the picture. Here, of course, I do not mean to imply that ancient Americans have been totally excluded from the scope of anthropological research, but just that the civilizations of the Americas and the artifacts of higher civilization, such as the calendar, the writing systems, and other such artifacts, have never been seriously compared from the perspective of shared or complimentary development; we still divide the Earth into the 'Old' and the 'New' Worlds. This is unfortunate. The evidence presented in this paper indicates the existence of ways of viewing the sky, seeing shapes of animals among the stars, plotting their movements through the sky, and giving them attributes which are of a degree of sophistication too high to have been carried across Beringia 20,000 years ago. If the ancient Americans did bring something from Asia with them, it was not a fully developed calendar, correlatable to within one day to the Chinese calendar (as will be shown in my next paper).

Through the course of time, the astronomical nature of the Mexican day-names was either lost or forgotten. This was not the case in China, in fact, in China and other parts of Asia, it is the day-name guise of the mansions which has tended to be ignored. Books on the Mexican calendar system are very few when compared to those available on the Chinese calendar. In China they are abundant, and we see that the oldest published book in the world is the yearly T'ung Shu (通書) almanac, and is of a nature very similar to the Aztec Tonalamatl 'Book of Days' and similar Mayan books. The purpose of such Chinese and Mexican books also serve the same function: to assist in the identification of lucky (吉) and unlucky (凶) days, and to announce the times of planting, the rains, and the harvest. Of primary interest to both groups, was the rise of the Pleiades (昴), which around 2300 B.C., announced the Spring Equinox (when viewed at midnight, perhaps explaining the east to west reversal seen in Appendix 2, with the Western calendar usually based on the heliacal rising of the sun). Even today, the importance of this mansion is indicated by the fact that it is perhaps the only mansion whose name is easily recognized by the common citizen of China or Japan; its Japanese name, Subaru, has even entered English through the name of a famous Japanese automobile named in its honor. While, in Mexico, we see the beginning of a new 52-year cycle signalled by the rise of the Pleiades around midnight. The precession of the Equinoxes may have altered the coordination of the rise of certain asterisms with certain solar junctures, but the ancient importance of certain events has not been forgotten in either area of the world.

The cycle of celestial animals through the heavens may have been spread out over one (see Table 3) or two-year (see table 5) intervals, but they can be collapsed into one coordinated system, just like the Indian and Arabian/Babylonian Zodiacal elements may be so coordinated (see Table 1). The 28 Chinese mansions/day-names may also be shown to reflect the same passage of days as the 20+8 Mexican day-name system. The attributes of and association with different quarters of the sky of the planet Venus (Chinese: White/West and Mayan: White/North) and the planet Mars (Chinese: Red/South/Horse/Fire and Mayan: Red/East/Deer/Fire) are suggestive of a common system of philosophy, as is the commencement of the solar months with the Chinese Tiger and the Mayan (god of the) Jaguar, and the complete compatibility of the Chinese and Mexican directional-color schemes. And finally, we see the general agreement in the animal-referents of the Chinese and the Aztecs, with the Aztec animal-referents perhaps best preserving an older, Toltec, system of animal referents. To me, all of these data are suggestive of the "long and

intensively active period of communication” I mentioned earlier. But, the research presented in this paper is, in fact, only suggestive; it should be followed by more research aimed at putting a much finer edge on many aspects of the Chinese and Mexican calendar.

During the course of my research, other features have attracted my attention, including a possible relationship between the Chinese 8 Trigrams (八卦) and the Olmec/Mayan numeral signs; for example, can the Chinese trigram: Tui ䷗ (sheep) be read as the Olmec/Mayan numeral for ‘12’ (deer)? Is there a relationship between the Chinese and Mayan scripts; for example, does Chinese: 東 ‘East’ equal Mayan: Kankin ‘Tree + Sun’? And also, is there a relationship between the Chinese Four Deities (四神) and the Aztec Four Deities of the four quarters; for example, is the Chinese Red Sparrow (朱雀) equivalent to Aztec Huitzilopochtli ‘Hummingbird of the South/Left’? And lastly, why is the Chinese west quarter associated with the color white (the color indicating mourning) and death, just as the Aztec west quarter is associated with the color white (the color indicating mourning) and death? Is it because the Chinese western quarter is controlled by the White Tiger (see Table 3), which, to the Aztecs was associated with the common consequence of meeting a large cat: death? These and other issues should be investigated in the future, and should be of some interest.

In my next paper, I will address these issues, as well as deal much more thoroughly with the issue of coordinating the Chinese and Mayan calendar systems. For the present, I will only say that the 12 Earthly Branches can be compared much more convincingly with the Mexican day-names, that all the elements of a Chinese date, including the Chinese year-bearers can be compared with all the elements of a Mayan date, and that the starting point of the present 1,872,000-day Mayan cycle at JD 58 4283 can be compared with the starting date of the Chinese calendar in the same year, with the movements of the planet Mars being tied to these dates in both cases.

The Twenty-Eight Lunar Mansions of China

APPENDIX 1

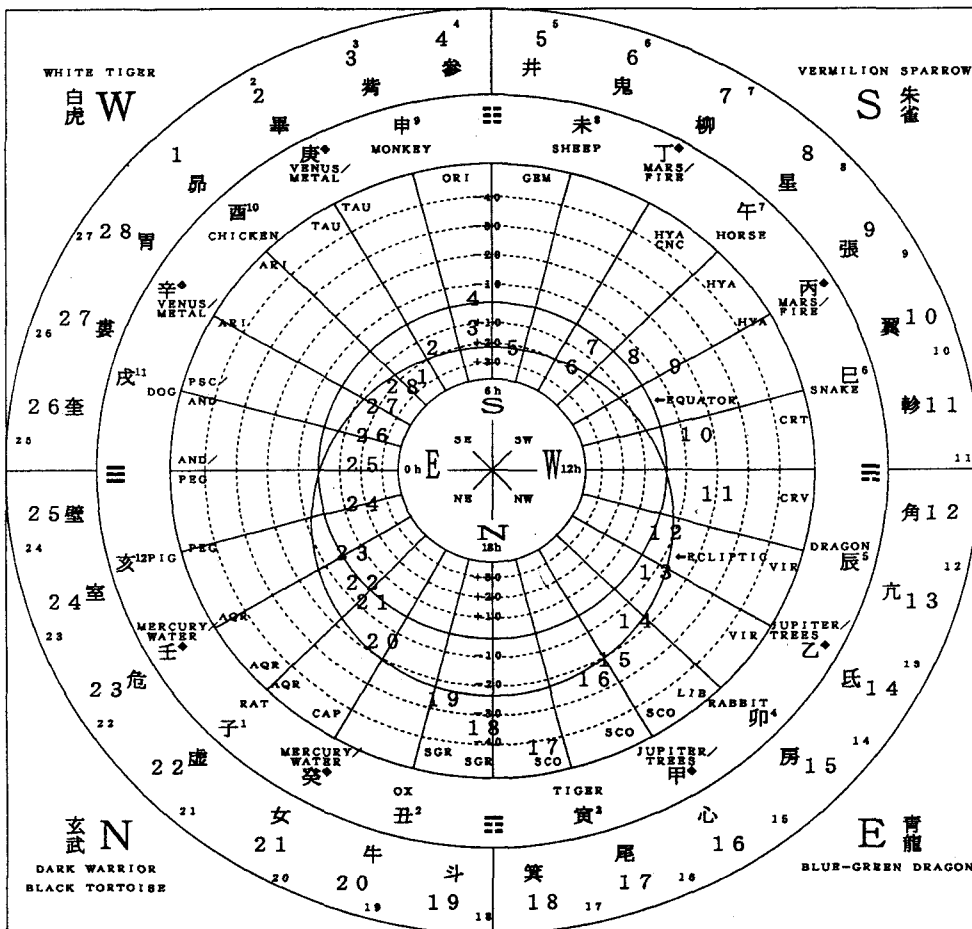
LIST OF CORRESPONDING STARS
IN FOUR LUNAR-MANSION SYSTEMS

(Mansions without corresponding stars are highlighted and all their stars are noted)

| 28 Chinese HSIU (宿)' | | | | 28 Indian NAKSHATRA' | | | 28 Arabian MANAZIL' | | | 28 Babylonian 'Houses'' | | |
|----------------------|-------|--------------------------|--------------------------|----------------------|------------|------------|---------------------|------------------|-------------------|-------------------------|----------|-------|
| 名 | # | 71 Stars | Group | # | 59 Stars | Group | # | 78 Stars | Group | # | 28 Stars | Group |
| 昴 | 18/1 | Pleiades | Tau | 1/3 | Pleiades | Tau | 3 | Pleiades | Tau | 4 | Pleiades | Tau |
| 畢 | 19/2 | α θ γ δ ε | Tau | 2/4 | α θ γ δ ε | Tau | 4 | α θ γ δ ε | Tau | 5 | α | Tau |
| | | | | | | | | β | Tau | 6 | β | Tau |
| | | | | | | | | ζ | Tau | 7 | ζ | Tau |
| 觜 | 20/3 | λ φ | Ori | 3/5 | λ φ | Ori | 5 | λ φ | Ori | | | |
| 參 | 21/4 | α | Ori | 4/6 | α | Ori | | | | | | |
| 井 | 22/5 | η μ ν γ ξ ε ζ λ | Gem Gem Gem Gem | | | | 6 | η μ ν γ ξ | Gem Gem Gem | 8 | η | Gem |
| | | | | | | | | ε ζ λ α | Gem | 9 | μ | Gem |
| | | | | | | | | β | Gem | 10 | γ | Gem |
| | | | | 5/7 | α | Gem | 7 | ε ζ λ α | Gem | 11 | α | Gem |
| | | | | | β | Gem | | β | Gem | 12 | β | Gem |
| 鬼 | 23/6 | θ δ γ | Cnc | 6/8 | θ δ γ | Cnc | 8 | δ γ | Cnc | 13 | δ | Cnc |
| 柳 | 24/7 | ε δ σ η ρ | Hya | 7/9 | ε δ σ η ρ | Hya | | | | | | |
| 星 | 25/8 | α ι τ κ ν | Hya | 8/10 | ε μ | Leo | 9 | ε μ | Leo | 14 | ε | Leo |
| 張 | 26/9 | κ λ μ ν φ | Hya | | α η γ ζ | Leo | 10 | α η γ ζ | Leo | 15 | α | Leo |
| 翼 | 27/10 | 22 stars | Crt | 9/11 | δ θ | Leo | 11 | δ θ | Leo | 16 | ρ | Leo |
| | | | | 10/12 | β | Leo | 12 | β | Leo | 17 | β | Leo |
| | | | | | | | 13 | β | Vir | 18 | β | Vir |
| 轸 | 28/11 | δ γ ε β | Crv | 11/13 | δ γ ε β | Crv | | γ | Vir | 19 | γ | Vir |
| 角 | 1/12 | α ζ | Vir | 12/14 | α | Vir | 14 | α ζ | Vir | 20 | α | Vir |
| 亢 | 2/13 | ι κ λ | Vir | 13/15 | α | Boo | 15 | ι κ λ | Vir | | | |
| 氏 | 3/14 | κ β γ ι | Lib Lib | 14/16 | α β γ ι | Lib Lib | 16 | α β γ ι | Lib Lib | 21 | α | Lib |
| 房 | 4/15 | δ β π | Sco | 15/17 | δ β π | Sco | 17 | δ β π | Sco | 22 | β | Lib |
| 心 | 5/16 | α σ τ | Sco | 16/18 | α σ τ | Sco | 18 | α σ τ | Sco | 23 | δ β | Sco |
| 尾 | 6/17 | λ → ε | Sco | 17/19 | λ → ε | Sco | 19 | λ → ε | Sco | 24 | α | Sco |
| 箕 | 7/18 | γ δ ε η | Sgr | 18/20 | δ ε | Sgr | 20 | γ δ ε η | Sgr | 25 | θ | Oph |
| | | | | 20/22 | α ε ζ | Lyr | | | | | | |
| 斗 | 8/19 | λ φ σ τ ζ | Sgr | 19/21 | σ ζ | Sgr | | λ φ σ τ ζ | Sgr | | | |
| | | | | 21/23 | α β γ | Aql | 21 | ξ ο π ρ υ | Sgr | | | |
| 牛 | 9/20 | α β | Cap | | | | 22 | α β | Cap | 26 | α β | Cap |
| | | | | | | | | | | 27 | γ | Cap |
| | | | | | | | | | | 28 | δ | Cap |
| 女 | 10/21 | ε ν | Aqr | 22/24 | β α γ δ | Del | 23 | ε ν | Aqr | | | |
| 虛 | 11/22 | β | Aqr | | | | 24 | β | Aqr | | | |
| 危 | 12/23 | α | Aqr | 23/25 | λ | Aqr | 25 | α | Aqr | | | |
| 室 | 13/24 | α β | Peg | 24/26 | α β | Peg | 26 | α β | Peg | | | |
| 壁 | 14/25 | γ α | Peg And | 25/27 | γ α | Peg And | 27 | γ α | Peg And | | | |
| 奎 | 15/26 | β δ 7 stars | And Psc | | | | 28 | (β δ η ζ ε δ) | (And) Psc | | | |
| | | | | 26/28 | ζ ε δ | Psc | | | | 1 | η | Psc |
| 婁 | 16/27 | β γ α | Ari Ari | 27/1 | β γ | Ari | 1 | β γ α | Ari Ari | 2 | β | Ari |
| | | | | | | | 2 | δ ε | Ari | 3 | α | Ari |
| 胃 | 17/28 | Muscae | Ari | 28/2 | Muscae | Ari | | | | | | |

1. Data are from Mathews (1943), Mayers (1910), and Murakami (1966).
2. Data are from Kay (1981) and Roy (1970).
3. Data are from Brennand (1896).
4. Data are from Epping (1889).

APPENDIX 2



APPENDIX 3

| CHINESE MANSION #s 28 MANSION-ANIMALS | | MAYAN 'MADRID CODEX' DAY-NAME # SERIES | | STELLAR GROUPINGS | 12 EARTHLY BRANCHES | 10 HEAVENLY STEMS | 4 CARDINAL DIRECTIONS | |
|--|------------|---|----|----------------------|------------------------|----------------------|--------------------------|---------------------|
| 雞 18/1 | CHICKEN | turkey | 16 | 11 6 1 | Pleiades | ☾ CHICKEN 酉 | (VENUS) | WEST 西 |
| 鳥 19/2 | crow | | | 17 12 7 2 | Taurus | ☿ metal 庚 | | |
| 20/3 | | | | 18 13 8 3 | | | | |
| 21/4 | | | | 19 14 9 4 | | | | |
| 犴 22/5 | wild dog | dog | 10 | 20 15 10 5 | Gemini | | SOUTH 南 | |
| 羊 23/6 | SHEEP | | | 1 16 11 6 | Cancer | ♈ SHEEP 未 | | |
| 24/7 | | | | 2 17 12 7 | | | | ☿ fire 丁 (MARS) |
| 25/8 | | snake | 5 | 3 18 13 8 | | ♋ fire 丙 | | |
| 26/9 | | | | 4 19 14 9 | Crater | ♏ SNAKE 巳 | | |
| 蛇 27/10 | SNAKE | | | 5 20 15 10 | Corvus | | | |
| 蚓 28/11 | earthworm | dog | 10 | 6 1 16 11 | | | EAST 東 | |
| 1/12 | | | | 7 2 17 12 | Libra | ♍ tree 乙 (JUPITER) | | |
| 2/13 | | | | 8 3 18 13 | Scorpio | ♏ RABBIT 卯 | | ☿ tree 甲 |
| 貉 3/14 | badger | lizard | 4 | 9 4 19 14 | | | NORTH 北 | |
| 兔 4/15 | RABBIT | | | 10 5 20 15 | Sagittarius | | | |
| 狐 5/16 | fox | | | 11 6 1 16 | Capricorn | ♑ OX 丑 | | ☿ water 癸 (MERCURY) |
| 6/17 | | TLALOC | 19 | 12 7 2 17 | | ♋ water 壬 | | |
| 7/18 | | | | 13 8 3 18 | Pegasus | ♐ PIG 亥 | | |
| 獬 8/19 | Hsiai-Chai | | | 14 9 4 19 | Peg./And. | | | |
| 牛 9/20 | OX | dog | 10 | 15 10 5 20 | And./Psc. | | WEST 西 | |
| 10/21 | | | | 16 11 6 1 | Aries | ♈ DOG 戌 | | ♋ metal 辛 (VENUS) |
| 11/22 | | | | 17 12 7 2 | Orion | ♌ MONKEY 申 | | ♎ metal 庚 |
| 12/23 | | monkey | 11 | 18 13 8 3 | Orion | | SOUTH 南 | |
| 猪 13/24 | PIG | | | 19 14 9 4 | Hydra | | | ☿ fire 丁 (MARS) |
| 獐 14/25 | tapir | | | 20 15 10 5 | Hydra | ♋ HORSE 午 | | ♌ fire 丙 |
| 狼 15/26 | wolf | deer | 7 | 1 16 11 6 | | | EAST 東 | |
| 狗 16/27 | DOG | | | 2 17 12 7 | Hydra | | | |
| 17/28 | | | | 3 18 13 8 | Virgo | | | |
| 18/1 | | dragon | 1 | 4 19 14 9 | Virgo | ♍ DRAGON 辰 | NORTH 北 | |
| 19/2 | | | | 5 20 15 10 | | | | ♎ tree 乙 (JUPITER) |
| 猴 20/3 | MONKEY | | | 6 1 16 11 | Scorpio | ♏ TIGER 寅 | | ♏ tree 甲 |
| 21/4 | ape | Jaguar | 14 | 7 2 17 12 | Sagittarius | | | |
| 22/5 | | | | 8 3 18 13 | | | | |
| 23/6 | | | | 9 4 19 14 | Aquarius | | | |
| 24/7 | roebuck | lord/ master | 20 | 10 5 20 15 | Aquarius | ♏ RAT~ master 子 | ☿ water 癸 (MERCURY) | |
| 25/8 | HORSE | | | 11 6 1 16 | Aquarius | | ♋ water 壬 | |
| 26/9 | deer | | | 12 7 2 17 | | | | |
| 27/10 | | dragon | 1 | 13 8 3 18 | | | WEST 西 | |
| 蛟 1/12 | dragon I | | | 14 9 4 19 | Aquarius | | | |
| 龍 2/13 | DRAGON II | | | 15 10 5 20 | Aquarius | | | |
| 3/14 | | Jaguar | 14 | 16 11 6 1 | | | | |
| 4/15 | | | | 17 12 7 2 | | | | |
| 5/16 | | | | 18 13 8 3 | | | | |
| 虎 6/17 | TIGER | lord/ master | 20 | 19 14 9 4 | Scorpio | | | |
| 豹 7/18 | leopard | | | 20 15 10 5 | | | | |
| 8/19 | | | | 1 16 11 6 | | | | |
| 9/20 | | bat | 20 | 2 17 12 7 | | | | |
| 蝠 10/21 | | | | 3 18 13 8 | Aquarius | | | |
| 鼠 11/22 | RAT | | | 4 19 14 9 | Aquarius | | | |
| 燕 12/23 | swallow | swallow | 20 | 5 20 15 10 | | | | |
| 13/24 | | | | 6 1 16 11 | | | | |
| 14/25 | | | | 7 2 17 12 | | | | |
| 15/26 | | swallow | 20 | 8 3 18 13 | | | | |
| 16/27 | | | | 9 4 19 14 | | | | |
| 16/27 | | | | 10 5 20 15 | | | | ♋ metal 辛 |
| 雞 18/1 | CHICKEN | turkey | 16 | 11 6 1 16 | Pleiades | ☾ CHICKEN 酉 | (VENUS) | WEST 西 |

APPENDIX 4

| CHINESE MANSION #s 28 MANSION-ANIMALS | | MAYAN 'MADRID CODEX' COMBINED DAY-NAME NUMBER-SERIES | | | | | | CHINESE MANSION #s 28 MANSION-ANIMALS | |
|---|------------------------------------|---|--|--|--------------|--|---|--|--|
| 雞 18/1 鳥 19/2 20/3 21/4 | CHICKEN ⑩ crow | turkey 16 | 11 ^A 6 1 17 12 7 2 18 13 8 3 19 14 9 4 20 15 10 5 1 16 11 6 2 17 12 7 3 18 13 8 4 19 14 9 | 4 19 14 9 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 16 | turkey deer | ⑩ CHICKEN 18/1 crow 19/2 20/3 21/4 | 雞 鳥 | |
| 犴 22/5 羊 23/6 24/7 25/8 26/9 | wild dog SHEEP ⑧ | deer 7 | 2 17 12 7 3 18 13 8 4 19 14 9 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 7 | deer | wild dog 22/5 ⑧ SHEEP 23/6 24/7 25/8 26/9 | 犴 羊 | | |
| 蛇 27/10 蚓 28/11 1/12 2/13 | SNAKE ⑥ earthworm | snake 5 | 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 5 | snake | ⑥ SNAKE 27/10 earthworm 28/11 1/12 2/13 | 蛇 蚓 | | |
| 貉 3/14 兔 4/15 狐 5/16 6/17 7/18 | badger RABBIT ④ fox | rabbit 8 | 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 8 | rabbit | badger 3/14 ④ RABBIT 4/15 fox 5/16 6/17 7/18 | 貉 兔 狐 | | |
| 獬 8/19 牛 9/20 10/21 11/22 12/23 | Hsial-Chal OX ② | lizard 4 | 14 9 4 19 15 10 5 20 16 11 6 1 17 12 7 2 18 13 8 3 19 14 9 4 20 15 10 5 1 16 11 6 2 17 12 7 3 18 13 8 4 19 14 9 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 4 | lizard | Hsial-Chal 8/19 ② OX 9/20 10/21 11/22 12/23 | 獬 牛 | | |
| 猪 13/24 獐 14/25 狼 15/26 狗 16/27 17/28 18/1 19/2 | PIG ⑫ tapir wolf DOG ⑪ | (TLALOC) dog 10 | 19 14 9 4 20 15 10 5 1 16 11 6 2 17 12 7 3 18 13 8 4 19 14 9 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 10 | dog | ⑫ PIG 13/24 tapir 14/25 wolf 15/26 ⑪ DOG 16/27 17/28 18/1 19/2 | 猪 獐 狼 狗 | | |
| 猴 20/3 猿 21/4 22/5 23/6 | MONKEY ⑨ ape | monkey 11 | 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 11 | monkey | ⑨ MONKEY 20/3 ape 21/4 22/5 23/6 | 猴 猿 | | |
| 獐 24/7 馬 25/8 鹿 26/9 27/10 28/11 | roe buck HORSE ⑦ deer | deer 7 | 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 7 | deer | roe buck 24/7 ⑦ HORSE 25/8 deer 26/9 27/10 28/11 | 獐 馬 鹿 | | |
| 蛟 1/12 龍 2/13 3/14 4/15 5/16 | dragon I DRAGON I ⑤ | dragon 1 | 15-10-5-20 16 11 6 1 17 12 7 2 18 13 8 3 19 14 9 4 20 15 10 5 1 16 11 6 2 17 12 7 3 18 13 8 4 19 14 9 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 1 | dragon | ⑤ DRAGON I 1/12 2/13 3/14 4/15 5/16 | 蛟 龍 | | |
| 虎 6/17 豹 7/18 8/19 9/20 | TIGER ⑬ leopard | jaguar 14 | 19 14 9 4 20 15 10 5 1 16 11 6 2 17 12 7 3 18 13 8 4 19 14 9 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 14 | jaguar | ⑬ TIGER 6/17 leopard 7/18 8/19 9/20 | 虎 豹 | | |
| 蝠 10/21 鼠 11/22 燕 12/23 13/24 14/25 15/26 16/27 | bat RAT~ master ① swallow | lord/ master 20 | 2 17 12 7 3 18 13 8 4 19 14 9 5 20 15 10 6 1 16 11 7 2 17 12 8 3 18 13 9 4 19 14 10 5 20 15 11 6 1 16 12 7 2 17 13 8 3 18 14 9 4 19 15 10 5 20 16 11 6 1 | 20 | Lord/ Master | bat 10/21 ① RAT~ master 11/22 swallow 12/23 13/24 14/25 15/26 16/27 | 蝠 鼠 燕 | | |
| 雞 18/1 | CHICKEN ⑩ | turkey 16 | 11 6 1 19 14 9 4 | 16 | CHICKEN 18/1 | 雞 | | | |

APPENDIX 5

| CHINA | | MEXICO | | | | | CHINA | | | | |
|---|---------------------|--|------------|----------------------|----|--|-------|---|--|--|-------------------------------|
| 28 ASTERISM-ANIMALS (In an attenuated, or, 'Jumping' Order) | | MONTHLY DEITIES and/or meanings | | 19 MAYAN MONTHS | | MONTHLY DEITIES and/or meanings | | 8 (of 10) HEAVENLY STEMS 天干 | 4 QUADRANTS 四宮 4 DEITIES 4 ANIMALS 5 COLORS | | 5 POINTS 5 COLORS 5方·五色 |
| 12 MONTHS (In Reversed- Order) | | NAME # | | 5 POINTS 5 COLORS | | # NAME | | | | | |
| 3/14 貉 badger | 2 卯 mao | tree+sun | KANKIN: 14 | yellow | 4 | ZOTZ | | tree/ 乙 AZURE/ 青 | blue-green | | |
| 6/17 虎 TIGER | → 1 寅 yin | | MUAN 15 | blue-green | 5 | TZEC EARTH | | Jupiter 甲 YELLOW 黃 | EAST CENTER | | |
| 9/20 牛 OX | → 12 丑 ch'ou | | PAX 16 | black | 6 | XUL | | water/ 癸 BLACK 黑 | black | | |
| 12/23 燕 swallow (PIG) | 11 子 tzu (10 亥 hai) | parrot | KAYAB 17 | WEST | 7 | YAXKIN SUN | | Mercury 壬 TURTLE 龜 | NORTH | | |
| 15/26 狼 wolf | 9 戌 hsü | | CUMKU 18 | | 8 | MOL | | metal/ 辛 WHITE 白 | white | | |
| 18/1 雞 CHICKEN | → 8 酉 yu | MONKEY? | UAYEB 19 | white | 9 | CHEN | | Venus 庚 TIGER 虎 | WEST | | |
| 21/4 猿 ape (SHEEP) | 7 申 shen | JAGUAR | POP 1 | | 10 | YAX VENUS | | Venus 庚 TIGER 虎 | | | |
| 24/7 獐 roebuck | 6 未 wei | #7 (DEER) | UO 2 | red | 11 | ZAC | | fire/ 丁 RED 朱 | red | | |
| 27/10 蛇 SNAKE | → 4 巳 szu | SERPENT | ZIP 3 | EAST | 12 | CEH deer | | Mars 丙 BIRD 雀 | SOUTH | | |
| 2/13 龍 DRAGON II | → 3 辰 ch'en | | ZOTZ 4 | yellow | 13 | MAC | | tree/ 乙 AZURE/ 青 | blue-green | | |
| 5/16 狐 fox (TIGER) | 2 卯 mao (1 寅 yin) | EARTH | TZEC 5 | blue-green | 14 | KANKIN: tree+sun | | Jupiter 甲 YELLOW 黃 | EAST CENTER | | |
| | | | MUAN 15 | | 15 | | | tree/ 甲 DRAGON 龍 | yellow | | |
| 8/19 獬 Hsiai-chai | 12 丑 ch'ou | | XUL 6 | | 16 | PAX | | water/ 癸 BLACK 黑 | black | | |
| 11/22 鼠 RAT | → 11 子 tzu | SUN | YAXKIN 7 | black | 17 | KAYAB parrot | | Mercury 壬 TURTLE 龜 | NORTH | | |
| 14/25 獾 tapir (DOG) | 10 亥 hai (9 戌 hsü) | | MOL 8 | | 18 | CUMKU | | Mercury 壬 TURTLE 龜 | | | |
| 17/28 雉 pheasant | 8 酉 yu | | CHEN 9 | white | 19 | UAYEB MONKEY? | | metal/ 辛 WHITE 白 | white | | |
| 20/3 猴 MONKEY | → 7 申 shen | VENUS | YAX 10 | NORTH | 1 | POP JAGUAR | | Venus 庚 TIGER 虎 | WEST | | |
| 23/6 羊 SHEEP | → 6 未 wei | | ZAC 11 | | 2 | UO #7 (DEER) | | fire/ 丁 RED 朱 | SOUTH | | |
| 26/9 鹿 deer (SNAKE) | 5 午 wu (4 巳 szu) | NEW FIRE deer | CEH 12 | EAST | 3 | ZIP SERPENT | | Mars 丙 BIRD 雀 | red | | |
| 1/12 蛟 dragon I | 3 辰 ch'en | | MAC 13 | | 4 | ZOTZ | | tree/ 乙 AZURE/ 青 | blue-green | | |
| 4/15 兔 RABBIT | → 2 卯 mao | tree+sun | KANKIN: 14 | yellow | 5 | TZEC EARTH | | Jupiter 甲 YELLOW 黃 | EAST CENTER | | |
| 7/18 豹 leopard | 1 寅 yin | | MUAN 15 | blue-green | 15 | | | Jupiter 甲 DRAGON 龍 | yellow | | |
| (OX) | (12 丑 ch'ou) | | XUL 6 | | 16 | PAX | | water/ 癸 BLACK 黑 | black | | |
| 10/21 蝠 bat | 11 子 tzu | | PAX 16 | black | 17 | YAXKIN SUN | | Mercury 壬 TURTLE 龜 | NORTH | | |
| 13/24 猪 PIG | → 10 亥 hai | parrot | KAYAB 17 | WEST | 8 | MOL | | metal/ 辛 WHITE 白 | white | | |
| 16/27 狗 DOG | → 9 戌 hsü | | CUMKU 18 | | 9 | CHEN | | 庚 TIGER 虎 | WEST | | |
| 19/2 鳥 crow (MONKEY) | 8 酉 yu (7 申 shen) | MONKEY? | UAYEB 19 | white | 10 | YAX VENUS | | Venus 庚 TIGER 虎 | | | |
| 22/5 犴 wild dog | 6 未 wei | JAGUAR | POP 1 | | 11 | ZAC | | fire/ 丁 RED 朱 | SOUTH | | |
| 25/8 馬 HORSE | → 5 午 wu | #7 (DEER) | UO 2 | red | 12 | CEH deer | | Mars 丙 BIRD 雀 | red | | |
| 28/11 蚓 earthworm | 4 巳 szu | SERPENT | ZIP 3 | EAST | 13 | MAC | | Mars 丙 BIRD 雀 | | | |
| (DRAGON) | (3 辰 ch'en) | | ZOTZ 4 | yellow | 14 | KANKIN: tree+sun | | tree/ 乙 AZURE/ 青 | blue-green | | |
| 3/14 貉 badger | 2 卯 mao | EARTH | TZEC 5 | blue-green | 15 | MUAN | | Jupiter 甲 YELLOW 黃 | EAST CENTER | | |
| 6/17 虎 TIGER | → 1 寅 yin | | MUAN 15 | | 15 | | | tree/ 甲 DRAGON 龍 | yellow | | |
| 9/20 牛 OX | → 12 丑 ch'ou | | XUL 6 | | 16 | PAX | | water/ 癸 BLACK 黑 | black | | |
| 12/23 燕 swallow | 11 子 tzu | SUN | YAXKIN 7 | black | 17 | KAYAB parrot | | Mercury 壬 TURTLE 龜 | NORTH | | |

APPENDIX 6

| CHINESE MONTH # | CHINESE MANSION # | MEXICAN COMBINED DAY # | SERIES | MEXICAN MONTH # | CHINESE MONTH # | CHINESE MANSION # | MEXICAN COMBINED DAY # | SERIES | MEXICAN MONTH # |
|-----------------|-------------------|------------------------|--------|-----------------|-----------------|-------------------|------------------------|--------|-----------------|
| 1 | sheep | 23/6 | 11 6 | 2 | 5 | horse | 25/8 | 8 | 12 |
| 2 | 24/7 | roebuck | 12 | 3 | 6 | deer | 26/9 | 9 | 13 |
| 3 | 25/8 | horse | 8 | 4 | 7 | serpent | 27/10 | 10 | 14 |
| 4 | 26/9 | 9 | 9 | 5 | 8 | serpent | 28/11 | 11 | 15 |
| 5 | 27/10 | snake | 10 | 6 | 9 | 1/12 | 12 | 16 | 1 |
| 6 | 28/11 | 11 | 11 | 7 | 10 | 2/13 | 13 | 17 | 2 |
| 7 | 1/12 | 12 | 12 | 8 | 11 | 3/14 | 14 | 18 | 3 |
| 8 | 2/13 | dragon I | 13 | 9 | 12 | 4/15 | 15 | 19 | 4 |
| 9 | 3/14 | 14 | 14 | 10 | 13 | 5/16 | 16 | 20 | 5 |
| 10 | 4/15 | rabbit | 15 | 11 | 14 | 6/17 | 17 | 21 | 6 |
| 11 | 5/16 | 16 | 16 | 12 | 15 | 7/18 | 18 | 22 | 7 |
| 12 | 6/17 | tiger | 17 | 13 | 16 | 8/19 | 19 | 23 | 8 |
| 13 | 7/18 | 18 | 18 | 14 | 17 | 9/20 | 20 | 24 | 9 |
| 14 | 8/19 | Hsiai-chai | 19 | 15 | 18 | 10/21 | 21 | 25 | 10 |
| 15 | 9/20 | ox | 20 | 16 | 19 | 11/22 | 22 | 26 | 11 |
| 16 | 10/21 | 1 | 1 | 17 | 20 | 12/23 | 23 | 27 | 12 |
| 17 | 11/22 | rat/master | 2 | 18 | 21 | 13/24 | 24 | 28 | 13 |
| 18 | 12/23 | swallow | 3 | 19 | 22 | 14/25 | 25 | 29 | 14 |
| 19 | 13/24 | pig | 4 | 20 | 23 | 15/26 | 26 | 30 | 15 |
| 20 | 14/25 | 5 | 5 | 21 | 24 | 16/27 | 27 | 31 | 16 |
| 21 | 15/26 | 6 | 6 | 22 | 25 | 17/28 | 28 | 1 | 17 |
| 22 | 16/27 | dog | 7 | 23 | 26 | 18/1 | 1 | 2 | 18 |
| 23 | 17/28 | (14 days) | 8 | 24 | 27 | 19/2 | 2 | 3 | 19 |
| 24 | 18/1 | chicken | 9 | 25 | 28 | 20/3 | 3 | 4 | 20 |
| 25 | 19/2 | 2 | 2 | 26 | 29 | 21/4 | 4 | 5 | 21 |
| 26 | 20/3 | monkey | 3 | 27 | 30 | 22/5 | 5 | 6 | 22 |
| 27 | 21/4 | ape | 4 | 28 | 31 | 23/6 | 6 | 7 | 23 |
| 28 | 22/5 | 5 | 5 | 29 | 1 | 24/7 | 7 | 8 | 24 |
| 29 | 23/6 | sheep | 6 | 30 | 2 | 25/8 | 8 | 9 | 25 |
| 30 | 24/7 | roebuck | 7 | 31 | 3 | 26/9 | 9 | 10 | 26 |

APPENDIX 9

THE ELEMENTS OF THE CHINESE & MEXICAN CALENDARS

| CHINA | | | | MEXICO | | | | | |
|--------------------|---------|--------------|--------------|-----------------|---------------|-----------------|----|----------|---------------|
| MANSIONS/DAY-NAMES | | | REFERENTS | AZTEC DAY-NAMES | | MAYAN DAY-NAMES | | | |
| #s | NAME | MEANING | MEANING | # | NAME | MEANING | # | NAME | MEANING |
| 1/12 | 角 CHÜEH | horn | 蛟 dragon I | 1 | CIPACTLI | earth dragon | 1 | IMIX | corn |
| 2/13 | 亢 K'ANG | neck | 龍 dragon II | 2 | EHECATL | wind | 2 | IK | wind/breath |
| 3/14 | 氏 TI | bottom/root | 貉 badger | 3 | CALLI | house | 3 | AKBAL | darkness |
| 4/15 | 房 FANG | house/room | 兔 rabbit | 4 | CUETZPALIN | lizard | 4 | KAN | yellow/corn |
| 5/16 | 心 HSIN | heart | 狐 fox | 5 | COATL | snake | 5 | CHICCHAN | snake |
| 6/17 | 尾 WEI | tail | 虎 tiger | 6 | MIQUIZTLI | death | 6 | CIMI | death |
| 7/18 | 箕 CHI | basket | 豹 leopard | 7 | MAZATL | deer | 7 | MANIK | running wind |
| 8/19 | 斗 TOU | dipper | 豹 Hsiai-Chai | 8 | TOCHTLI | rabbit | 8 | LAMAT | Venus |
| 9/20 | 牛 NJU | ox | 牛 ox | 9 | ATL | water | 9 | MULUC | much/heaped |
| 10/21 | 女 NÜ | woman | 蝠 bat | 10 | ITZCUINTLI | dog | 10 | OC | dog |
| 11/22 | 虛 HSÜ | empty | 鼠 rat | 11 | OZOMATLI | monkey | 11 | CHUEN | monkey |
| 12/23 | 危 WEI | dangerous | 燕 swallow | 12 | MALINALLI | grass | 12 | EB | tooth |
| 13/24 | 室 SHIH | house | 猪 pig | 13 | ACATL | reed | 13 | BEN | dry reed |
| 14/25 | 壁 PI | wall | 獾 tapir | 14 | OCELOTL | ocelot | 14 | IX | jaguar/shaman |
| 15/26 | 奎 K'UEI | stride/legs | 狼 wolf | 15 | CUAUHTLI | eagle | 15 | MEN | sage |
| 16/27 | 婁 LOU | to tie/bind | 狗 dog | 16 | COZCACUAUHTLI | turkey | 16 | CIB | wax |
| 17/28 | 胃 WEI | stomach | 雉 pheasant | 17 | OLLIN | movement | 17 | CABAN | earth |
| 18/1 | 昂 MAO | Pleiades | 雞 chicken | 18 | TECPATL | stone knife | 18 | ETZ'NAB | spearhead |
| 19/2 | 畢 PI | to end/net | 烏 crow | 19 | QUIAUHUITL | fire-rain | 19 | CAUAC | storm |
| 20/3 | 觜 TSUI | beak/turtle | 猴 monkey | 20 | XOCHITL | flower | 20 | AHAU | lord/master |
| 21/4 | 參 TS'AN | to mix/blend | 猿 ape | | | | | | |
| 22/5 | 井 CHING | well | 犴 wild dog | | | | | | |
| 23/6 | 鬼 KUEI | imp/ghost | 羊 sheep | | | | | | |
| 24/7 | 柳 LIU | willow | 羆 roebuck | | | | | | |
| 25/8 | 星 HSING | star | 馬 horse | | | | | | |
| 26/9 | 張 CHANG | extended | 鹿 deer | | | | | | |
| 27/10 | 翼 YI | wing | 蛇 snake | | | | | | |
| 28/11 | 軫 CHEN | cart's floor | 蚓 earthworm | | | | | | |

| EARTHLY BRANCH # | SOLAR MONTH # | NAME | MEANING |
|------------------|---------------|---------|------------|
| 1 | 11 | 子 TZU | rat/master |
| 2 | 12 | 丑 CH'OU | ox |
| 3 | 1 | 寅 YIN | tiger |
| 4 | 2 | 卯 MAO | rabbit |
| 5 | 3 | 辰 CH'EN | dragon |
| 6 | 4 | 巳 SZU | snake |
| 7 | 5 | 午 WU | horse |
| 8 | 6 | 未 WEI | sheep |
| 9 | 7 | 申 SHEN | monkey |
| 10 | 8 | 酉 YU | chicken |
| 11 | 9 | 戌 HSÜ | dog |
| 12 | 10 | 亥 HAI | pig |

| AZTEC MONTHS | | | MAYAN MONTHS | |
|--------------|--------------------|-----------------------|--------------|--------|
| # | NAME | MEANING | # | NAME |
| 1 | XIUTZITZQUILO | to touch bouquets | 1 | POP |
| 2 | TLACAXIPEHUALIZTLI | skinning of men | 2 | UO |
| 3 | TOZOZONTLI | small perforation | 3 | ZIP |
| 4 | HUEYTOZOZTLI | great perforation | 4 | ZOTZ |
| 5 | TOXCATL | dry thing | 5 | TZEC |
| 6 | ETZALCUALIZTLI | day of eating beans | 6 | XUL |
| 7 | TECUILHUITONTLI | little feast of lords | 7 | YAXKIN |
| 8 | HUEYTECUILHUITL | great feast of lords | 8 | MOL |
| 9 | MICAILHUITONTLI | little feast of dead | 9 | CHEN |
| 10 | XOCOTLHUEZTLI | fall of Xocotl | 10 | YAX |
| 11 | OCHPANIZTLI | day of sweeping | 11 | ZAC |
| 12 | PACHTONTLI | moss | 12 | CEH |
| 13 | HUEYPACHTLI | great moss | 13 | MAC |
| 14 | QUECHOLLI | flying spear | 14 | KANKIN |
| 15 | PANQUETZALIZTLI | raising of banners | 15 | MUAN |
| 16 | ATENOZTLI | coming down of waters | 16 | PAX |
| 17 | TITITL | to stretch | 17 | KAYAB |
| 18 | ITZCALLI | growth | 18 | CUMHU |
| 19 | NEMONTEMI | useless days | 19 | UAYEB |

| HEAVENLY STEM # | NAME | MEANING |
|-----------------|----------|--------------|
| 1 | 甲 CHIA | East/trees |
| 2 | 乙 YI | East/trees |
| 3 | 丙 PING | South/fire |
| 4 | 丁 TING | South/fire |
| 5 | 戊 WU/MOU | center/earth |
| 6 | 己 CHI | center/earth |
| 7 | 庚 KENG | West/metal |
| 8 | 辛 HSHIN | West/metal |
| 9 | 壬 JEN | North/water |
| 10 | 癸 KUEI | North/water |

| CHINA | |
|------------|-----------|
| 8 TRIGRAMS | |
| # | NAME |
| 1 | ☰ CH' IEN |
| 2 | ☷ TUI |
| 3 | ☲ LI |
| 4 | ☵ CHEN |
| 5 | ☱ SUN |
| 6 | ☶ K'AN |
| 7 | ☳ KEN |
| 8 | ☴ K'UN |

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