

SOME NOTES ON THE IDEOGRAMS OF THE
CHINESE AND THE CENTRAL AMER-
ICAN CALENDARS.

ALEXANDER von Humboldt long since observed that:

“In Mexico from the seventh century until our era the days have been called ‘tiger,’ ‘dog,’ ‘monkey,’ ‘hare,’ or ‘rabbit,’ as throughout eastern Asia the years bear the same names among the Tibetans, the Tatar-Manchus, the Mongols, the Kalmüks, the Chinese, the Japanese, and among the nations of Tonkin and Cochin-China.”

The learned scientist contrasted the day-names of the Mexican system with the year-nomenclature of the Asiatic races: sinologists have since demonstrated that the symbols now employed in China to designate the years were originally proper to the days alone, and that their use in connection with the “cycle of years” dates only from the first century of our era.

The invention of the system of time-measurement, current at the present day in China, Japan, Korea, Siam, Tibet, and the neighboring countries, is ascribed by Chinese tradition to Huâng-tí,* B. C. 2636, though, according to Dr. Chalmers, the first known occurrence of the cyclical name of a day in Chinese literature is found in the *Shū Ching*—the “classic of history”—under the first year of

* In transcribing Chinese sounds, the modern pronunciation of Peking is followed throughout these notes. Chinese characters inclosed in [] are antique forms.

the emperor T'ai-chia, B. C. 1752. "This is the only instance of the use of the cycle which occurs before 1121 B. C.," after which date it begins to be referred to by Chinese writers as a thing well established and known to all men.

These Chinese time-symbols, twenty-two in number, consist in two series of very ancient ideographic characters, obscure in origin and significance: one set of ten, known as "the celestial stems," and one of twelve, "the terrestrial branches." The commentary on the classical work called the "Record of Rites"—*Li Chi*—states that:

"Tá-não [a minister of the fabulous Huang-ti mentioned above], having traced out the relations of the five elements and ascertained by divination the laws regulating the movements of the constellation of the Great Bear, invented the symbols *chià*, *yí*, etc., to name the days, calling this series 'stems'; and for naming the moons used the signs *tzù*, *ch'òu*, etc., which he styled 'branches.' By the combination of these 'branches' and 'stems' he completed the six decades of days."

Each of the twelve branches is under the tutelage of a particular animal, and the ten stems are assigned to various manifestations of the five elements—water, fire, wood, metal, and earth,—recognized by Chinese philosophy.

In ancient Mexico, a series of twenty symbols served to designate the days, and though, so far as we are aware, no division analogous to that of the Chinese stems and branches was made, we yet find that one-half of these Mexican characters bear the names of animals, and the remaining half the names of certain objects and influences in nature.

The following tables exhibit the arrangement of the two series of characters, Asiatic and American:

I. THE CHINESE SERIES.

A. The Ten Stems.

NUMBER.	SYMBOLS		NAME.	ASSIGNMENT.	ELEMENTAL INFLUENCE.
	ANCIENT.	MODERN.			
1.	甲	甲	chià	fir tree	wood
2.	乙	乙	yi	bamboo	wood
3.	丙	丙	pìng	torch flame	fire
4.	丁	丁	ting	lamp flame	fire
5.	戊	戊	móu	hill	earth
6.	己	己	chì	plain	earth
7.	庚	庚	k ^c ng	weapon	metal
8.	辛	辛	hsin	cauldron	metal
9.	壬	壬	jên	wave	water
10.	癸	癸	kuèi	stream	water














B. The Twelve Branches.



NUMBER.	SYMBOLS		NAME.	ASSIGNMENT.
	ANCIENT.	MODERN.		
1.	子	子	tzù	rat
2.	丑	丑	ch'òu	ox
3.	寅	寅	yîn	tiger
4.	卯	卯	mào	hare
5.	辰	辰	ch'ên	dragon
6.	巳	巳	ssú	serpent
7.	午	午	wù	horse
8.	未	未	wéi	goat
9.	申	申	shen	monkey
10.	酉	酉	yù	cock
11.	戌	戌	hsü	dog
12.	亥	亥	hái	boar.

No. 10 is also written *yu*.¹ Several other forms of No. 12 are found.

¹ 卯 (卯)

II. THE MEXICAN SERIES.

NUMBER.	SYMBOL.	NAME	MEANING OF NAME.
1.		cipactli	dragon
2.		ehecatl	wind
3.		calli	house
4.		cuetzpalin	lizard
5.		coatl	serpent
6.		miquiztli	death
7.		mazatl	deer
8.		tochtli	rabbit
9.		atl	water
10.		itzquintli	dog
11.		ozomatli	monkey
12.		malinalli	grass
13.		acatl	cane
14.		ocelotl	tiger
15.		quauhtli	eagle
16.		cozcaquauhtli	vulture
17.		ollin	movement
18.		tecpatl	flint

19.		quiahuatl	rain
20.		xochitl	flower.

Von Humboldt considered the similarities between the two series so remarkable as to declare that:

“The six signs of the Tatarian zodiac (i. e. dragon, serpent, dog, hare, monkey, tiger) which are also found in the Mexican calendar, are sufficient to make it extremely probable that the nations of the two continents have drawn their astronomical ideas from a common source, and it is worthy of notice that the points of resemblance on which we insist are not derived from rude pictures or allegories susceptible of being interpreted in accordance with any hypothesis that it is desired to sustain.”

The eminent Americanist, the late Dr. D. G. Brinton, takes issue with this pronouncement and finds cause to remark:

“Years ago, Alex. von Humboldt assigned it (the Central American calendar system) the first rank among the proofs that they (the American nations) had reached a certain degree of true civilization, indeed, so deeply did its intricacies impress him that he could not believe that it was wholly developed by tribes so uncultured in some other respects, and sought for its chief principles of origin among the civilizations of Asia. . . . A profounder study of the subject, rendered possible by more abundant documents, especially of a linguistic character, has shown that the hypothesis of the great naturalist is unnecessary, and indeed contrary to the evidence. The peculiarities which marked this calendar belong to itself alone, and differ completely from those on which the time-counts and astronomical measurements of the ancient nations of the Old World were based. It is strangely and absolutely independent in its origin and development.”

So far Dr. Brinton.

Some of the peculiarities that marked the American system were: the beginning of the year at the winter solstice; the reckoning of time by a lunar as well as by a solar year, and in addition the employment of a ritual year of

260 days, or 20 periods of 13 days each; the division of the year into 72 periods of 5 days each, or 4 seasons of 18 weeks; the addition of intercalary days at the end of the year, by which the length of the solar year was fixed approximately at 365 days; the arrangement of the years in cycles by indictions, each year of the cycle bearing a compound designation, one element of which is the name of an animal.

In view of the fact that every one of these "peculiarities" exists also in the Asiatic calendar system, Dr. Brinton's assertion that the characteristics of the American calendar "belong to itself alone, and differ completely from those on which the time-counts and astronomical measurements of the ancient nations of the Old World were based," is susceptible of at least some degree of modification.

As a result of his "profounder study of the subject, rendered possible by more abundant documents, especially of a linguistic character," Dr. Brinton in his *Native Calendar System of Central America and Mexico*, undertook an exhaustive etymological analysis of the calendar names in the different central American languages, in the endeavor "to reach the symbolical significance of the calendar as a mythical record and method of divination." He designedly avoids any analysis of the written characters, believing that the aid thence to be derived is fallacious, and arrives at the conclusion that:

"Whatever other uses of an astronomical and time measuring character the calendar had, the best known and most general service which it rendered was for divining purposes. . . . The basic theory of the art of divination according to the calendar is nowhere stated. I propose to form a suggestion as to what this was, as appears to be indicated by the calendar itself, and to be supported by a number of collateral facts mentioned by early authors."

Dr. Brinton's suggestion is, that the 20 American calendar names constituted an esoteric résumé of the course

of human life and its vicissitudes. His linguistic analyses reveal that:

“Restoring the figurative terms to their literal meaning, we may conclude that the general and original symbolism of the day-names in all the tongues in which we have them, were as follows:

NUMBER.	SYMBOL.	HIERATIC SIGNIFICATION
1.	sword fish	birth, the beginning.
2.	wind	breath, life, the soul.
3.	darkness, the house	sleep, rest, repose.
4.	iguana	food, nourishment.
5.	snake	sexual life, reproduction.
6.	death	child-bearing, children.
7.	deer	hunting.
8.	rabbit, seed	agriculture.
9.	water, rain	illness or productiveness.
10.	dog	hardship and suffering, and success through them.
11.	monkey	difficulties surmounted.
12.	broom, teeth	loss, evanescence.
13.	reed	cold, drought, advancing years.
14.	tiger	learning, wisdom.
15.	eagle, bird	knowledge, skill.
16.	vulture, owl	old age, misfortunes.
17.	motion	debility, failing powers.
18.	flint knife	war, death.
19.	lightning	sickness, destruction.
20.	sun	the house of the soul.”

Dr. Brinton continues:

“The examination of this sequence reveals that it was intended to cover the career of human life from the time of birth until death at an old age. The individual emerges from the womb of his mother and the parturient waters, as did the earth from the primeval ocean. He receives breath and with it life, which is supported by repose and food. The man reproduces his kind; the woman, at the risk of her life, brings the child into the world. The chase and tilling the ground are the leading occupations of peace; and he who holds firm through illness, suffering, and hardships, will gain the prizes of life. Having reached the acme of his career, a decline commences, losses

multiply, years increase, and though knowledge and wisdom are augmented, old age comes on apace, with failing powers, with vanquished struggles, with sickness and death; until at last, its course run, its task complete, the soul quits the worn-out body and soars to its natural haven and home, the abode of the sun. Such, it seems to me, without any straining, is the philosophical conception of life which was intended to be conveyed by the symbols of this strange old calendar. They may not have originated contemporaneously with it, certainly not if it was primarily deduced from astronomical observations, but quite probably if, instead of this, it was built on terrestrial relations and mythical concepts."

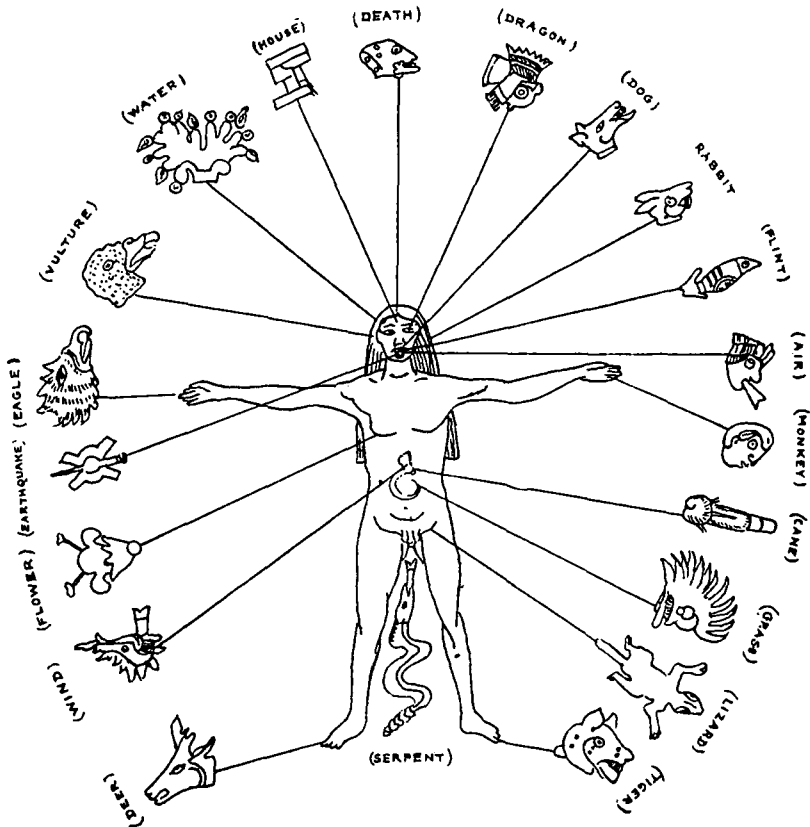
The question naturally presents itself: What can a similar analysis of the Asiatic day-names, based on "more abundant documents, especially of a linguistic character" than were available in Von Humboldt's time, reveal?

According to Dr. Brinton, the best known and most general service rendered by the American calendar was for divining purposes. It is unnecessary to advert to the connection between the cyclical ideograms and the art of divination in Asia. Every student of Chinese is familiar with the rôle played by the Ten Stems and the Twelve Branches in the astrologer's gramarye, and their never-ending reference to the points of the compass, the elements, the horary periods of the day, the various animals, the members of the body, and a thousand and one other alleged relations to the constituent parts of existence; and how upon their procession and interaction, in one order or another, are founded all the predictions of the diviner in regard to the secrets of nature and of being.

As a single instance. A figure in the Mexican manuscript catalogued as "Codex Vaticanus" exhibits the ascription of the day-emblems to the various parts of the human body. In Chinese almanacs of the present day may frequently be seen the pictures of the gods of the four seasons, their forms besprinkled with disks bearing the symbols of the Twelve Terrestrial Branches.

Dr. Carus very appositely suggests that similar presentments are common in mediæval European works on astrology and may be met with, not infrequently, in almanacs even of our own times.

Is it not curious to remark that in both these figures—

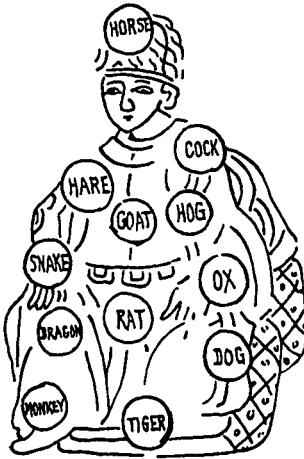


ASSIGNMENT OF DAY EMBLEMS TO THE PARTS OF THE HUMAN BODY.
From Mexican Codex in Vatican Library.

American and Asiatic—the sign of the “tiger” is at the left foot; that the “hare” and the “cock” on the shoulders of the Chinese deity are paralleled by the “rabbit” and the “vulture” on the sides of the Mexican; and that the “lizard” in one and the “rat” in the other,—creatures which several

circumstances tend to equate in cyclical nomenclature,—preside over the belly?

But to return. Are there any grounds for a belief that the Asiatic ideograms were intended “to cover the career of human life from the time of birth until death at an old age?” If this is so, the fact helps to strengthen very materially the evidence in favor of the derivation of the two calendars from a common source. The question is best answered by the characters themselves.



ZODIAC EMBLEMS ASSIGNED TO THE PARTS OF THE HUMAN BODY.

CHINESE SUMMER GOD.

From a contemporary Western almanac.

From modern Chinese Almanac, substituting translations for the native characters of the twelve ‘branches.’

In the Chinese field, we can not follow Dr. Brinton in ignoring the assistance to be derived from the written characters, for Chinese etymology is based not on phonetics but on a comparison and analysis of the oldest forms of the ideographic symbols.

Roughly speaking, each Chinese character is composed of two parts: one called a “radical” or “classifier,” which is a conventional representation of the class of objects to which the character relates; and another, technically

known as the "phonetic complement," being a picture of some common object, usually totally unconnected in meaning, but the name of which has the same sound, with that of the object or idea denoted by the whole composite character. Consequently, from the very nature of Chinese writing, to quote Dr. Edkins,

"The sound of the 'phonetic' part of a character is an index to the sound of the words when the characters were first made. . . . Anciently, words like in their 'phonetic' symbols were like in sound. This is at once recognized by every one in simple cases. . . . We may proceed further than this, and say that when difficulties occur in discovering similarity in sound, it is in every case due to changes effected by time in the sounds of the words."

The modern Chinese sounds, in their myriad dialectic variations, can not afford a trustworthy basis for etymological deduction; the old phonetic symbols must be relied on for help in that direction.

ANALYSIS OF THE CHINESE IDEOGRAMS.

1. *The First Stem, Chia.*²

Dr. Wells Williams, in his *Syllabic Dictionary of the Chinese Language*, defines this character as: "the plumule or scaly covering of a growing seed just bursting; cover of a sprout; a bud;" and says "the original character is described as composed of *mu*,³ "wood," with a cap over it, representing the first movements of the sprout in spring." Dr. Chalmers prefers to regard *chia* as an original ideogram, and makes no analysis of its component parts. His definition is: "a protecting cover; helmet." It may be remarked, *en passant*, that the Chinese, Aztec, and Maya day-symbols correspond in so far at least that they are all non-composite, or what sinologists would term "primitive" characters. The Imperial K'ang-hsi Lexicon tells us that "grass and trees beginning to grow" are called

² 甲[甲]

³ 木[木]

by this name *chia*, and among ancient forms of the character listed by that authority occurs one,⁴ in which *jen*,⁵ the ideogram for “man,” is placed on top of the sign *chia*⁶ referring directly, as it would seem, to the opening period of human life. Surmounted by *jih*,⁷ “the sun,” similarly the character *tsao*,⁸ has the meaning “early.” Surrounded by *men*,⁹ “the two leaves of a folding door,” its significance is the same,—“the door just open to admit the rays of the rising sun.”¹⁰ There is also a close resemblance between the old form of this stem *chia*¹¹ and that of *ch’üan*,¹² “a fountain,” “a spring.” The upper part of both characters is like *mi*¹³ (old sound *mik*), “a protecting cover,” which enters frequently into the composition of Chinese symbols (Cf. the Maya *mac*¹⁴ of supposedly similar name). Etymologically connected may be: *chia*,¹⁵ “to hide away,” “put in the bosom,” “cherish”; *chia*,¹⁶ “a metal undershirt.” The general idea conveyed by this first stem and its derivatives is something hidden awakening into life,—the commencement of plant life in particular.

2. *The Second Stem, Yi.*¹⁷

This is defined as “a curling sprout or bud just coming out of the darkness and seclusion of winter.” Chalmers says “the bursting of vegetation... this (ideogram) denotes effort in *ch’ien*,¹⁸ ‘dry,’ ‘strong,’ ‘advancing’; *luan*,¹⁹ ‘to unravel,’ ‘confusion,’ and *yu*,²⁰ ‘excess.’” In the K’ang-hsi Lexicon occur two very similar characters, now obsolete, *ya*,²¹ defined as *nan ch’u chih mao*, “the appearance of difficulty in coming forth,” and *yin*,²² described as an old form of *yin*,²³ “to conceal.” These and the stem symbol depict very plainly: (i) the motionless plant hidden in the

4 命	5 人	6 甲	7 日	8 早[𠄎]	9 門	10 脚開
11 [𠄎]	12 泉[𠄎]	13 一[𠄎]	14 一[𠄎]	15 挾	16 輪	17 乙[𠄎]
18 乾	19 亂	20 尤	21 乙	22 乙	23 陰	

ground,²⁴ and the different forms it takes when sprouting under (ii) favorable²⁵ and (iii) unfavorable²⁶ circumstances. The stem name is etymologically connected with *yi*,²⁷ "one," "the first." The K'ang-hsi lists an old form of *jih*, "the sun," which consists in a circle enclosing this second stem,²⁸ i. e., the one circle, the great disk. Other connections, real or imaginary, are: "to let loose"²⁹; "to overflow";³⁰ "to rush on," as to battle;³¹ "to unfold," "to fly"³²; "standing ready"³³; "coming suddenly"³⁴; "full"³⁵; "exuberant"³⁶; "to increase"³⁷; "to pour out"³⁸; "to be ready to overflow"³⁹;—all now pronounced *yi*. The ideas conveyed by the second stem, then, are (i) the uncurling of a sprout and coming out from darkness, and (ii) oneness, unity, the consciousness of the ego.

3. *The Third Stem, Ping.*⁴⁰

One authority says: "Composed of *yi*,⁴¹ 'one,' *ju*,⁴² 'to enter,' and *chiung*,⁴³ 'a receptacle or door'; *yi*⁴¹ representing the *yang*⁴⁴ principle." In other words, this is the sun entering the door, the dawn of reason in the individual. *Yi*, "one," is here used as the equivalent of the old sun symbol alluded to under the last stem. In modern Chinese and Japanese, the sun is styled *t'ai yang*,⁴⁵ *taiyo*, "the great positive principle." The dictionary *Shuo-wen T'ung-hsün Ting-sheng* arrives at the same conclusion by slightly different analysis. This character, it says, is the original of *ping*,⁴⁶ "fiery," "bright," "conflagration," and *tsai*,⁴⁷ "fires under a cover," is an old form of the same. The top line is the same as *shang*,⁴⁸ "to ascend," and the rest is "fire under a roof" contracted. The concept of "brightness" and "flame" runs through the cognate characters,

24 𠂔	25 乙	26 乚	27 一	28 囧	29 逸	30 洩	
31 軼	32 釋	33 翊	34 億	35 臆	36 翼	37 益	38 挹
39 溢	40 丙	41 一	42 久	43 冂	44 陽		
	45 太陽	46 炳	47 𠂔	48 上			

and the stem symbol itself is used in Canton to write the local word *ping*, "to burn." Surmounted by the "sun" ideogram, the stem means "bright and glorious like the sun," and has the same name, *ping*.⁴⁹ Infancy is now past and the child is advancing into the brightness of youth,—such seems to be the meaning conveyed by the symbol. Possible connections are: *ping*,⁵⁰ "bright," "luminous"; *ping*,⁵¹ "to have power"; *ping*,⁵² "power"; *ping*,⁵³ "to confide in"; *p'ing*,⁵⁴ "undisturbed."

4. The Fourth Stem, *Ting*.⁵⁵

This is the figure of a nail or peg, anything firmly fixed or settled. Dr. Williams says it denotes "that things are perfected. . . robust and full grown person. . . to sustain, to bear." Another old form of the character is composed of *jen*,⁵⁶ "man," over *chüeh*,⁵⁷ "hook," the latter said to stand here for *hsin*,⁵⁸ "the heart;" the man's heart is established, full of determination and courage. With the addition of the sign for "weapon," indicating martial prowess, the character *ch'eng*⁵⁹ has the meaning "complete," "perfected." A character⁶⁰ occurring on a bell of the Shang dynasty, cited by Edkins, and identified with this *ting* stem, bears some resemblance to the *ch'eng* symbol. On a tripod of Fu-ting is found a quite dissimilar form,⁶¹ which may represent the head of a nail; a third old form,⁶² is a very fair picture of the nail in full. This last ideogram is identified by some with *liang*,⁶³ "honest," "upright." In Peking, a young man, sixteen to eighteen years of age, is styled *ting-nien*,⁶⁴ "arrived at manhood," and this is exactly the idea appropriate to the position occupied by the *ting* stem in the sequence. Related words are numerous: *ting*,⁶⁵ "a nail," "a spike"; *ting*,⁶⁶ "firmly set-

49 𠄎	50 炳	51 乘	52 柄	53 凭	54 平	55 丁[个]
56 人[刀]	57 丁[心]	58 心[地]	59 成[咸]	60 [𠄎]	61 [𠄎]	62 [𠄎]
	63 良	64 丁年	65 釘	66 鼎		

tled"; *ting*,⁶⁷ "peak," "summit"; *ting*,⁶⁸ "secure," "fixed," "steady"; *ting*,⁶⁹ "ballast"; *ting*,⁷⁰ "honest," "trustworthy"; *t'ing*,⁷¹ "decided," "resolute"; *t'ing*,⁷² "baton of authority"; *t'ing*,⁷³ "good," "complete," "full," "whatever is the purpose of life."

5. *The Fifth Stem, Wu or Mou.*⁷⁴

Supposed to be a form of *mou*,⁷⁵ "an ax or halberd," but probably used phonetically for *mou*,⁷⁶ "luxuriant," "ripe grain," "when all things are flourishing," with which both Edkins and Williams connect it. The characters *ch'eng*⁷⁷ and *hsien*,⁷⁸ written with the same phonetic element, mean "complete," "perfect," "all." Connections with *mou*,⁷⁹ "luxuriant"; *mou*,⁸⁰ "force of purpose," "to exert one's mind"; *mou*,⁸¹ "male," "virility"; *mou*,⁸² "to deliberate," "to ponder"; *wu*,⁸³ "to bend the mind to a subject"; *wu*,⁸⁴ "to gallop furiously"; *mou*,⁸⁵ "to do business," "carry on commerce";—are more or less probable. The leading idea is activity, the business of life.

6. *The Sixth Stem, Chi.*⁸⁶

The native lexicologers do not explain the form of this symbol, but all are agreed as to its signification: "one's self." It resembles ideograms employed to depict "breath" and "air." Williams says: "This character is connected with the center of a thing, as it is considered to be altered from *chung*,⁸⁷ "the middle," and because it is the sixth of the ten stems." Of similar meaning are *chi*,⁸⁸ "to exhaust a subject"; *chi*,⁸⁹ "to stand up." The man is now "himself," has come to his own, having accomplished the purpose of life, and the gradual descent to the grave begins.

67 頂	68 定	69 訂	70 停	71 挺	72 挺	73 壬
74 戊	75 冏	76 冏	77 冏	78 冏	79 冏	80 懋
81 牡	82 謀	83 務	84 鷲	85 賢	86 己	87 中
		88 紀	89 起			

7. *The Seventh Stem, Keng.*⁹⁰

“The original form represents the hands receiving a thing, as at autumn when all things are full. . . to change, to alter, age; to bestow reward.” In Chalmers’ opinion it is composed of *kung*,⁹¹ “to lift up the hands together,” and *kan*,⁹² “to violate”; the latter element being phonetic. *Kan* itself is composed of *ju*,⁹³ “to enter,” inverted, and *yi*,⁹⁴ “one.” His definition is: “joining on to, as the border or foot of a garment.” The main idea seems to be either (i) change, alteration; or (ii) rewards of labor; *cozca-quauhtli* and *ollin* are the American analogs. Connected may be: *keng*,⁹⁵ “to change”; *keng*,⁹⁶ “a limit,” “an extreme point”; *keng*,⁹⁷ “a path leading to a sepulchre”; *keng*,⁹⁸ “to thrum the threads of a lute rapidly, so as to endanger breaking them.”

8. *The Eighth Stem, Hsin.*⁹⁹

From *yi*,¹⁰⁰ “one,” and *ch’ien*,¹⁰¹ “error,” explained as depicting “the arms of a man holding up a thing, referring to the sorrow one feels at winter coming.” *Ch’ien* is from *kan*,¹⁰² “to violate,” under an old form of *shang*,¹⁰³ “superiors.” The ordinary meaning of *hsin* is “a bitter, sharp, pungent taste”; whence, by metonymy, because the peppery taste makes the tears flow, “toilsome,” “suffering,” “grievous,” “sad,” “the melancholy feeling in autumn when vegetation turns sere.” The Shuo-wen says it is composed of *ch’ien*,¹⁰⁴ “to offend superiors,” plus an extra stroke,¹⁰⁵ showing the enormity of the crime. The meaning of sadness and failing powers is appropriate to the position occupied by the character in the stem series.

90 庚[庚]	91 [夂]	92 干[干]	93 入[入]	94 一	95 更
96 夏	97 壚	98 隳	99 幸[幸]	100 一	101 [卍]
		103 [二]	104 [卍]	105 [一]	102 [干]

9. *The Ninth Stem, Jen.*¹⁰⁶

According to Dr. Williams, "defined as a man standing on the earth, the earth denoting the business of life." Others say it represents the embryo in the womb. It resembles *t'ing*¹⁰⁷ in form, and as a phonetic element is often interchanged with *jen*,¹⁰⁸ "sincere." Other meanings are: "running water," "great," "full," "to flatter." Edkins' account is: "Plants growing out of the ground, with the sense *t'ing*, 'grow upward.' This stem is very similar in form to *t'ing* and indeed seems to be confounded with that symbol by some of the authorities." Chalmers' definition of the *jen* stem is "to sustain, to bear. . . probably a derivative of *kung*,¹⁰⁹ "work," like *chü*,¹¹⁰ *wu*,¹¹¹ *ch'en*,¹¹² and *ya*,¹¹³ and the middle line denotes the person doing the work intended." The character, as now written, consists in the sign for "scholar" with an additional stroke on top. Concerning the *t'ing* ideogram, Chalmers says that the old form¹¹⁴ shows a man standing on the soil, meaning "to stand up," "go." It is probable that the *jen* sign is used phonetically for a character, now read *jen*,¹¹⁵ meaning "sincere," "sure," "trusty," "rely upon," "a trust," "an office," "to undertake," "be responsible for," "the incumbent," "acting official." Other words with the sound *jen* have significations suitable to the position of this emblem among the stems; e. g., *jen*,¹¹⁶ "to dwell on with satisfaction," as a well-spent life, we may opine; *jen*,¹¹⁷ "fortitude," "endurance"; *jen*,¹¹⁸ "grain which is fully ripe"; *jen*,¹¹⁹ "the yellowish color of an old sword." The significance of this symbol lies in its reference to the completion of the affairs of life and to pleasurable retrospection.

	106 壬[王]	107 壬	108 任	109 工	
110 巨	111 巫	112 臣	113 亞	114 [王]	115 任
	116 巷	117 忍	118 稔	119 初	

10. *The Tenth Stem, Kuei.*¹²⁰

The old form in the shape of a cross is, according to the native etymologists, the same as the modern *kuei*,¹²¹ "arms," "tridents," "arrows," etc. The modern form,¹²² from the Li¹²³ writing, is also old, and is said to be a combination of *po*,¹²⁴ "to stop," "to hinder," (from *chih*, "to step," in two positions), with *shih*,¹²⁵ "an arrow," i. e., to send home an arrow. The dictionary Shuo-wen, commenting on the old "cross" form, points out that it represents "water flowing from the four quarters and entering the ground." Williams states that "the original form is like two sticks laid across to represent water flowing into the ground in all directions." Edkins, following the Liu-shu Cheng-wei, thinks that the two pieces of wood placed crosswise "formed no other than an ancient implement used in leveling." This was called *kuei*,¹²⁶ and used by builders in reducing land to a level. In the variety written with the arrow sign, Edkins detects *pei*,¹²⁷ "north," and *shih*,¹²⁸ "arrow." The north belongs to winter, and *kuei* is applied to both. "Both earth and water," on the authority of the Shuo-wen, "then become smooth and flat and can be easily measured." Streams flowing together are now *kuei*,¹²⁹—a similar sound but differently ideographed. A place where four roads meet is also *kuei*.¹³⁰ All the authorities identify the lower part of the *kuei* stem with the "arrow" sign, but the forms of the two are not quite the same. (See Wu-yin Chih-yün and Chih-yün in K'ang-hsi, s. v. *kuei*.¹³¹) The etymological connections are very interesting and suggestive. That which most naturally presents itself is,—as suggested by the Cheng-yün,—"to return," *kuei*,¹³² "to go to," "to send back," "to revert to the original place,"

120 癸	121 戣	122 癸	123 隸	124 屮
125 𠄎	126 規	127 北	128 矢	129 漚
	131 𠄎	132 歸		130 逵

used in the phrase *kuei wu*,¹³³ "to revert to nothingness," "to die." Other relations are: *kuei*,¹³⁴ "strength all gone out"; *kuei*,¹³⁵ "water all dried up," as in a fountain or well; *kuei*,¹³⁶ "to change," "to alter"; *kuei*,¹³⁷ "the day, but especially the shadow," as in *fei kuei*,¹³⁸ "time flies." The tortoise, *kuei*,¹³⁹ emblem of longevity, and the juniper tree *kuei*,¹⁴⁰ whose durable wood is prized for making coffins, as also *kuei*,¹⁴¹ "the spirit of a dead man," are all called by this same name *kuei*; and it is curious to note that the "disk of the sun" *kuei*,¹⁴² and the "sunflower" *kuei*,¹⁴³ are similarly designated, in connection with the fact that the last day-name in the American calendars is "sun," the home of the soul, otherwise styled *xochitl*, i. e., "flower."

Summarizing the results attained by these analyses of the "Ten Stems," we obtain a sequence somewhat as follows:

1. *Chià*; the sprout is still hidden in the ground, but begins to feel the impulse of life and shoots upward;
2. *Yi*; it has reached the surface and uncurls;
3. *Ping*; the sun reaches it; and beneath his influence
4. *Ting*; it stands upright; and gaining vigor,
5. *Móu*; spreads forth luxuriantly; until, as a tree,
6. *Chì*; it has reached its full growth; and
7. *Kēng*; its fruit is gathered;
8. *Hsin*; decay sets in; the leaves fall;
9. *Jên*; the seed is again hidden in the ground; and
10. *Kuèi*; at the close of the year, there is a return to the original darkness, and the processes of nature enter on a new cycle of life.

As the "ten stems" have reference to the operations of nature in the procession of the seasons, so it can be shown that the "twelve branches" relate to man's affairs in particular.

133 歸無	134 効	135 屬	136 桅
137 罍	138 飛罍	139 龜	140 楨
	142 規	143 葵	141 鬼

*A. The First Branch, Tzu.*¹⁴⁴

This is explained as the “figure of a baby strapped on its mother’s back. The legs are swathed together in their wrappings, hence represented by a single stroke. An old form¹⁴⁵ is recorded, where the three vertical lines on top show the hair. The character presents no difficulty; it is in everyday use, with the meaning “child,” “son.”

*B. The Second Branch, Ch’ou.*¹⁴⁶

The original form resembles a hand holding things. Others say: “it is like *shih*,¹⁴⁷ ‘ten,’ inside of *erh*,¹⁴⁸ ‘two,’ because the twelfth month is called *ch’ou yüeh*.”¹⁴⁹ Further old forms are *ch’ou*¹⁵⁰ and *ch’ou*.¹⁵¹ The latter may be compared with the Maya sign,¹⁵² supposed by some to be a “hand.” The radical idea is holding, grasping, guiding; referring perhaps to the care of the parents for their offspring. Compare the ideograms of “grasping a son”¹⁵³ and “grasping a daughter,”¹⁵⁴ both synonymous with *hao*,¹⁵⁵ “to love.” Of like sound and meaning with the branch character are *ch’ou*,¹⁵⁶ all expressive of “to hold”; *chou*,¹⁵⁷ “to environ,” “to provide for”; *chou*,¹⁵⁸ “to shade,” “to conceal”; *ch’ou*,¹⁵⁹ “to hold, as the earth does”; *ch’ou*,¹⁶⁰ “to conceal by holding in the elbow”; *ch’ou*,¹⁶¹ “to take out with the end,” “to lift”; *ch’ou*,¹⁶² “to arrange details.”

*C. The Third Branch, Yin.*¹⁶³

Williams, citing some metaphysical abstractions of the Shuo-wen, says: “From *mien*,¹⁶⁴ ‘a covering,’ which is likened to the kneepan that prevents the humors from ascending the body. These humors are depicted by *chiu*,¹⁶⁵

144 子[子]	145 [𠂔]	146 丑[𠂔]	147 十	148 二	149 丑月	
150 [𠂔]	151 [𠂔]	152 [𠂔]	153 𠂔	154 𠂔	155 𠂔	156 𠂔
157 周	158 𠂔	159 𠂔	160 𠂔	161 𠂔	162 𠂔	
	163 寅[寅]	164 𠂔[𠂔]	165 𠂔			

'a mortar,' as coming out of the ground, and including the stimulus of nature in spring which the frost hinders . . . 'to reverence,' 'to respect,' 'respectful,' 'a fellow officer,' 'a colleague,' 'vigorous,' 'strong.' This is not over-intelligible to the Occidental mind. In the oldest forms, the character is composed of a central part, said to be a modification of *jen*,¹⁶⁶ the "man" sign; *chü*,¹⁶⁷ "the hands brought together," "to clasp the hands"; and *mien*,¹⁶⁸ "a house," "a covering." With this compare the character *hsüo*,¹⁶⁹ "to educate," where may be seen the "child," *tzu*,¹⁷⁰ under a "shelter," *mien*;¹⁷¹ above, the signs of "imitation," *hsiao*,¹⁷² and of "guiding hands," *chü*;¹⁷³ intimating that, in the process of education, the protected child is guided and taught to imitate. Suggested connections: *yin*,¹⁷⁴ "to take an interest in"; *yin*,¹⁷⁵ "to shelter"; *yin*,¹⁷⁶ "to regulate," "to sustain"; *yin*,¹⁷⁷ "to lead on," "to point out," "bring forward"; *yin*,¹⁷⁸ "careful," "anxious"; *yin*,¹⁷⁹ "to move forward," "to journey"; *yin*,¹⁸⁰ "to nourish"; *yin*,¹⁸¹ "covered," "in private life," "not in office." To this branch may be allotted the meaning of early studies, the child being instructed in the respect due to its parents. With this *ch'ou* symbol compare *fu*,¹⁸² "father," where a hand grasping the rod of authority is pictured.

D. The Fourth Branch, *Mao*.¹⁸³

The old form is like an open door, or rather the two leaves of a double door, "analogous to the springing up of vegetation in March." It is defined by *mao*,¹⁸⁴ "a cover," as the earth is then covered. This last symbol, *mao*, "a cover," has, among other meanings, that of "rushing heedlessly," "venturing," "going forward," and the branch-sign itself is used in divers binomial expressions with a

166 [入]	167 [冫]	168 [冂]	169 學[學]	170 [宀]	171 [冂]	
172 [冫]	173 [冫]	174 憲	175 陰	176 殷	177 引	178 懸
179 爻	180 飲	181 隱	182 爻[冫]	183 叩[叩]	184 冒	

like signification, as "calling the roll," *tien mao*; ¹⁸⁵ "answering a summons," *chou mao*.¹⁸⁶ The symbolism may be the venturesomeness of youth or the responding to the roll-call of duty when the period of instruction, typified by the preceding branch, is over.

*E. The Fifth Branch, Ch'en.*¹⁸⁷

The ancient form is supposed to depict "sprouting plants transformed by heaven. . . 'to excite,' 'to occasion,' 'to move,' 'to influence.'" Such is Dr. Williams' definition. The native lexicon *Shuo-wen T'ung-hsün Ting-sheng* says that the old form is composed of the sign for a human being, and another, meaning something concealed, the whole having the meaning "pregnant."

*F. The Sixth Branch, Ssu.*¹⁸⁸

This is the picture of a serpent, the animal emblematic of the sixth branch. It refers to the fourth moon, says one authority, when all nature is in vigor. The ideas conveyed by this symbol and that of the last branch correspond with those associated in Mexico with the skull and serpent, *miquiztli* and *coatl*, motherhood and fatherhood.

*G. The Seventh Branch, Wu.*¹⁸⁹

The figure of a pestle, defined as expressing "the resistance which the earthy vapors of the fifth moon, hence called *wu yüeh*,¹⁹⁰ oppose to the skyey influences, thus covering the earth with fog." This sign is used with *wu*,¹⁹¹ "to oppose," "to stand up," "to resist," "cross," "transverse." Chalmers points out that the seventh branch has the sense of crossing. It denotes the sun at noon, and hence the meridian of life. Its form is very similar to that

¹⁸⁵ 點卯

¹⁸⁶ 晝卯

¹⁸⁷ 辰[辰]

¹⁸⁸ 巳[巳]

¹⁸⁹ 午[午]

¹⁹⁰ 年月

¹⁹¹ 迂

of the "stem" called *ting*,¹⁹² and both may possibly have been symbols of reproduction.

*H. The Eighth Branch, Wei.*¹⁹³

This is *mu*,¹⁹⁴ the "tree" symbol, with an extra line at the top, showing the abundance of foliage and the tree's full vigor in the sixth month. So say the lexicologists. The character is a common adverb of negation and doubt, "not yet." Although the midday has passed, the set time has not yet expired, *meh ssu meh le li*, as the Shanghai vernacular has it. This is the counterpart of *mou*¹⁹⁵ among the "stems."

*I. The Ninth Branch, Shen.*¹⁹⁶

"Formed," says Willims, "of *chiu*,¹⁹⁷ 'a mortar,' and *kun*,¹⁹⁸ 'to join.' Others say the character is intended to represent the backbone... 'to extend,' 'to stretch,' 'reiterate,' 'prolong,' 'increase.'" The Shuo-wen says that the element which Williams makes out as *chiu*,¹⁹⁷ "a mortar," is *chü*,¹⁹⁹ "the two hands holding or grasping" (found in the third branch *yin*²⁰⁰), and that the stroke *kun*¹⁹⁸ pictures the body; the whole representing a man placing his hands to his sides and stretching himself. The character is emblematic of weariness and declining years, as in the eighth stem.

*J. The Tenth Branch, Yu.*²⁰¹

One old form is a figure of a vessel used for distilling, "referring to the closing up of nature in the eighth moon, when crops are ripe... 'ripe,' 'finished,' 'mature,' 'as ripe millet fit for making spirits,' 'the ripeness of crops.'" This branch is assigned to the west, and bears a great likeness to some old forms of the symbol *hsi*,²⁰² "west," employed

192 丁[个] 193 未[罍] 194 木[罍] 195 戊 196 申[申] 197 臼
198 丿 199 臼 200 寅 201 酉[酉] 202 西

in writing the name of that cardinal point. *Hsi*, however, is said to picture "a bird sitting on its nest at sunset." Another old form²⁰³ of this branch shows "a door barred," the antonym of the fourth branch,²⁰⁴ which is "an open door." This typifies the closing, as the other does the opening, of life. Some connected words: *yu*,²⁰⁵ "an old building whose timbers are decayed;" *yu*,²⁰⁶ "dark," "obscure," "hidden from view," "shades or spirits who are in obscure places"; *yu*,²⁰⁷ "grieved," "mournful"; *yu*,²⁰⁸ "to float," "to travel to," "go away."

*K. The Eleventh Branch, Hsü.*²⁰⁹

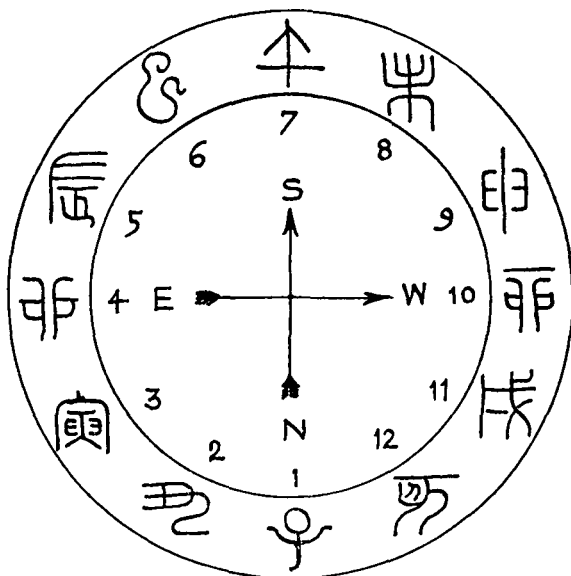
This is *wu*, the fifth stem, with the addition of a short horizontal line, perhaps denoting the wound made by the weapon, or the movement in throwing the spear. Compare other symbols of motion, such as *mou*,²¹⁰ "the long-handled ax attached to a chariot," where the dictionary makers tell us that the waved line is indicative of the revolutions of the instrument; also *ch'ou*,²¹¹ "to plow," showing the furrows and the "boustrophedon" movement; also *sheng*,²¹² "to ascend," where the three short lines are said to show the steps of the sun on his upward path. The meaning of this branch is "hurt," "pitiable," correlative with the *hsin* stem, and referring to nature fading in the ninth moon and the closing of human life. Others say it is symbolical of "fullness, for things start in *wu* (the fifth branch) and get ripe in *hsü* (this eleventh branch) when the sun's heat declines."

*L. The Twelfth Branch, Hai.*²¹³

The Shuo-wen says this is just another form of *shih*,²¹⁴ "a pig." Williams thinks it is made of *jen*,²¹⁵ "man" above,

203 𠩺	204 𠩺	205 𠩺	206 幽	207 憂	208 幽
209 戌	210 𠩺	211 𠩺	212 𠩺	213 亥	214 豕
		215 人			

and *nü*,²¹⁶ “woman” below. None of the authorities gives any satisfactory explanation of the character, and its old forms are quite numerous and dissimilar. The sound *chu*²¹⁷ means “to drive out,” and *sui*²¹⁸ means “to scatter”; both of these are written by the “pig” symbol, so that it is probable, or, on Edkins’ theory of the phonetic complements, almost certain that the old sound of these words was *shih*, or whatever the old-time name of the hog may have been. It is not improbable then, that this *hai* branch



may have had the meaning “drive away,” “scatter,” although, etymologically, it seems rather to be connected with words meaning “young child.” (Cf. also *chu*,²¹⁹ *chu*.²²⁰) One old form²²¹ contains, apparently, the elements *jen*,²²² “man,” and *yin*,²²³ “to conceal,” which might lead to the supposition that the character has reference to the tomb. This explanation is offered with hesitation, as it rests on no native authority.

²¹⁶ 女[𡚨]

²¹⁷ 逐

²¹⁸ 遂

²¹⁹ 豕

²²⁰ 猪

²²¹ [𡚨]

²²² [人]

²²³ [廴]

The Twelve Branches are assigned to the cardinal points, beginning at the north, the region of winter and darkness; passing around through the east (spring), the south (summer), to the west (autumn), and thus back to the north again, as shown in the foregoing diagram.

In this arrangement the symbol of the opening door in the east and that of the closing door in the west are immediately noticed. The position of the two characters *yin*²²⁴ and *shen*,²²⁵ each containing the "hand" sign, also arrests the attention. This placement of contrasting emblems was evidently premeditated and offers a clew to the interpretation to be given to some of the ideograms whose significance is more or less obscure.

The child, *tzu*,²²⁶ in the north, is set opposite the man in the prime of life, *wu*,²²⁷ in the south. (Cf. the form and meaning of the stem *ting*²²⁸). The restraining hand, *ch'ou*,²²⁹ stands over against the tree in its unrestricted exuberance of foliage, *wei*.²³⁰ *Yin*,²³¹ where may be seen the child, *jen*,²³³ emerging from the home, *mien*,²³⁴ as yet sustained by the parental hands, *chü*,²³⁵ and exulting in his new-found strength, is opposed to *shen*,²³⁶ the man stretching himself in world-weary languor. Then come the opening and the closing doors; and next *ch'en*,²³⁷ a symbol of the beginning of life, in opposition to *hsü*,²³⁸ indicative of approaching dissolution. While to complete the series there is the antonymy of *ssu*,²³⁹ "the serpent," a genetic sign, as against *hai*,²⁴⁰ "the man concealed," alluding, as may be supposed, to the last home and resting-place of the soul.

Several circumstances tend to show that the eleventh and twelfth branches originally occupied a different place in the series, and that the sequence began with what is now

	224 寅[寅]	225 申[申]	226 [子]	227 [午]	228 [个]	229 [丑]
230 [巽]	231 [寅]	233 [入]	234 [门]	235 [巳]	236 [巳]	237 [辰]
		238 [未]	239 [巳]	240 [卯]		

the third symbol; but this fact does not materially alter the significance of the series, since it is to be regarded as continuous and never-ending, a delineation of the ceaseless interaction of the positive and negative principles in the great scheme of being.

RECAPITULATION.

Having thus predicated a community of intention on the part of the framers of these cycle-names in regard to the lesson to be conveyed by the sequence of symbols, the attempt may perhaps be made to compare the individual characters of the two continents yet more closely.

The first stem, *chia*, represents the seed beginning to sprout under the influence of the sun's rays in spring. One of the derivations proposed for the Maya, Tzental, and Quiché-Cakchiquel name of the first day, *imix*, *imox*, connects it with *mex* or *mix*, "the beard," and metaphorically "the sun's rays."

The second stem, *yi*, shows a young plant coming out from darkness into the air and light of day, and this ideogram also conveys the idea of individuality, self-consciousness, the dawn of reason. In the Zapotec calendar the second day was *ni*, "to grow," "increase," "gain life," or *laa*, "warmth," "heat," "reason," "intelligence." In the Maya, Tzental, Nahuatl, Quiché-Cakchiquel, (and also sometimes in the Zapotec), the second day is *ik*, *igh*, *ik*, *gui*, *ehecatl*, all meaning "air," "life," "soul."

The third stem *ping* pictures the sun entering a house or covering. The third Mexican day is *calli*, "house."

The fourth stem, *ting*, is an emblem of virility and reproduction. *Cuetzpalin*, the lizard, is the fourth Mexican day, and this creature was the ruler of the womb and loins. In Tzental the fourth day was *ghanan*, a name referring to the god of plants and abundance.

Chi, the sixth stem, is, as has been seen, considered by

some Chinese authorities as a variant of *chung*, "the middle," "the center." The Zapotec *lana*, meaning "separate," "apart," "the middle," and the Tzental *tox*, "what is separated," are applied to the sixth day in the American series.

The seventh stem, *keng*, contains a "hand" sign, as does also the symbol for *manik*, the seventh Maya day.

Jen, the ninth stem, is referred to the pregnant womb and is assigned to the element water. In Maya and Tzental, *muluc*, *molo*, names of the ninth day, mean "to pile up," "to heap up," while the Zapotec term *niza* and the Nahuatl *atl* both mean "water," and are employed as names of the ninth day in those calendars.

It was seen above that the interpretation ordinarily given to the seventh branch of the Chinese series was "pestle." In the Meztitlan dialect of the Nahuatl, the sixteenth day was known as *temetlatl*, which also signifies "pestle."

It will be noticed that the Ten Stems of the Chinese series are distributed by pairs among the five elements, the first member of each group being allied to the *yang*,²⁴¹ or active principle of the dual philosophy, and the second to the *yin*,²⁴² or passive principle. For instance, under the element "metal," the stem "weapon"—the "metal" of the warrior—is assigned to the aggressive *yang*, and the stem "cauldron"—the "metal" of the home—to the unassuming *yin*. A similar antonymy prevails among the other stems. The raging "wave" is opposed to the tranquil "stream"; the sturdy "fir" to the slender "bamboo"; the fierce flame of the "torch" to the feeble glimmer of the primitive "lamp"; the rugged "mountain" crag to the orderly cultivated "plain."

There is no particular evidence of a similar division of the American sequence, though it is apparent at a glance

that here are two terms assignable to the aqueous element, "water" (*atl*) and "rain" (*quiahuitl*); three vegetable products, "flower" (*xochitl*), "grass" (*malinalli*), and "cane" (*acatl*.) The "flint" (*tecpatl*) may be considered as a representative of "fire," and the "earthquake" (*ollin*) as a manifestation of earthy influence. *Calli*, "the house," as of mineral origin, may perchance form a second in the "earth" group. There remain "wind" (*ehecatl*) and "death" (*miquiztli*); no great stretch of imagination is required to pair the gentle zephyr and the noxious spirit breath of death in a group ruled by the element "air,"—recognized in Mexican though ignored in Chinese science; and if fancy may be accorded yet further license, and the "cane"—either from its use in blowing fires or as employed in the frictional production of that element—be transferred to the "fire" group, an American series of "elementally-assigned" stems is built up, arranged in groups of twos and exhibiting antonymies roughly corresponding with, and perhaps not more fantastic than those of the Asiatic scheme. "Water," represented by the active "rain," as against the passive "water" in the bowl (cf. the ideogram *atl*). "Wood," the gorgeous "flower" of the cactus offsetting the lowly, every-day "grass." "Earth," in its active manifestation as the all-destroying "earthquake"; passive and immovable, on the other hand, as molded into the vast pile of the *teocalli*, the "house" of the gods. "Air," the fierce all-conquering breath of "death" and the cool refreshing "breeze" of spring. "Fire," the *yang* manifestation produced on the instant from the "flinty rock," and the *yin* avatar of the lordly element brought about by the action of the "cane" spindle of the fire-mill.

Turning now to the animal names, composing the other half of the series, one encounters the "dragon," the "snake," the "rabbit," the "dog," the "monkey," and the "tiger" on both shores of the Pacific. In other words, one

is confronted, as remarked by Gustav Schlegel, by the truly remarkable fact that, of the ten zoological terms of the Mexican cyclical nomenclature, no less than six are absolutely identical with those dedicated to a like purpose in far-away Asia; and since the "eagle" or "vulture" may be accepted without demur as the counterpart of the "cock," the assertion can be made that all but three of the Mexican names find their representatives in the Chinese list. As against the "lizard," "deer," "eagle," and "vulture" of America, there remain the Asiatic "rat," "ox," "horse," "goat" and "pig." The lizard and the deer, creatures very familiar to the Mexicans, may be taken as the analogues of the rat and the ox, (Schlegel equates the lizard with the dragon); the horse and the pig, as animals not indigenous, may reasonably be supposed to have been dropped from the list by those who adapted the series to American use; while the goat, also not a native of Mexico, a rock animal, may have been replaced by the vulture, a bird of the crags.

Such an assignment of the American terms is, no doubt, far-fetched and fantastic,—it is intended as a mere suggestion,—but to those accustomed to follow the history of written characters, of words, of customs, in their migrations from land to land, from people to people, it will rather be matter for surprise that such striking coincidences between the two calendars should be visible on the surface to the casual observer at this day.

In the reassignment of the zoological terms just attempted, the Asiatic and American names were provisionally paired as follows:

(The numerals preceding the names indicate their order in the series.)

CHINESE.			MEXICAN.	
1	tzù	rat	4	cuetzpalin lizard
2	ch'òu	ox	7	mazatl deer

3	yín	<i>tiger</i>	14	ocelotl	<i>tiger</i>
4	mào	<i>hare</i>	8	tochtli	<i>hare</i>
5	ch'ên	<i>dragon</i>	1	cipactli	<i>dragon</i>
6	ssú	<i>serpent</i>	5	coatl	<i>serpent</i>
7	wù	<i>horse</i>	—		
8	wéi	<i>goat</i>	15	quauhtli	<i>eagle</i>
9	shen	<i>monkey</i>	11	ozomatli	<i>monkey</i>
10	yù	<i>cock (bird)</i>	16	cozcaquauhtli	<i>vulture (bird)</i>
11	hsū	<i>dog</i>	10	itzqintli	<i>dog</i>
12	hái	<i>boar</i>	—		

Placing now the Maya day-glyphs (corresponding with these Mexican day-names) side by side with the Chinese symbols, thus:

1	tzù	𠄎	☉	4	kan
2	ch'òu	𠄎	☿	7	manik
3	yín	𠄎	♁	14	ix
4	mào	𠄎	♂	8	lamat
5	ch'ên	𠄎	♁	1	imix
6	ssú	𠄎	☾	5	chicchan
7	wù	𠄎	—	—	
8	wéi	𠄎	♁	15	men
9	shen	𠄎	♁	11	chuen
10	yù	𠄎	♁	16	cib
11	hsū	𠄎	☉	10	oc
12	hái	𠄎	—	—	

it will be noticed that:

1. The Maya "grasping hand" sign, *manik*, the seventh American day, finds a place opposite the Chinese "grasping hand," *ch'ou*;

2. Corresponding with the Chinese "tiger" branch, *yin*, comes the Maya *ix*, the fourth day, translated "sorcerer" by Dr. Brinton, a name connected with *balam*, "tiger," and metaphorically "wise man," since the Mayas supposed their sorcerers to possess the power of trans-

forming themselves into tigers. In this connection, the statement found in the Second Appendix to the Chinese Classic of Divination, *Yi-ching*, — that “the great man produces his changes as the tiger does when he changes his spots,” is worthy of notice. Dr. Seler thinks that the Maya glyph *ix* itself “shows the round hairy ear and spotted skin of the jaguar”;

3. The character *mao*, ascribed to the Chinese day of the “hare” is a picture of an “opening door,” typifying the Orient, sunrise, spring. The Maya *katun* corresponding with the Nahuatl day of the rabbit, *tochtli*, is *lamat*, concerning which Dr. Brinton says: “The figures (of *lamat*) bear a close resemblance to some sun signs. . . they seem to show the orb partly below a line, the horizon”;

4. The symbol appertaining to the Chinese “dragon” branch, *ch'en*, is defined by Dr. Wells Williams as “sprouting plants transformed by heaven.” Answering to the Nahuatl “dragon” day, *cipactli*, was the Maya *imix*, which Perez regards as a transposition of *ixim*, “maize.” Again *cipactli* is considered by some writers to denote the “sword-fish” or other marine monster, and Dr. Brinton notes that the head of a fish symbolized the fructifying and motherly waters. One of the Shuo-wen’s explanations of *ch'en*, is, as has been stated above, “pregnant”;

5. The glyph *chicchan*, the fifth day, identified by Seler as a serpent’s skin, corresponds exactly with the Nahuatl *coatl* and Chinese *ssu*, both pictures of snakes;

6. *Chuen*, the eleventh day, the equivalent of the Mexican *ozomatli*, is explained by Brasseur and Seler as “a monkey’s mouth”; it thus corresponds with the Chinese “monkey” branch, *shen*;

7. *Cib*, the symbol of the fourteenth day, is especially noteworthy. It is the correlate of the Nahuatl *cozca-quauhthli*, the “vulture,” and is paralleled by the Chinese day of the “cock,” whose ideogram is *yu*, “a jar of spiritu-




ous liquor," *ci*, "trickling down." The "pottery decoration" (the short parallel strokes several times repeated around the edge of the glyph) certainly indicates the jar or vase." The Tzental name, *chabin*, for this sixteenth day, has, as some of its meanings, "end," "funereal rites"; with which compare the second form (closing door) of the Chinese character, referred to the death of the day, the setting sun, the fall of the year. The fact that *chab* in the Quiché-Cakchiquel dialects means "arrow" might perhaps suggest a comparison of the Tzental *chabin* with the tenth Chinese stem *kuei*, said by some to depict an arrow come to rest, and referring, as does the Tzental word, to the closing scenes of the life-drama.

* * *

Among the Twelve Branches, the ideograms *mao* and *yu*, the opening and closing doors, spring and autumn, east and west, sunrise and sunset, are especially prominent. In the Maya series, three glyphs have been regarded by divers authorities as sun symbols:

Imix					
Lamat					
Akbal					

Imix is taken to represent the sun's rays, like the Egyptian hieroglyph *maau*²⁴³ and the Chinese *shih*.²⁴⁴ *Lamat* is said to picture the disk of the great luminary under some peculiar condition; Dr. Brinton sees in it "the orb partly below a line, the horizon," and from etymological analogies (*lambat*, i. e., "*hundirse in cosa blanda*") explains it as "the sunset." The Chinese pictogram *tan*,²⁴⁵ presenting the sun and a line, the horizon, has the reverse meaning, "sunrise," and so far as form is concerned may be compared with the Maya *akbal*, said to show the rays

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of the sun after sinking below the horizon, and connected with the word *akab*, "night."

Assuming for a moment that the identification of *lamat* as a solar emblem is correct; disposing the series in such a way that this glyph *lamat* comes opposite its Asiatic correlate *yu*, "the closing door"; and ranging the signs which precede and follow the *lamat* glyph in the Maya calendar in the *regular* sequence; thus:

	CHINESE.			MAYA.
1	tzù, child	子	—	
2	ch'òu, hand	手	—	
3	yîn, shelter	廄	☉	1 imix, food
4	mào, opening door	門	☽	2 ik, wind
5	ch'ên, containing	厩	☼	3 akbal, evening
6	ssù, serpent	巳	☽	4 kan, iguana
7	wù, pestle	杵	☉	5 chicchan, serpent
8	wéi, foliage	蕪	☽	6 cimi, death
9	shen, stretching	伸	☼	7 manik, hand
10	yù, closing door	西	☉	8 <i>lamat</i> , sunset
11	hsù, wounding	戕	☽	9 muluc, heap
12	hái, boar	豕	☉	10 oc, dog

We find here that the signs *ik*, *akbal*, *kan*, *chicchan*, *cimi*, *manik*, *lamat*,—"wind," "night sun," "iguana," "serpent," "death," "grasping hand," "sunset," form a series roughly corresponding with the Asiatic sequence of "sunrise," "dragon," "serpent," "pestle," "foliage," "pressing hands," "sunset." If we omit from the Chinese list the "horse" branch, *wu*, whose ideogram is the "pestle,"²⁴⁶ and which, as before noted, does not seem to have had analogs in the American series, we obtain the following category:

4	sunrise			3	sun symbol
5	dragon			4	iguana
6	serpent			5	serpent
7	—	-	-	—	
8	foliage			6	death
9	hands			7	hand
10	sunset			8	sunset

Here the Maya sun symbols are parallel with the Chinese signs of similar import; the iguana and the serpent of the Maya pair off with the dragon and the serpent of the Chinese; and the "hands" of the *shen* branch correspond with the "hand" of the *manik* day. While the symbols of the two series do not form absolutely identical pairs, yet the *relative* positions of the signs in regard to the general series is the *same* in the Chinese list as it was in Mayapan.

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