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Correspondences Between the Chinese Calendar Signs and the Phoenician Alphabet

Julie Lee Wei[1]

Similarities between the Phoenician alphabet and the Chinese calender signs, the *tiangan dizhi*, or heavenly stems and earthly branches, have been remarked upon by a number of linguists. Besides some obvious similarities between the letters in the two sets, each set has 22 symbols. Are the similarities in symbols and the identical number of 22 mere coincidences? Are they anciently related and do they correspond one-to-one? Quite a few Sinologists and Assyriologists have grappled with this question, including Hugh Moran and David Kelley, Edwin Pulleyblank, and Victor Mair. In a recent article, "Early Contacts Between Indo-Europeans and Chinese," Mair stated that "The number of unquestionable, impeccable correspondences of symbols in the two sets sharing similar sounds and shapes is at least 15." (Mair 1996: 35). Earlier, Mair had disclosed, in an article entitled "West Eurasian and North African Influences on the Origins of Chinese Writing", his discovery that the two sets "display an almost perfect fit both graphically and phonetically" (Mair 1990), but due to other major commitments he has written on only a few of the correspondences.

The problem first intrigued me several years ago. Recently I took up the puzzle again, and as a result have now identified all the correspondences that have not been identified in the literature. Indeed, there is a one-to-one correspondence between the 22 letters of the ancient Phoenician alphabet and the 22 of the Chinese *ganzhi*, a correspondence that seems to have been established in the early years of the Shang dynasty. In addition to phonetic and graphic correspondence, I have found that they also correspond in meaning.

My findings are summarized in two tables (Table 1 and Table 2). It will be seen that I have assigned meanings to letters of the alphabet as well as to *ganzhi* letters whose meanings have hitherto been unknown or highly uncertain. How I have arrived at those

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meanings as well as at each of the 22 correspondences will be discussed, after some introductory remarks.

Correspondence or Coincidence?

In identifying the correspondences I have looked for a three-way resemblance in each pair of letters. In other words, any pair should resemble each other in sound, meaning, and symbol (grapheme). I have found that each of the 22 pairs has a three-way resemblance.

This study has followed to a large extent the three fundamentals of method used by Joseph Greenberg in his pioneering work, *The Languages of Africa* (Greenberg 1966). The first is, when seeking correspondences between words, that "the sole relevance is comparison of resemblances in sound and meaning in specific forms." The second principle is that of "mass comparison as against isolated comparisons between pairs of languages." The third principle is that "only linguistic evidence is relevant in drawing conclusions..." (Greenberg 1966:1).

However, the present paper is preliminary in that it falls somewhat short of "mass comparison". To some degree, "mass comparison" has been made to determine the meaning (as reflected by the symbol as well as by its most ancient, Hebrew, name) of each of the Phoenician letters of the alphabet. Several generations of scholars have done this by searching the Sumerian, ancient Egyptian, Babylonian, Assyrian, and other Semitic vocabularies (Diringer 1968: 195ff, Jensen 1969: 255ff), and the meanings they have attributed to the Hebrew names of the Phoenician letters have been based on this search. This surely would qualify as "mass comparison". On the Chinese side, I have searched Chinese dictionaries for the ancient meanings of the *ganzhi* characters. I have also examined ancient Sumerian and Egyptian symbols as well as Sumerian, Egyptian, Coptic and, to a less extent, Assyrian, Hebrew, and other dictionaries for words and symbols that match a given Chinese character in sound, graph, and meaning and then compared them with the meanings generally attributed to the Hebrew names of the alphabet and to the alphabet letter itself. In some cases, with the assistance of the sinograph, I have been able to arrive at a new explanation of the meaning of the Phoenician-letter-with-Hebrew-name (which will simply be called the Phoen/Heb letter).

Number of letter	Roman letter	Greek name	Greek letter	Hebrew name	Phoenician letter	Chinese letter (oracle bone)	Chinese letter (modern)	Modern and inferred archaic sound
1	A	alpha	Α α	**āleph**			甲	**chou, *hnrjəw**
2	B	beta	Β β	**bēth**			丙	**bing, *pjiaŋx**
3	G	gamma	Γ γ	**gīmel**			午	**wu, *hmət**
4	D	delta	Δ δ	**dāleth**			丁	**ding, *ting**
5	E	ep-silon	Ε ε	**ḥe**			亥	**hai, *gə?**
6	F	di-gamma	Ϝ ϝ	**waw**			戊	**wu, *mu?h**
7	Z	zeta	Ζ ζ	**zayin**			壬	**ren, *nzjəm**
8	E, H	eta	Η η	**ḥēth (kheth)**			庚	**geng, *kəraŋ**
9	Th	theta	Θ θ	**ṭēth**			辰	**chen, *djən**
10	I	iota	Ι ι	**yod**			己	**ji, *kjə?**
11	K	kappa	Κ κ	**kaph**			癸	**gui, *khwiət**
12	L	lambda	Λ λ	**lāmed**			酉	**you, *ljəw?**
13	M	mu	Μ μ	**mēm**			卯	**mao, *mru**
14	N	nu	Ν ν	**nūn**			乙	**yi, *?arjət**
15	X, KS	xi	Ξ ξ	**sāmekh**			辛	**xin, *siŋm†**
16	O	o-micron	Ο ο	**'ain**			寅	**yin, *ljən**
17	P	pi	Π π	**pē**			未	**wei, be, bi††**
18	Ts			**ṣādhē (tsude)**			戌	**xu, *sjwət**
19	Q	koppa	Ϙ ϙ	**qōph**			甲	**jia, *krap**
20	R	rho	Ρ ρ	**rēsh**			巳	**si, *rjagx**
21	S	sigma	Σ, σ	**šin, shin**			申	**shin, *hljin**
22	T	tau	Τ τ	**tāw**			子	**zi, *tsjə?**

†Taiwanese dialect. †† Minnan:Amoy dialect. **Stone script.

Table 1. Summary of the 22 correspondences.

In each case I argue for the meaning based on the evidence in Chinese, Sumerian, Egyptian, and Coptic, etc., as well as the extensive research already done by other scholars on the subject. (Coptic is later than the Shang dynasty, to which the 22 correspondences date, but since it is a descendant of ancient Egyptian and spells words with vowels, it can throw some light on Egyptian hieroglyphs, which are usually written without vowels.)

However, this study still falls short of sufficient "mass comparison" in that, where it has claimed, for a sinograph and Sumerian and ancient Egyptian words, a connection antedating the Phoenician alphabet, I have not had an opportunity to check my conclusions sufficiently against other ancient languages. Further work needs to be done to test my conclusions against the vocabularies of such languages as Hittite, Old Akkadian, Babylonian, Assyrian, Old Persian, and Sanskrit. On the other hand, since Sumeria and Egypt were dominant cultures, the existence of a word in their languages implies the existence of cognates or borrowings in many other contiguous or related languages, just as a word in Latin implies the existence of cognates or borrowings in many Romance and Germanic languages.

As for Greenberg's third fundamental principle of method, that "only linguistic evidence is relevant" in making conclusions about correspondences, I have hewed as closely as possible to it. However, since pictograms are part of the Chinese language as well as of Sumerian and ancient Egyptian, I take "linguistic" to include not only "sound [phonetic shape] and meaning" but also pictorial or pictographic (graphemic) evidence. Resemblance of pictograms can be construed in several ways:

1) Resemblance of pictorial shape: e.g., Phoenician *yod*  has a shape resembling the Chinese letter *ji*  . This is geometric resemblance.
2) Resemblance of pictorial concept: Egyptian *st*  and Chinese *yin*  () resemble each other in that each depicts an arrow entering a target, although the shape of the graph is different. This would be conceptual resemblance. One can represent "water" by a wavy line  (as in Egyptian) or represent it by a drop of water , as in many American posters. The two would be conceptually different. Conceptual resemblance does not necessarily mean resemblance of the signification of the

Roman	Hebrew name and meaning	Phoenician	Chinese (Oracle Bone)	Chinese (modern)	Chinese sound and meaning	Sumerian	ancient Egyptian	Assyrian	Celtic	Germanic	Other
A	aleph "bull"			丑	*hnrjəw "bull"			alpu "bull"			
B	beth "house"			丙	*pjiaŋx "mother"	ban-da "mother"	ben-ti "breasts"	bantu "mother"	Old Irish ben "woman"	Scottish bairn	Arabic bint "daughter of"
G	gimel "camel"			午	*hmət "tip"	gim	qenbt "angle"	Akkadian gamalu		English camel	Chinese jiam "pointed"
D	daleth "door"			丁	*ting "head"	du,dug "mouth"		daltu "door"			Greek delta "mouth"
E	he "fence"			亥	*gəʔ "boundary"						
F	waw "hook"			戊	*muʔh "halberd"	mul "spear"	marhu "spear" ua, "pike"				
Z	zain "beam"			壬	ren, "beam" "reel"	zin "life"	sa-t "beam"			English "reel"	IE *ret- "pole"
H	kheth "fence"			庚	*geng "enclosure"	gan,kan "enclosure"	khen			English "home" "hamlet"	Portuguese curral kraal"
Th	teth "field"			辰	*djən "irrigate"		ten-t "field"		Irish tir, "land"		Latin terra "land"
I	yod "hand"			己	*kjəʔ "regulate"	gid,gad "hand"	kap "paw"	kappu "hand"			
K	kaph "hand"			癸	*khwiət "reach"		kep (hand glyph)				
L	lamed "water-pot"			酉	*ljəw? "store water"	lud, "pot pitcher"	nu "pot"	rihu "pour water"	Old Irish sruth "stream"	English river	Latin rivus "stream"
M	mem "water"			卯	*mru "stream"	ma "water"	*maw "water"	mu "water"		English mere	Latin mare, "sea"
N	nun "fish"			乙	*ʔarjət "stream"	lud "pot"	nu-t "water"			English river	Latin rivus "stream"
X KS	samekh "sacrifice"			辛	*siəm "sacri-fice"	sim "to offer"	sma "offer-ings"	zebu "sacri-fice"			
O	'ain "eye"			寅	*ljən "to aim"		ar "pupil"	enu "eye"			
P	pe "mouth"			未	be, "ram" "taste"		ba "ram"				
Ts	sadhe "net"			戌	*sjwət "battle-ax"			shetu "net, snare"			Hebrew tsude "to hunt"
Q	qoph "skin, hide"			甲	*krap "shell"		khaut "skin"			English coat	Latin cutis "skin"
R	resh "head"			巳	*rjəgx "figure head"			resu "head"			
S	sin, shin "tooth"			申	*hljin, *thjin "fasten" "lightning"		s-tehen "lightning"	shinnu "tooth"		Eng., grin, thunder	Latin IE*(s)-ten
T	taw "mark"			子	*tsjəʔ "mark"						

Table 2. Comparisons of the meanings of the 22 correspondences.

pictograms. For example, Chinese *you*  represents a jar pictorially. However, the dictionary meaning of the word *you*  is not "jar" but "wine" or "irrigated field". The Egyptian *nu*  , also the pictogram of a jar, has among its meanings "internal organ".

3) Resemblance through a shared pictorial element: Phoenician *'ain* O resembles Chinese *yin*  (also) because both share a small circle. This would be a subset of geometric resemblance.

Resemblance of sound and meaning, or sound and symbol, or of any combination of sound, meaning, and symbol could be simply due to chance or coincidence. However, the more languages in which a given resemblance is found, the smaller the probability that the resemblance is just due to chance or coincidence. Greenberg states:

> Let us assume even that accidental resemblances between two languages can be rather high, say twenty percent. The chance that some single meaningful form will appear with similar sound and meaning is then 1/5. The chance that the same element will appear also in some third language is the square of 1/5, that is 1/25. In general, given *n* languages the chance that a resemblance will occur in all of them will be $(1/5^{n-1})$ (Greenberg: 3).

While Greenberg's work involved the possible occurrences of chance resemblances of a given word in numerous languages, the present paper also involves a different kind of chance occurrence. The present study advances the proposition that there is also a 22-fold correspondence, over and above the individual correspondences—that there are 22 interlinked three-way correspondences. I have not found out how one calculates such a probability, but it strikes me that the chances of an accidental coincidence would be extremely small.

When Were the 22 Correspondences Created?

First of all, a few words about the probable dating of the translation of the 22 letters of the Phoenician alphabet into the 22 letters of the Chinese calendar signs. (That there was

The Ten Heavenly Stems

甲	jia	"shell","armor"
乙	yi	"stream", "water"
丙	bing	"woman", "female"
丁	ding	"head", "man"
戊	wu	"halberd"
己	ji	"regulate"
庚	geng	"gate", "enclosure"
辛	xin	"offerings", "sacrifice"
壬	ren	"beam","frame", "reel","to reel"
癸	gui	"rest"

The Twelve Earthly Branches

子	zi	"son", "seed", "mark","writing"
丑	chou	"bull"
寅	yin	"shoot","archery"
卯	mao	"water", "power"
辰	chen	"build dyke", "irrigate"
巳	si	"figurehead", "worship"
午	wu	"noon", "silk"
未	wei	"taste", "ram"
申	shen	"belt-hook", "lightning,rain"
酉	you	"store water for irrigation","wine"
戌	xu	"battle-axe"
亥	hai	"boundary"

The 60-day cycle

甲子 jiazi
乙丑 yichou
丙寅 bingyin
丁卯 dingmao
戊辰 wuchen
己巳 jisi
.
.
.

Table 3. The Chinese calendar signs and the 60-day cycle.

an effort to translate and not merely to transliterate will be apparent shortly). The 22 calendar signs are divided into two sets, the ten heavenly stems (*tiangan*) and the twelve earthly branches (*dizhi*). By consecutively and continuously pairing letters from the two sets, we get a cycle of 60 names of days of the calendar (Table 3). This cycle is then repeated throughout the year and into the next year, year after year.

The earliest surviving records of the calendar signs are on Shang dynasty oracle shells and bones. The absolute dates of the reigns of Shang monarchs are still in dispute (Keightley: 255). According to traditional chronology, the Shang dynasty lasted 1766-1154 BCE. David S. Nivison, who has devoted 20 years to the study of Shang chronology, maintains that the Shang dynasty lasted 1554-1040 BCE (Nivison: 43-45). In his view, the Shang oracle shells and bones inscriptions (OSBI) date from about 1215. Some scholars give the period covered by the oracle shells and bones inscriptions as circa 1250-1050 BCE (Schuessler: ix).

There is evidence, however, that the set of ten *tiangan* (heavenly stems) date to the beginning of the Shang dynasty, if not earlier, for they appear in the names of Shang kings. Here I shall follow Nivison's chronology. In the traditional list of Shang kings, all but two of the ten *tiangan* letters appear in the names of the kings. Only *bing*丙 and *gui*癸 are missing. However, in Nivison's revised, augmented list of kings, *bing*丙 appears in the name of King Wai Bing (r. 1541-1540), who appears to have been purged from the traditional list. Nivison maintains that *gui*癸 is absent because it was the name of the founding king's father and was therefore taboo. *Gui*癸 appears in the name of Di Gui, the last king of the previous, Hsia, dynasty, but Nivison agrees with D. K. Pankenier that Di Gui was a fiction. He never existed. My own conjecture is that *gui*癸 may have been excluded because it meant "to exhaust" and "to end, to rest" (later written ), certainly suitable for the name of the last king of the toppled dynasty, the proverbial tyrant Di Gui (albeit fictional).

In any case, since nine of the ten *tiangan* were used in Shang kings' names, we may reasonably presume that the 10 heavenly stems existed as a set as early as the beginning of the Shang dynasty, about the middle of the 16th century. We may then presume that the

22-letter Phoenician alphabet (or rather its precursor from Southwest Asia) was translated into the 22 Chinese calendar signs as early as circa 1550 BCE, if not earlier.

Constraints of the Author

of the 22 Correspondences

It will be seen from Tables 1 and 2 that the correspondences are not perfect fits. After identifying the 22 correspondences I had a continuing sense of dissatisfaction. I tried to re-shuffle the Phoenician letters and Chinese characters but failed to get a better fit. Was the set of 22 correspondences then a mere figment of the imagination? But then there were so many individually very good fits (to be demonstrated later). Were they all coincidences? Suddenly it occurred to me that the author of the 22 correspondences must have felt the same dissatisfaction after he/she completed them some 3,500 years ago. Anyone who has attempted the translation of one language into another will be familiar with that sense of dissatisfaction. Translation after all is compromise. And every one of the 22 correspondences reveals some compromise, in sound, meaning, or symbol.

As a working hypothesis, we presume that the person responsible for translating the proto-Phoenician consonantary into the Chinese was a diviner/scribe and that he/she was of Middle Eastern or Eurasian extraction. This translator could have been working alone or in collaboration with others. This supposed translator who was employed (or seeking employment with his/her set of 22 correspondences) in the Shang dynasty court probably faced the same difficulties in translation as the Chinese journalist working in Hong Kong or Beijing today. Let us illustrate with an example or two. Take the American word *cool*, meaning "hip," "sharp", "very nice". It now appears regularly in Chinese newspapers as *koo* 酷, a Chinese character which in its traditional sense means "cruel" or "very very, terribly"—not quite the meaning of *cool*. "Sharp", "very nice" and "very, very" have overlapping meanings, however. Phonetically, *koo* is a defective rendition of *cool*, and "terribly" isn't exactly the meaning of *cool*, but the Hong Kong journalist settles for *koo* anyway because there is no Chinese word ending in *l*. Similarly, the word *bus* (*omnibus*) became in Cantonese (the dialect of most Hong Kong Chinese) *ba-see* 巴士, which now has evolved into a very respectable word, *ba* 巴. *Ba* 巴 is now a frequent designation for

"bus" in Hong Kong's Chinese newspapers. Then take proper names. "Roosevelt", for an example. The standard translation comes from Cantonese (whose usages often became the standard in Chinese as a whole because Hong Kong was at the forefront of East-West interaction)—the Cantonese translation of Roosevelt was Law-see-fook.

Here we have considered phonetic factors. But there may also be semantic ones at work, denotative or connotative. These may be religious, astrological, socio-political, moral, esthetic. Hitler was translated Shee-te-le 希特勒, "Rare (a pun)-unique-strangle", the "strangle" chosen deliberately from among possible homonyms, no doubt, to convey moral distaste. Chelsea (Clinton) is translated Chwe-er-shee 雀兒喜, "Little sparrow joyful", words chosen to register affection. But the translator had to replace initial "che" with "chwe" so as to get the word "sparrow". There may be taboos operative as well. Or a certain word may be chosen over another because of its preferred symbolism. Thus, the constraints on the translator are multiplied.

Yet these constraints would only be the normal constraints of translation. For in addition to them the Shang translator had also to observe the special three-way constraint of attempting to match sound, meaning, and pictogram for each letter of the alphabet. So unless we take into account all these constraints, we are liable to ask the impossible of our translator at the Shang court around 1550 BCE; that is, we will look for impossibly perfect fits in the 22 correspondences.

How did the Phoenician-Hebrew Names
Sound in 16th Century BCE?

Still another point to bear in mind is this: We cannot be sure of how the Semitic names of the alphabet sounded in the 16th century. The Hebrew names are the oldest names of the alphabet known to us, but our first evidence for them appeared very late, only in rabbinical texts! (Jensen: 286ff). Even so, the *ganzhi* are remarkably close to the sound of the Hebrew names. There are certain consistent differences, however, such as that final *-t* or *-th* in Hebrew corresponds to final *-n* or *-ng* in the Chinese . In both cases these are alveolar consonants. Usually, the Chinese final *-n* reflects the final *-n* in the corresponding Sumerian or Egyptian word. This suggests that anciently a Hebrew letter

such as *teth* or *beth* may have sounded closer to *ten* or *ben*, that is, they were alveolar stops rather than alveolar plosives.

Why Phoenician into Chinese?

It is also necessary to consider briefly this question before examining the 22 correspondences. We have here assumed that the proto-Phoenician alphabet was translated into Chinese, and not vice versa. Why this assumption? First, because there is strong evidence that the Phoenician alphabet was composed of signs derived mainly from Sumerian and ancient Egyptian signs, and the Sumerian and Egyptian civilizations were older than the Shang dynasty, when the *ganzhi* first appeared on oracle shells and bones as calendar signs.

Sumeria had urban centers by ca. 3400 and city-states with complex organization by 3200. The Sumerian language ceased to be spoken after 1900 BCE, having been supplanted by Old Akkadian. During the Shang dynasty, Old Babylonian and Old Assyrian were the major spoken languages of Mesopotamia (Caldwell 1974: v-3). In Egypt, the Archaic (First and Second dynasties), Old Kingdom, and First Intermediate periods lasted 3168-2035 BCE, before the Shang. The Shang dynasty began after Egypt's Middle Kingdom period (2035-1668) and about the beginning of the New Kingdom period (1550-1070) (Aldred 1987: 9). The Rhind Papyrus, c. 1600, is written in hieratic, a highly developed cursive script, and includes computations with complicated fractions, and solutions to problems involving two unknown quantities (Aldred 1987:91).

Also, since astronomy, astrology, and mathematics were developed in the Mesopotamian region well before the Shang dynasty, it is reasonable to assume that an innovative numbering and calendrical system would have been introduced from the Mesopotamian region into Shang China rather than the other way around.

Some scholars believe that the proto-Semitic alphabet was invented during the Hyksos period, ca.1730-1580 BCE (Diringer 1948: 214). Peter T. Daniels and William Bright place the creation of the Phoenician alphabet after 1200 (Daniels: 89, Fig. 4). Inscriptions found at Byblos (modern Jbail, Lebanon) have been assigned by some scholars to the 17th or 15th century and the next oldest evidence of the alphabet, the

Ahiram inscription, discovered at Byblos in 1923, has been assigned to the end of the 13th century (Jensen: 283ff).

Recent excavations in Banpo, Shaanxi Province, China, and other sites indicate that the earliest forerunners of the sinographs may have originated as far back as 6000 years (Jao: 9). But several factors were decisive in persuading me to lean towards the view that, as a set of signs (whether consonantal or calendrical), the proto-Phoenician alphabet was the older set, and translated into the *ganzhi*. One is that the Sumerian and Babylonian number system was based on 60, and the *ganzhi* involves a cycle of 60 numbers. (According to ancient historians, the Chinese sexagesimal cycle was adopted during the reign of Huangdi [circa 2697-2597 BCE, traditional chronology][Tung: 51]). Another is that at least 16 of the Phoenician letters can be traced directly to either Sumerian or Egyptian precursor graphemes. Still another factor is the greater abstraction and simplicity of the Phoenician and proto-Phoenician list. The Chinese *ganzhi* are mostly still pictographic in OSBI whereas the letters of the Phoenician alphabet (or their precursors in the Northern Linear [Canaanite] scripts [Daniels: 89, Fig. 4]) have been largely stripped of pictorial content and reduced to simple geometric shapes. The Phoenician letters are less pictograms and more pure phonograms. They provide more speed, economy, and lower cost—that is, more efficiency—in learning and using the language. In this respect, they represent the more advanced technology of the day.

Thus, although each Chinese *ganzhi* character may have existed long before the proto-Phoenician alphabet, the *ganzhi* as a set would seem to be no earlier than the proto-Phoenician alphabet.

Abbreviations:

AD	*The Assyrian Dictionary*, edited by Ignace J.Gelb et al.
AMD	*Amoy Dictionary*, by Rev. Carstairs Douglas
Ball	*Chinese and Sumerian*, by C. J. Ball
OCP	*A Handbook of Old Chinese Phonology,* by William H. Baxter
BI	Bronze inscription
Budge	*An Egyptian Hieroglyphic Dictionary* by E. A. Wallis Budge

Cant.	Cantonese dialect
Cihai	*Cihai Dictionary*
DEZ	*A Dictionary of Early Zhou Chinese*, by Axel Schuessler
GS	Great seal script
HD	Langenscheidt's *Pocket Hebrew Dictionary to the Old Testament*
Jiagu	*Jiaguwen Zidian* (*Dictionary of Oracle Bone Characters*), by Xu Zhongshu et al.
MSM	Modern standard Mandarin
Moran	*The Alphabet and Ancient Calendar Signs,* by H. A. Moran and D. H. Kelley
OB	Oracle-shells-and-bones script
OSBI	Oracle-shells-and-bones inscriptions
RS	Regular script
SC	Scribal script
SD	*The Sumerian Dictionary*, "B", edited by Ake W. Sjoberg
SS	Small seal script
XY	*Xingyinyi Zonghe Dazidian* (*Epigraphical Dictionary of Chinese*)

Note:

1. The word "related" will be used to mean "cognate", that is, traceable to a common ancestor. For example, English *bus* and Chinese *ba* 巴士 ("bus") would be related, although no claim is made that the languages are genetically related.
2. The transcription of ancient Egyptian words will be that of E. A. W. Budge, who uses an *e* between Egyptian consonants merely as a convention, to make a vowel-less Egyptian word pronounceable.
3. Ancient forms of sinographs will be from the *Xingyinyi Zonghe Dazidian* and the *Jiaguwen Zidian* dictionaries, unless otherwise stated.
4. Modern Chinese words are represented by modern standard Mandarin, unless otherwise stated.
5. The reconstructed archaic sound of Chinese characters will be that of Schuessler's *Dictionary of Early Zhou* [1050-770 BCE] *Chinese*, unless otherwise stated.

6. Glosses or etymology on English words will be from *Webster's New Collegiate Dictionary* or the *Oxford English Dictionary,* unless otherwise stated.

The Correspondences

Aleph  and *chou* (**hnrjəw*) , OB .

For the identification of this correspondence we are indebted to Moran and Kelley (Moran: 69) . They point out that the Hebrew *aleph*, "a bull", is "not the ordinary word for bull, but a special ancient word used for sacred cattle, corresponding to the Assyrian word *alpu*, 'a bull'". They also point out that the last letter in the ancient Phoenician alphabet, *taw*, also indicates a bull; for the Aramaic *tor* means "oryx" or "ox", which in Arabic is *thaur*, in Greek *tauros*, and in Latin *taurus* (Moran:14).

Moran and Kelley also noticed that the Chinese calender sign *chou* is not a picture of a hand, as Chinese scholars have claimed, but a glyph of the head of an ox. They observe that *chou* , bears a close resemblance both to *aleph* and to the constellation in the Chinese lunar zodiac named *niu* ("ox") .

Moran and Kelley's book gives only the modern pronunciation of sinographs, not the ancient or archaic pronunciation. Much work has since been done on inferring earlier pronunciations. The ancient pronunciation of is reconstructed as **hnrjəw* (*DEZ*: 85). This may seem phonetically unrelated to *aleph*, but it becomes plausible if we remember that 1) it is only an inferred pronunciation, not necessarily the actual pronunciation, and 2) the sounds *n*, *l*, and *r* were not distinguished in the ancient Chinese scribe's dialect (e.g., **ljəkw, *Crjəwk* ["six"] and **njəp* ["inside"] were written with the same OB sign, viz. , and *n* and *l* are still not distinguished in the dialects of Hunan and Hubei. Thus, if we pronounce **hnrjəw* as **hlrjəw* (if such theoretical constructs are at all pronounceable), we would get a phonetic shape much closer to *aleph.*

Another point to note is that the sinograph , occurs in several words today as a phonogram with the pronunciation of *niu,* which is the homophone of *niu* ("ox"). These include the words *niu* ("twist"), *niu* ("a little girl"), and *niu* ("button"). This indicates that anciently may also have had a sound that meant "ox".

Thus, since the sound, meaning, and graph of Hebrew *aleph* and Chinese *chou*

(**hnrjəw*) , are similar, this is probably a correspondence and not simply a set of coincidences.

Beth (later Greek and) and *bing* (**pjiaŋx*) , OB , , , , . Victor Mair pointed out this correspondence, suggesting that was a rotation of , a form of (Mair 1990). From my list of correspondences (see Table 1), it would seem that the Semitic *th* sound corresponds to nasals in many Chinese words:

beth	to	*bing* (**pjiaŋx*)
daleth	"	*ding* (**ting*)
kheth	"	*geng* (**krang*)
teth	"	*chen* (**djən*)

Mair's correspondence is accepted here because of the similarities of sound, meaning, and graph between *beth* and *bing* . *Beth* , Moran and Kelley point out, can mean "house", "temple", "daughter", "woman" in Middle Eastern languages. *Bă*( ) is "maid" in Hebrew (*HD*: 50).

Chinese *shi* ("house") (OB), is the classical term for "wife" (i.e., "the person at home") and "to wive", "to marry" (*XY*: 343). Chinese *nei* ("inside", "within") is also a classical term for "wife". Both are still used in literary Chinese. I shall argue that "woman", "female", and "vulva" were former, now lost, meanings of the logogram *bing* . If *bing* meant "woman", and one's "woman" was referred to as "house" in China, *bing* ("woman") and Hebrew *beth* would be similar in sound, meaning, and graph, a three-way correspondence.

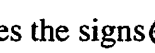
First of all, the OB graph of *bing* , , may have had two semantic values: "woman" and "inside". The OB graphs of *bing* , and *nei* ("inside") , are often exactly the same (see *bing* and *nei* graphs, Jiagu: 1541ff; 579ff). The graph depicts a house (*XY*: 0125), and the graph , represents the word *ru* ("to enter"). Combining the two graphs gives us the pictogram *nei* , (RS) ("to enter", "within"). And *nei* ("within") also means "woman". Although *bing* and *nei* are today distinguished as separate words, I believe, on the basis of the similarity in graph

and meaning, that in the early Shang dynasty their graphs were not distinguished. Thus *bing* 丙 would also have meant "within" and "woman" (i.e., "the person at home").

Chinese *bi* 匕 means "vulva". *Bi* 妣, OB 𠂤 anciently meant "mother"; now it means "deceased mother", "ancestress", where *bi* 匕 resembles an ancient Greek form, 𐌁 , of *beth* or *beta* (Jensen: 452). *Pin* 牝 means "female". *Ping* (**pjiaŋh*, see *DEZ*: 39 for the phonetic sign) 牉 means "paramour, mistress" and "to have a sexual relation with". Also, *fu* (**bjiʔ / *bjəgx*) 婦 means "woman", "wife" (*OCP*: 758, *DEZ*: 179), and *be* and *bi* mean "sister" in Minnan (Southern Fujian) dialects, e.g., Amoyese (妹). Because of the similarity of sound and meaning, I would maintain that all these designations for "woman" or "female" in Chinese were probably cognates. The graph *bing* 丙 is no longer a word for "woman" today, but "woman" (or "female", "mother", "daughter") was probably one of its meanings in early Shang times when the alphabet was translated into the calendar signs. As is well known, a sinograph can be polyvalent, both phonetically and semantically. A logogram could be used as a rebus or phonogram to generate many other words. Later on, classifier signs were added to distinguish the various meanings of a graph.

Chinese *bing* 丙 is similar to Sumeran *ban* 𒁍 , a depiction of the two breasts of a woman (Waddell 1927: Plate II). It meant "to beget", "to create", "son", "daughter ", "young of man and animals". In Old Akkadian, *banu* is "engender"; *banu* is "begetter". In Babylonian *bantu* is "mother" (*AD*, "B": 80, 87, 94, 238). In Babylonian *bintu* is "daughter" (*AD*: B.238). In Ugaritic, *bn* is "son", "*bt*" is "daughter" (Gordon: 373). These meanings still survive in various languages, e.g., Arabic *bint* ("daughter of") and *bin* ("son of"); Persian *-pur* ("child of"), where the final *r* corresponds to *-n*. P. Anton Deimel in his *Sumerisches Lexikon* gives the graphs 𒁍 and 𒁎 , again breasts, with *ban(da)* and *dumu* among the phonetic values, and the meanings "Mamma", "child", and "little" (Deimel: 53.273).

But is Chinese *bing* 丙 related to Sumerian *ban* 𒁍 , female breasts, since the outer vertical lines in *bing* 丙 tend to be parallel rather than slanting inward? I would answer yes.

Deimel gives the signs  and as composed of Sumerian *udu* ("sheep") + "udder" ( ), together meaning *uz* ("she-goat"). (Would Sumerian *udu* be related to English *udder,* German *euter,* and the IE base *udh-*, "udder"?). A variant Sumerian *uz* ("she-goat") sign is (Deimel: 44.213). These graphs for the udder are almost exactly like the Chinese graphs for *bing* , , (*Jiagu*: 1540). Deimel also gives the signs for "vulva", "father", and "mother" as , with the phonetic values of *ad-du* and *ad-da* (Deimel: 54.274). All these Sumerian symbols are similar in shape and represent words in a word field, all related to gender and reproduction. The same graph, , , slightly varied, can represent female breasts, the udder, or the vulva, with the associated meanings of "mother", "female", "vulva", "child", and "father".

Egyptian *ben-ti* meant "the two breasts of a woman". *Benn* meant "to copulate", "to beget", "to be begotten", "virile", "phallus" (Budge: 217). Egyptian *ben* and *benben* also mean "copulate" (Budge: 217) These Egyptian words are similar to Sumerian *ban* and *ban(da)* in sound and meaning.

Would Chinese *bing* , which looks like Sumerian *ban(da)* (picture of female breasts) and the Sumerian graph for the udder, and also Egyptian *ben-ti* (picture of the two breasts) be related to the Sumerian *ban(da)* and Egyptian *ben-ti* logograms? I maintain that it is indeed related to the Sumerian and Egyptian. What further evidence do we have for this view?

There are many OB characters containing the *bing* symbol in the *Jiagu* dictionary, but most of them are as yet undeciphered. As far as I can ascertain, one of the few Chinese words which contains the *bing* symbol and still retains a vestige of these ancient meanings of *bing* (**pjiaŋx*) , appears to be the word *bian* (**pjian*) , whose semantic values include "whip", "pizzle of a male animal", "pizzle of an ox, dog, tiger, deer"(*Cihai*: 2037). The *bing* symbol is written twice here, denoting plural number. Various scholars cited in the *XY* dictionary interpret this symbol as a representation of the rump of a horse or buttocks of a man. I interpret the *bing* symbol as simply a male symbol, here symbolizing horses or men. It resembles the Sumerian *ad-da* sign , which can mean male or female ("mother" or "father"). The lower graph is a well-recognized glyph of a hand ( ) holding a stick or whip. OB

(now 更) has the modern Mandarin pronunciation of *geng*, meaning "change", but was probably formerly pronounced *bian* (便), also meaning "change" and "to take over (the control of men)" (*DEZ*: 195). Hence the male symbols *bing* and a hand with a stick. The later SS form (now 便), also containing the male symbol *bing* together with a hand and a stick, however, is now pronounced *bian*, meaning "to urinate", "to defecate". Here there is a slight semantic shift, but the referents are still close to, if not within, the word field.

Furthermore, I interpret as a male symbol in the words *shi*, RS 師 ("troops"), *kuan* ("functionaries"), RS 官, and *xue*, RS 辥 ("govern", an obsolete meaning) [XY: 1544]). The meaning of the symbol in these words is much disputed (*XY*: 0341, 0394, 1430). One view is that it is an abbreviation of, a symbol variously interpreted as representing a bound prisoner (in sitting position, with head bent to the ground), a staring eye, and the buttocks of a man. Some scholars maintain that the eye symbolizes a man, man-servant, or minister. Others maintain that the buttocks symbolizes a male. It seems to me that when we are speakingof troops, servants, and men as the governed masses, or of horses being whipped, it would be more likely that the male would be represented by the male symbol (buttocks perhaps) rather than by the staring eye. I would maintain that the graph is a symbol of the male pudenda and that and are but variants of the *bing* symbol, which like the Sumerian symbol, may represent either male or female as begetter (see above).

These then are the evidence and the reasoning that lead me to the view that Chinese *bing*, Sumerian *ban* ("woman's breasts", "to beget", "daughter", "son") and Egyptian *ben-ti* ("woman's breasts") and *benn* ("to copulate", "to beget"), *ben* ("copulate") are related, since they are similar in sound and meaning.

Waddell maintained that Sumerian *ban* ("breasts", "beget", "daughter", etc.) was related to Egyptian *bann-t* (i.e., *bnt* ["breasts"]) and to Scottish *bairn* ("child") and other Indo-European words (Waddell 1927: 27). I would point out that *bing* also has parallels in Celtic words for "woman"—Old Irish *ben*, New Irish *bean*, Welsh *benyw*, (Buck: 2:22); for "female"—Old Irish *ban-*, Welsh *benyw-*, (Buck: 2.24); and for "breasts"—Old Irish *bruinne*, Welsh *bron*, and Breton *brennid* (Buck: 4.40). Recent

archaeological diggings have indicated the probable presence of ancient Celts in the region west of China, in present-day Chinese Sinkiang (Barber: 135ff). Chinese *ding* ("man") 丁 also has parallels in Celtic: Welsh *dyn* ("man"), Breton *den* ("man"), Irish *duine* ("man"), where "man" means "human being" (Buck: 2.1). We also have Sumerian *din* ("man") (Ball: Sign-list, no. 21).

Still another indication that "woman" or "female" was a semantic value of the graph *bing* 冎 is one noted by Moran and Kelley: The name for the constellation 匚 in the Chinese lunar zodiac, which resembles Hebrew *beth* 𐤁 was named *nu* ("woman") 女 .

Does an important word like *bing* ("woman", "female", etc.) 冎 survive in any other variant or cognate form in Chinese? It probably does. The surviving variant or cognate forms of *bing* probably include *bi* (**pjiəʤx/h*) ("mother" [obsolete], "deceased mother", "ancestress") 妣匕 , *bi* (**pjiəʤx*) ("vulva") 匕 , and *pin* (**pjiəʤx*) ("female")牝匕 (*XY*: 0165, see note by Li Jingzhai李敬齋; 947). Of particular significance is the reconstruction **pjiəʤx/h* (for both Chinese "mother" and "vulva") which corresponds to Sumerian *ban-da* and Egyptian *ben-ti*, where the *-da* and *-ti* are feminine endings. For final *n-da* and *n-ti*, the Chinese has *-dx/h*, still recognizable as the feminine endings (recall that the *bing* 冎 grapheme is similar to both the Sumerian graphemes for female breasts as well as to those for the vulva).

Thus I conclude that *bing* (**pjiaŋx*) 冎 was a glyph for "mother", "vulva", "female", "daughter", etc., and perhaps also for "within", in Shang times and would be similar to Phoen/Heb *beth* 𐤁 in sound, meaning (as "house", "woman"), and graph.

Gimel 𐤂 , 𐤂 , 𐤂 and *wu* (**hmə̀t*) 午 OB 𐤂 , 𐤂 , 𐤂 .

What do we see as the most striking feature of the ancient forms of *gimel* 𐤂 , 𐤂 , 𐤂 ? Obviously their pointed shape. Most scholars believe that *gimel* means "camel", even though they agree that the Hebrew names of the Phoenician symbols may not reflect the original meaning of the symbols and were adopted merely as nicknames. In Egyptian demotic, *gmwl* means "camel". For camel we also have Akkadian *gamalu*, Hebrew *gamal*, Aramaic *gaml-a*, Arabic *gamal*, English *camel*, and French *chameau* . The African Nubian word for camel is *kam* (*Vycichl*: 341).

I believe that *gimel* 𐤂 derives from the Sumerian sign *gim* 𒄑 (Deimel: 190, 96) and the Egyptian hieroglyph *qenbt* ("angle", "corner") 𓎛 , 𓎜 (Budge: cxxviii, nos. 39,40). Egyptian *qenb* also means "angle", "corner" (Budge: 774). The alphabet letter *gimel* is *jim* in Arabic, which brings to mind Chinese (Hakka dialect) *jiam* ("pointed") 尖 , and they may be related to Egyptian *qenb*. *Qeh,* also Egyptian for "corner", "angle", is *kooh* in Coptic (Budge: 777), similar to *gog* ("angle", "corner") in Chinese (Cantonese). Hebrew *gimel* would certainly be an apt word for what looks like a camel's pointed hump. It is obviously much easier to write 𐤂 and 𐤂 , the earliest forms of *gimel*, than 𓎛 or 𓎜 , the Egyptian signs.

Chinese *wu* 午 , 𠂤 includes among its meanings "noon". The OB and BI forms of *wu* include 𐤄 and 𐤄 respectively, both depictions of pestles. The earliest oracle-bone form of *wu*, however, is 𠂤 (RS 糸), a skein of silk..

At first I matched the pestle glyph 𐤄 with *gimel* 𐤂 , 𐤂 because of the pointedness. As for the reconstructed sound of *wu* 午 , Schuessler gives **ŋaagx* and **Cŋaʔ*, while Baxter gives **ngaʔ*, all quite different from Hebrew *gimel*. This was puzzling. Looking again at the earliest glyph of *wu*, which is 𠂤 , I suspected that there might be a different pronunciation. Indeed, this glyph 𠂤 , a skein of silk, had two phonetic values, one being **hmaːt*. This we know from the dictionary gloss (*XY*:1289):

"一蠶所吐為忽、十忽為絲、絲五忽也."

"That which a silkworm spits out is called *hu* [**hmaːt* 忽]; ten **hmaːt* is a *si* [𠂤]. *Si* [𠂤] means five **hmaːt*."

This is followed by the gloss:

"蠶所吐者為糸 ." "That which a silkworm spits out is called *si* [𠂤]."

Since in the first sentence "That which a silkworm spits out is called *hu* [**hmaːt*]" and the second sentence says: "That which a silkworm spits out is called *si* [𠂤]", it means that 𠂤 (糸) was called **hmaːt* or *si,* and this interpretation is borne out in the two modern pronunciations of the glyph 糸 , *mi* and *si.*

Now, **hmaːt* resembles *gimel* in phonetic shape. It also resembles Egyptian *qnbt*. I believe that the pestle glyphs 𐤄 and 𐤄 were also pronounced something like **hmaːt*, in

the Shang translator's time and dialect or topolect (we can only assume that reconstructions are at best approximations of ancient pronunciation).

The glyphs for **hmət*  all feature prominently a pointed tip, namely, "the end", "the extremity". Now *mo* 末 ("end", "extremity") is reconstructed by Schuessler as **mat* (*DEZ*: 427) and Baxter reconstructs *mo* 秣, a word with the same phonogram, also as **mat* (*OCP*: 777). But the Chinese dictionary states that *mo* 末 was in classical Chinese interchangeable with *wu* 勿 (*XY*: 0691), and since *wu* 勿 is used as a phonogram in **hmət* 忽, it would be reasonable to presume that *wu* 勿 and therefore *mo* 末 (with which it was interchangeable) also had the phonetic value of **hmət*. In other words, **hmət*  also meant **hmət* (*mo* 末) "end", "tip", "extremity", similar in meaning to *gimel*, "point", "angle", "corner". *Wu* 午  , meaning "noon" also means the highest point or tip ("noon").

Thus *gimel*  and *wu* (**hmət*) 午  would be similar in sound, meaning ("point", "tip"), and graph.

Daleth  ,  and *ding* (**tiŋ*) 丁 ,OB  ,  .

E. G. Pulleyblank wrote about similarities between the Chinese *ganzhi* and the Phoenician alphabet in 1975 (although he has since rejected the notion that they correspond) (Pulleyblank1996). Certainly, the first few letters would seem similar. *Daleth*  would then correspond to Chinese *ding* 口 (丁). Here again there are similarities in sound, meaning, and graph.

Scholars have conjectured that *daleth* means "door" or "mouth" (Jensen:282, Moran: 73ff). Assyrian *daltu* means "a door", "door of a house", "jaws of a crocodile", "gates of a city", "the door of life". Greek *delta* Δ means "mouth" or "outlet of a river". Hebrew *dal* means "door", among other things (Moran: 73).

The *daleth*  graph probably derives from the Sumerian symbol for mouth or speech,  , pronounced *du*, *dug*, or *ka*, *gug*, *gu* (Ball: 57 and Sign-list, no. 63; Deimel: 5, no. 15). I agree with Ball that this Sumerian word is related to Chinese *kou*, *gu* (**khugx* / **khu?*) ("mouth") 口. Sumerian *du*, *dug* ("speech") would correspond to the Chinese word *dao* (**dəgwx*) ("speak", "speech", "Tao") 道.

The *daleth* graph also derives from the Sumerian symbol for head, , pronounced *sag* (Ball: Sign-list, no. 62; Deimel: 43, no. 194). (I also agree with Ball that it is related to the Chinese word for head, *shou*, *sau* [Cant.] (**skhjagwx*) 首 . Note Hebrew *sar* ["head"] and *sor* ["head of cattle"]). *Daleth* , is probably a simplification of the Sumerian , which may be related to the Egyptian hieroglyph , *unem* ("eat, devour") (Budge: cix).

Daleth the letter for *d*, is *dant* in the Ethiopic alphabet, where the *-l-* corresponds to a nasal consonant. Similarly, in the Chinese character *ding* (**tiŋ*) 丁 corresponding to *daleth*, the *-l-* corresponds to a nasal sound.

The glyph *ding* looks like the Chinese graph for *kou* ("mouth") , , . *Kou* ("mouth") is also used metaphorically as "mouth of river" (similar to the Greek usage), "mouth of the alley", etc. "Door" and "mouth" (entrance) has a common meaning.

One of the meanings of **tiŋ*, , is "head", also later written 頂. Another meaning is "man," or "adult male". As we know, "mouth" is often synonymous with "person", as in the phrase "mouths to feed". And Chinese **tiŋ*, (("mouth" or "head"), also meant "person" for census, household registration, and military draft purposes. The pictogram for **tiŋ*, , is similar to *daleth*, both being abstract line contours of an orifice representing the mouth or the head.

Tiŋ*, 丁 (OB)("man"), is probably related to Sumerian *din*, *tin* ("male", "man"), represented by the sign (male pudenda) (Ball: Sign-list, no. 21). C. J. Ball maintained, however, that this Sumerian word and graph is related to Chinese *chen* (djin*) ("male servant") 臣 (OB) which is also most likely a symbol of the male pudenda. Parallels of *din* ("man") are also found in Celtic, as we have already observed.

Thus Phoen/Heb *daleth* is similar to Chinese *ding* (**tiŋ*) 丁 , OB in sound, graph, and meaning (as "door", "mouth" ["entrance"], "head") .

He , , and *hai* (**ge?*) , OB , .

Here again sound, meaning, and graph are similar. Many scholars (Diringer 1948, Jensen 1969) believe that *he* meant "fence." One of the meanings of Chinese *hai* , is "boundary" (*Cihai*). Later *hai* ("boundary") was written 垓. Another meaning, very

close to "boundary", was "barrier", *hai* 𠂤, later written BS 𠂤阜 (XY: 1967). Thus in sound and meaning *hai* 𠂤 is similar to Phoen/Heb *he* ("fence") 𐤄. The glyph for *hai*, 𠂤, although similar to that for Phoen/Heb *he* 𐤄 does not depict a boundary, but a root; for one of the meanings of *hai* is "root", later written 𠂤木. All the same, *he* 𐤄 and *hai* 𠂤, resemble each other in sound, meaning (as "fence", "boundary", or "barrier"), and graph.

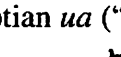
Waw 𐤅, 𐤅, 𐤅 and *wu* (**mugh / mu?h / *məw?h*) 戊, OB 𐤅. Although the archaic Chinese pronunciation of *wu* 戊 is reconstructed as **mugh*,**mu?h*, or **məw?h* (*DEZ*: 650), it was probably also pronounced *wu* as it is now pronounced in some dialects. On the ancient pronunciation of Chinese words Victor Mair writes:

> Since next to nothing is presently known of ancient and archaic Sinitic morphology (except a smattering about affixes, pronominal cases, etc.) let us concentrate on phonology for now. The total phonological system of Sinitic consists of all the sounds customarily spoken in all of the branches, languages, dialects, and subdialects of that group. Because the vast majority of these sounds have never been recorded in sinographs (indeed, many of the morphemes conveyed by these sounds are not directly representable by the sinographs) ..., we have to get at these sounds by any feasible means, including...
>
> 1. ...careful observation and comparison of all the hundreds of Sinitic languages, dialects, and subdialects still being spoken today...
> 2. ...research on the borrowings of foreign words in Sinitic texts and the borrowing of Sinitic words in foreign texts.... (Mair: 1996)

Thus the inferred archaic pronunciations **mu?h / *məw?h* (*DEZ*: 650) of *wu* 戊 were not necessarily the only pronunciations, since so little is known of ancient Chinese pronunciation among the many dialects. It is quite probable that some dialects

pronounced 午 as *wu* (or something close to *waw*) and others as **mu?h / *mɔw?h*, since *wu* and *mu* sounds frequently alternate across dialects, as shown by the following words:

舞 wu (Mandarin) 侮 wu (Mandarin) 務 wu (Mandarin)
舞 mou (Cantonese) 侮 mou (Cantonese) 務 mou (Cantonese)

Now let us consider the pictographic composition and meaning of *waw* 𐤅. Scholars tend to agree that *waw* probably meant "hook" (Moran: 77; Jensen: 282). "Hook" is among the several meanings of *waw* in Hebrew. Chinese *wu* 𠂤 is a halberd (combination of spear and battle-axe) with a hook at the end. Chinese *wu* (**mu?h*) may be related to Sumerian *mul* ("spear") (Ball: 106), Egyptian *marhu, markh* ("lance", "spear") (Budge: 283) and Egyptian *ua* ("pike", "harpoon")  (Budge: cxl, no. 43). Certainly Chinese *wu* ("hooked halberd") 𠂤, Phoen/Heb *waw* ("hook") 𐤅, and Egyptian *ua* ("pike", "harpoon") are similar in sound, meaning, and graph. Later renditions of *waw* are 𐤅, 𐤅, but these may reflect much earlier forms.

Thus, there is similarity of sound, meaning, and graph between Phoen/Heb *waw* 𐤅 and Chinese *wu* 午, 𠂤.

Zayin 𐤆 (ancient Greek forms 𐤆, 𐤆) and *ren* (*nzjəm* [*DEZ*: 507]) 壬, OB 𐤆.
Here there is similarity in sound, meaning, and graph. The meaning of *zayin* 𐤆 has been disputed (Moran: 79). Jensen agrees with those who maintain that *zayin* almost certainly means "weapon" (Jensen: 282). Moran and Kelley speculates that *zayin* corresponds to Sumerian *zi, zin* ("life", "soul", "living creature", etc.) (Moran: 79).

My interpretation of the meanings of Hebrew *zayin* 𐤆 and Chinese *ren* (*nzjəm*) 𐤆 follows.

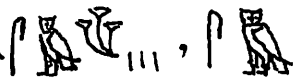
The earliest meaning of *ren* (*nzjəm*) 𐤆 is not readily discoverable in Chinese dictionaries because it is not given under the character *ren* 壬, 𐤆 itself. (The *Cihai* is obviously the work of multiple editors, for the editor of one section is sometimes unaware that a problematic graph has been treated in another section.) *Ren* 𐤆 is hidden in the gloss of another word, the word *luan* 亂 (*Cihai*: 0030), whose surviving meanings include "disorder", "rebellion", "calamity", "confused". An obsolete meaning is "to order affairs". It has been noticed that this word *luan* 亂 means both "disorder" and

attested meanings of "the west", "crime", "sorrow", "hardship", "pain", "a pungent taste" and "renewal through fasting and abstinence". It is also synonymous with *xin* (*siŋm*)  ("new", "to renew").

In a recent article Kwang-chih Chang maintains that *siŋm*  meant in Shang times "the ancestral image", or "the ancestor" of the Shang, and that *siŋm* "was the original ancestor worship" of the Shang rulers (Chang 1995: 76-77).

Let me present my interpretation of the Phoen/Heb graph *samekh*  and the Chinese *siŋm* :

There is strong evidence that *samekh* is related to the Egyptian hieroglyph which probably had among its meanings "herb", "grass", "vegetables", "corn", and "crop", and probably *sem* as one of its phonetic values. Here is some of the evidence for the sound *sem* and its meanings:

Sem ("herb", "grass", "crop", "pasture", "field"),  . (Budge: 667)

Budge gives about 18 different hieroglyphic forms for this word *sem*, 7 of them containing both the sign and the sign  , but placed in various positions. In three of these 18 hieroglyphs for *sem*, the sign  appears without the sign. Budge also gives *sim* as the corresponding Coptic word for *sem*.

First of all, a few words on Egyptian writing. Egyptian writing operates on the same essential principles as Chinese writing. The basic unit in ancient Egyptian is the pictograph, which can function as a word (logogram), a phonogram, or a semagram. A word typically has a phonetic component and a semantic component. The phonetic component consists of a sequence of phonograms, each typically representing a sequence of one to three consonantal phonemes. Vowels are generally unexpressed. This is followed by a semantic component consisting of a semagram (Loprieno: 12-13), called the "determinative" or "classifier" (corresponding to the "radical" in Chinese), which indicates the sphere or domain of the meaning of the word. A difference between Egyptian and Chinese is that the phonetic component in Egyptian is represented by consonants or syllables whereas it is syllabic in Chinese. Egyptian writing, like Chinese, may be written from left to right or from right to left, and from top to bottom. The

English *mere*, German *Meer*, etc. ["sea"]; and Sumerian *si* ["water"] would correspond to Chinese: Cantonese *soi* ["water"] 水 , English *sea,* Old English *sæ*, Dutch *zee*, and German *see*, etc. ["sea"].)

Although "fish" is generally the meaning assigned to *nun* 𓆑 , for "fish" is *nun* in Aramaic and late Hebrew, and *nunu* in Assyrian (Moran: 96) , the glyph is probably derived from the ancient Egyptian phonogram for the consonant *n*, written as 𓈖, which means "water" (Loprieno: 15). *Nun* 𓆑 would be an abbreviation of 𓈖. In South Semitic: Proto-Arabic scripts, which date to as early as the 5th and 6th century BCE, alphabet letter *n* includes the forms 𐪘, 𐪘, 𐪘 , which resemble Sumerian and Egyptian symbols for water (Jensen: 338).

Yi (**ʔarjət*) 𓆓 also means "fish gut". This would also resemble the Hebrew meaning of *nun*, which is "fish". *Nun* was probably a semiticization of Egyptian *nu-t* ("water", "stream", etc.) and "fish" would be a close rendition of the Egyptian meaning, since fish may be regarded as a metonym for water.

Thus *nun* 𓆑 , 𓆑 and *yi* (**ʔarjət*) 𓆓 , 𓆓 resemble each other in sound, meaning (relating to water and fish) and graph.

Samekh 𓊽 , 𓊽 and *xin* (*siŋm* [South Fujian: Taiwanese] / **sjin*) 𓊽 , OB 𓊽, 𓊽, 𓊽.
The meaning of *samekh* has hitherto been highly uncertain. Jensen says: "...*samekh* (a support? fish?)" Moran and Kelley speculate that it may be the Hebrew word *samakh*, "to lay a hand" on the victim of the sacrifice, "to support" or " lift up" (seemingly, a sacrificial carcass before the altar) (Moran: 98).

Schuessler reconstructs the archaic sound of *xin* 𓊽 as **sjin* (*DEZ*: 683). However, the South Fujian:Taiwanese pronunciation *siŋm* is much closer to Hebrew *samekh* and may very well have been closer to the ancient pronunciation of *xin* than Schuessler's **sjin*. Moreover, the South Fujian: Amoyese sound for *xin* ("dense and luxuriant foliage") 𓊽 , which has 𓊽, 𓊽 as phonetic sign and was probably one of the semantic values of 𓊽 , is *sim*. Therefore I shall refer to *xin* 𓊽 , 𓊽 as *siŋm*.

The original meaning of the glyph 𓊽 *siŋm* is disputed (*XY*:1848). One scholar sees it as the depiction of a blade, believing it to signify crime and punishment. *Siŋm* 𓊽 has the

signs and stand for "water". The Chinese pictogram would be an impressive example of graphic wit. As a symbol of the male pudenda, it is more abstract and witty than the literal rendition of the corresponding Egyptian hieroglyph. Some versions of early North Semitic *mem/mu* suggest that it may have doubled as shorthand for the Egyptian pictogram of the phallus, but that may be reading too much into the proto-Phoenician symbol.

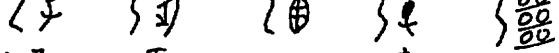
In any case, it is here argued that there is a three-way resemblance between Phoen/Heb *mem* and Chinese *mao*, in sound, meaning, and symbol.

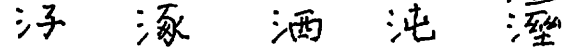
Nun , and *yi* (**ʔarjət*) , OB , , .

There is frequent alternation between the *r* and *n* sounds in Chinese, for example, *ren* (Minnan *nin*) , *ri* (**njit*) ("day") , and *rou* (**njəkw*) ("meat") . There are instances of the same radical being pronounced with initial *-n* or *-r* (e.g., *ru* and *nu* ; *nuo* and *ru*). **ʔarjət* indicates a guttural initial *r*, corresponding to the Hebrew initial *n-* in *nun*. Hebrew final *-n* in *nun* corresponds to Chinese final *-t* in **ʔarjət*. This may indicate that *nun* was originally *nu-t* in Shang times, for *nu-t* was an Egyptian word meaning "water" (Budge: 349). Budge points out that the Egyptian initial *n-* was probably palatalized like the Spanish *ñ* (Budge: lxiii), and this would be reflected in the *-rj-* of the Chinese **ʔarjət*.

Nu-t (one of many variant forms), also means "lake", "pool", "stream", "canal" (Budge: 349).

Chinese *yi* (**ʔarjət*) , meant "a small stream" (*XY*: 0385), a meaning that is now obsolete. Its meaning as "small stream" or "water" is attested by the many OB characters having , as the classifier for water (*Jiagu*: 1090ff):

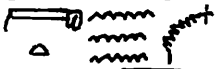
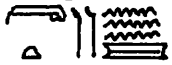
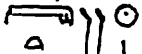
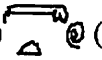
OB form: 

Modern form: 

This water radical , the same graph as *yi* (**ʔarjət*) , appears to be an abbreviation of Sumerian *a*, *me*, *si*, etc. ("water") , , (Waddell 1927: Plate IV; Deimel: 184.949). (Sumerian *me* [water"] would correspond to Chinese **hmiʔ* [*OCP*: 761] / **me* / **meʔ* [reconstruction based on words with *mei* phonograms, *DEZ*: 408]["sea"],

Chinese *mao*, **mru*,  , SC  , meaning "the Pleiades", "power", "nobility" (in relation to one's horoscrope). Ball points out that Sumerian *mu* ("man", "male") (from MU-SH=GUSH, GISH) corresponds to Chinese *mou* (**məgwx/*mə w?*) ("male of animals")  (Ball: 106). *Mou* ("male of animals") may be a surviving variant of *mao* (which I have conjectured as "male pudenda")  , just as  ("female of animals") may be a surviving variant of OB *bing*  (RS), which I have conjectured to have originally meant "mother","vulva", "female", etc.

In Egyptian hieroglyphs, procreation and seed are associated with water, as they are in the Chinese glyph *mao*, **mru*, . Similarly, the male organ in ancient Egyptian hieroglyphs is used both as a procreative symbol associated with water, and as a symbol of power and authority, and simply as a phonetic sign (for *met* in Egyptian) as well:

Egyptian *mu*  is "water"; *mu*  means "water", "essence", "sperm" (Budge: 293); *met*  means "phallus"; *met* ("seed")  ; *met* ("inundation")  *met* ("canal bank")  ; *met* ("chief", "governor")  ; *met-t* ("noon"),  (related to English "middle" and Chinese **hmet*, "noon"?) ; *met-t* (right, proper)  (related to English *meet*["proper"]?); *met* ("a kind of cloth")  (The represents a *t* sound; Budge: 331-32.)

Hebrew *maor*  means "pudenda"; *mod* means "power", "strength", "force". These Sumerian, Egyptian, and Hebrew words are similar to Chinese *mao* (**mru*) in sound and meaning. (There are also correspondences in Indo-European: for example, Old High German *maht* [power], Sanskrit *medhra* (phallus), Latin *muto* (phallus) [Buck: 4.492].)

Although *mem* is the name for  in the alphabet, it may be a later hebraization of Egyptian or Assyrian *mu* ("water"), and it may have been still close to the *mu* sound in the Shang period, as indicated by Greek *mu* and Chinese *mao*,**mru*.

Phoen/Heb *mem* and Chinese *mao* (**mru*) , RS are then similar in sound and meaning ("water" and its associations). As to the graphemes, I would argue that there is a conceptual resemblance. Both depict a pathway of flow, the Phoen/Heb and the Chinese , where in the Chinese the central channel (||) in suggests the phallus and flow, as well as the neck of a jar or water-pot and flow. In Sumerian, the

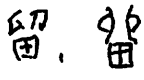
You (**ljəw?*)
("**stream**",
"store water",
"store water
for irrigation",
"irrigated field",
"wine")

liu (**ljəgw/*rjəw*)
("stream, flow")

liu (*[C]*rjəw?*)
("**stream, flow**")

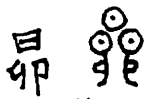
liu (*[C]*rjəw?*)
("**stream, flow**")

liu (*[C]*rjəw?*)
("**stream, flow**")



liu (**ljəgw / *Crjəw*)
("[to let water] **flow** [into fields]",
i.e., "**to irrigate**", "**to store**
[hold back] **water** [in fields]")
("hold in reserve", "remain", "tarry", etc.)

mao (**mru*)
("**water**",
"**male pudenda**")



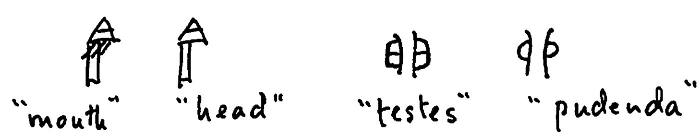
mao (**mru*)
("Pleiades",
"power","nobility")

Table. 5. Interpretation of *mao* (conjectured meanings are in bold-face).

phonetic value of *liu* (**(C)rjəw?*) (now written), a near-homophone of *you* (**ljəw?*) ("wine", "store water for irrigation", "irrigated field") 酉 and *liu* (**rjəw*) ("stream") 流.

A well-recognized meaning of *mao* (**mru*) 卯 (later ,) is "the Pleiades", symbolizing power and nobility (*XY*: 662). I maintain that in addition to the meaning of "the Pleiades", "power and nobility", the glyph also meant "male pudenda" as well as "testicles". Here the glyph of the top of a water-pot with two ears would have taken on the meaning of male pudenda through visual punning. The idea of visually associating the male pudenda with water, generation, power, and nobility would be related, if not derived from, the corresponding words and earlier scripts of Sumeria and Egypt, as will be shown. A comparison of the words I have just discussed and believe to be cognates are displayed in Table 5.

It is reasonable to assume that the glyph also represents the male pudenda because *mao* has the alternate phonetic value *liu* and *liu* resembles *luan* ("egg", "testicles") (BI) in sound. Moreover, since the latter glyph does not appear in OSBI, but only in bronze inscription script, we may presume that *luan* ("testicles") was earlier written as . Also, since means "testicles", it is logical to assume that meant the male pudenda, for by accentuating his meaning with the two lines, the scribe is simply saying: "I mean—this." This is like the Sumerian scribe when he wrote for "head" and for "mouth", "speech". In the latter he added the diagonal strokes to say: "I mean this—mouth."



This interpretation of *mao* (**mru*) , is clarified by the comparison in Table 5. The Chinese *mao*, *liu* (**mru* /*[*C*]*rjəw?*) ,OB , suggest that these words and graphs were related to corresponding words and graphs in Sumerian and Egyptian. Sumerian *mag* ("great, high, exalted") is represented by the glyph of a phallus: (Ball: Sign-list, no. 28) and the Sumerian "male" signs include and (Ball: Sign-list, no. 19). Ball cites as his source Fritz Hommel's *Sumerische Lesestucke* (1892). Sumerian *ma*, *mu* ("beget")(Ball: 102) correspond to Chinese *mao*, **mru* (depiction of male pudenda); and Sumerian *ma*, *mu* ("to rise, shine", of sun, stars) (Ball: 102) correspond to

utensil for holding water. Thus there is a three-way resemblance, in sound, meaning, and graph between *lamed* 𐤋 and *you* (**ljə w?*) 酉.

Mem 𐤌 , 𓈖 and *mao* (**mru*) 丣 ,OB 𠂤 , 𠂤 , 𠂤 .

Mem is generally thought to mean "water." *Mu* means "water" in Egyptian (Budge: 280) and Assyrian; *mayim* means "waters" in Hebrew (**hmə?*, 海, is "sea" in Chinese; *mere* is "a sheet of water" in Old English, *mare* "sea" in Latin, etc.). The Phoen/Heb glyph 𓈖 is an abbreviation of Egyptian *mu* 𓈗 ("water") (Budge: 293), the sound of which has been reconstructed as **maw* (Loprieno: 12). Chinese *mao* (**mru*) is a depiction of what has been interpreted by Chinese scholars as two flaps or panels of an open door. C. J. Ball interprets it as the male pudenda, and I would concur (Ball: Sign-list, no. 26). However, it is a a door as metaphor (a door to generation). The 𐤄 , 𐤐 symbol is a door symbol in the South Arabic alphabetic script (e.g., Thamudic and Safatene) (Jensen: 338) and I believe the resemblance between Chinese 𠂤 and the South Arabic symbols is not just an accidental coincidence.

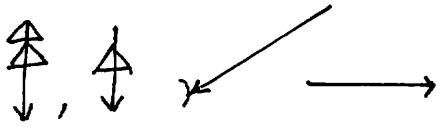
The glyph 𠂤 has not been fully explained in the epigraphical dictionaries, although the commentators cited are helpful. Lin Yiguang 林義光 observes that 丣 was originally the same word as 𠙵 and 𠙵 (*XY*: 0182). Lin maintains that 𠂤 depicts a helmet; Li Jingzhai that it depicts knives (*XY*: 0182). They may be correct, as the glyph can represent different icons through visual punning. However, the dictionary gloss that 丣 means "the holes for ropes on a wooden vessel" is most illuminating. I see 𠙵, 𠙵 and 𠂤 as the top of a wine or water pot, jar, or bottle, with the rings or ears for handles or ropes.

The fact that the pot has only the top and not the bottom would indicate the meaning "flowing", "flowing out" or "pouring" of water or other liquid. Or it could simply be shorthand for a water pot, symbolizing liquids, including water, and actions such as flowing or pouring.

I maintain, therefore, that a lost meaning of *mao*, **mru*, 𠂤 , is "water" or "water flowing", a meaning that would correspond with Hebrew *mem* ("water") and Egyptian **maw*. This interpretation is supported by a number of facts. One is that 丣 also had the

Sumerian *lud*, *dug*, *duk* ("pot", "vessel", "to pour water", "to inundate"

simplified to



Sumerian *bal* ("to dig for water", "to draw up water")

a-bal ("irrigation)

(Ball: Sign-list, no. 102)

[*ba-al*][*BAL*]=[*da*]-*lu-u* (*AD*: D.56)

bal=*da-lu-u* (*AD*: D.56)

ba-al ("to dig out water")

(*SD*: "B": 10.11;10.1.3)

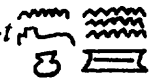
Sumerian *lud*, *dug* ("pot", "jar", "pitcher", etc., "to pour water", "to inundate"), corresponding to South Semitic alphabet letter *lawe*, Babylonian *dalu* ("draw water from well"), Mid-Assyrian *dalu* ("bucket used in irrigation", "irrigation with water drawn from well", "field irrigated by water drawn from well") (*AD*: D.56), and through interchange of *-u-* and *-mu-*, to Neo-Assyrian *lummu* ("a small pot"), and Hebrew *lamed* ("ox-goad")  , which in turn corresponds to Chinese **ljəw?*  , 酉 (glyph of pot or jar, meaning "wine", "store water for irrigation", "irrigated fields"), probably related to Sumerian *lud*, *dug* ("pot", "inundate") Akkadian *rihu* ("pour water", "inundate"), Egyptian *nu* ("pot", "liquids"), and Egyptian *nu-t*  ("mass of water") .

Table 4. Interpretation of Hebrew *lamed*  and Chinese *you* (**ljəw?*)  , 酉 .

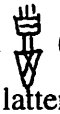
Dictionary tells us that dug. (lu-um) DUG=*lu-um-mu*, that DUG.DUG=*lum-mu, na-as-pa-kum.* and that Neo-Assyrian *lummu* meant "a small pot" (*AD*: IX.246). It appears then that Sumerian *dug* ("pot","pitcher", "jug", "to pour water", "inundate", etc.) was read *lummu* in Neo-Assyrian, meaning "a small pot"(*AD*: L.246), just like Chinese characters taken over by the Japanese can have two pronunciations, a Chinese one and a Japanese one. Neo-Assyrian dates from the 10th to the 7th century (Caldwell 1975: 4). Neo-Assyrian *lummu* ("a small pot") was probably a cognate of Hebrew *lamed* 𐤋 . Probably in the early Shang period, the letter 𐤋 (*lummu, lamed, lawe)* was still named Sumerian *lud* ("pot", "pitcher", "to pour out", "inundate", "irrigation") in the proto-Phoenician alphabet. The *-u-* sound in Sumerian *lud*, corresponding to South Semitic *lawe*, probably later became a *-mu-* or *-m-* sound, as in *lummu* and *lamed.* This interpretation is sketched in Table 4.

The Sumerian glyphs for "draw up water", "irrigation", *bal*  , depict abstractly the top of a well or other water-drawing contrivance and a vessel (bottle, pitcher, pot, etc.) being lowered by a rope or pole to draw water. *Lamed* (Neo-Assyrian *lummu*) 𐤋 would be an abbreviation of those glyphs. Notice that "pot", "jar" or other vessel for holding water, "to pour water", and "inundate" are all objects or actions implied by the word "irrigation". *Lamed* was probably a hebraization of an earlier name of the 𐤋 glyph, which certainly also looks like an ox-goad.

That the Chinese did not translate *lamed* into a word approximating "ox-goad" but into **ljəw?* ("wine", "store water for irrigation", "irrigated field") indicates that *lamed* was originally Neo-Assyrian *lummu* ("a small pot") or a related form of *lummu*, probably after the early Shang period (the sound was probably still Sumerian *lud* in the early Shang). Greek *mu* also reflects an earlier (in this case, Egyptian or Assyrian) word for water, *mu*, rather than Hebrew *mem.* Thus *lamed* (related to Neo-Assyrian *lummu* and Sumerian *lud*) and *you* (**ljəw?*)  , 酉 would have been, in proto-Phoenician, similar not only in sound (as evidenced by South Semitic *lawe*, Sumerian *lud*, Neo-Assyrian *lummu*, etc.) but also in meaning ("pot", "inundate", "irrigation"). As to graph, *lamed* 𐤋 (a ladle) and *you (*ljəw?)*  are pictorially similar in concept, since both are icons of a

31]. This appears to be similar to the frequent interchange of *n, r, l, j,* and *nr* among Chinese speakers or across Chinese dialects. E.g., *yu* ["fish"] 魚 is *nr* in some Hubei dialects.) Egyptian *nu-t*, Sumerian *lud*, and Chinese **ljəw?* are similar in sound, meaning ("water-pot", "water" or "liquid"), and graph (a pot or jar), a three-way correspondence.

Chinese **ljəw?*  like Sumerian *lud, dug* ("pitcher", "pot") also appear to have had two sounds:

1) **ljəw?* (corresponding to Sumerian *lud*)  meaning "wine", "store water for irrigation", etc., and
2) **tsjew?*, **dzjəw* (corresponding to Sumerian *dug, duk*), as in  (RS 酒)("wine"), and  (RS 酋) ("wine"[obsolete usage], "chief", "leader", etc.) (*DEZ*: 842,1857). In the latter word,  , the graph for wine also served as a phonogram for other words ("chief", "leader", etc.). But the graph is that of a wine or water jar or bottle, and Gao Hongjin 高鴻縉 points out that the phrase **dzjəw-ren* (酋人) meant "server of wine", "「酋人」即「酒人」", in the *Zhou Li* (*Zhou Rites*) (*XY*: 1857). Furthermore, the graphs of **tsjəw?* and **dzjəw* resemble that of Sumerian *lud, dug,*  . (Ball: Sign-list, no. 14). Since there is resemblance in both sounds, in meaning , and in graph—a fourfold resemblance—one is led to the conclusion that the Chinese word was related to the Sumerian.

I show later on (under Phoen/Heb *mem*) that **ljəw?* ("wine", "water stored", "irrigation") also originally meant "stream", "water", "flow". This further supports the belief that Akkadian *rihu*, Sumerian *lud, dug, duk*, Egyptian *nu-t, nu*, and Chinese **ljəw?* are all related, being similar in sound and meaning. (Budge points out that Egyptian *n* had a $\tilde{n}$ sound; that would correspond to Chinese *lj-*) (Budge: lvii).

The *lamed* glyph  could be interpreted as an abstract depiction of a ladle or vessel (bucket, jug, pot, etc.) for scooping up water. Obviously it looks like a ladle or dipper. The *lamed* glyph is probably a shorthand for Sumerian glyphs for *bal* ("to dig for water","to draw up water") (Ball: Sign-list, no.102) and *lud, dug* ("pitcher", "pot", etc.), as shown in the diagram below. Chinese **ljəw?* is the picture of a jar, pot, or bottle, a symbol for "liquids", or "stored liquid" (hence the extended meanings, "water stored for irrigation", "irrigated field"). Obviously, is faster to write than . The Assyrian

include "exhaust" ("reach to the end"), "the end", "return (home)", "to rest", "to cease", "empty", "full" (*DEZ*: 501; *XY*: 1973). *Gui*  , is the last of the ten heavenly stems, and the meaning of "rest" or "full" would be an appropriate name for the last day of the ten-day week.

Moran and Kelley note: "As primitive counting is done on fingers and there are five fingers on a hand, we would get from this character [] 4x5 or 20, the numerical value of *kaph* in the Semitic languages."(Moran: 89).

Kaph  , and *gui* (**khwiət*) , resemble each other in sound and meaning ("hand", "hands reaching"). They also resemble each other in symbol because each represents a hand abstractly as a stick with three prongs (and , of which appears to an abbreviation). Thus, there is a three-way resemblance between *kaph* and *gui.*

Lamed (South Semitic *lawe*)  , and *you* (**ljəw?*) , OB , , , .
The meaning of *lamed* has been uncertain. Some scholars believe it means "ox-goad" (Jensen: 282). The sounds of *lamed* and Chinese **ljəw?* are only similar in the initial *l-*. However, there is greater resemblance between the sounds of Chinese **ljəw?* and *lawe*, the South Semitic variant of *lamed* (Jensen: 266, Fig. 222).

**Ljəw?*  , , a glyph of a water or wine pot or jar, means "wine", "to store water for irrigation", "irrigated field"(*XY*: 1857). It is almost certainly related to Akkadian *rihu* ("pour water", "inundate") (Waddell 1927: 61), as well as to Sumerian *lud, dug* ("pitcher", "ewer", "pot", "jug") , which Ball points out (Ball: 102; Sign-list, no. 14), to *duk* ("pot", "bowl", "dish"), *duk* ("pour water", "inundate"), and *duk* ("open a canal") (Waddell 1927: 61, 62); and to Egyptian *nu* ("vase", "vessel", "pot", "what is fluid or viscous") and *nut* ("mass of water", "lake", "stream", "pool", "canal") (Budge: cxliii, 349). In Sumerian *lud, dug*, the *l-, d-* alternate and the *-d, -g* alternate. Sumerian *n-, l-* often alternate (Ball: 97) as they do in Chinese, both consonants being alveolars, and so it is not surprising that Egyptian *n-* in *nu* and *nu-t* would correspond to Sumerian *l-* in *lud* and Chinese *l-* in **ljəw?* . (Egyptian hieroglyphs did not have an *l* phoneme in its consonantary. The *l* sound when it did occur was represented by *n, r, j,* or *nr* [Loprieno:

Kaph  ,  and *gui* (**khwiət*) , OB, , BS , SS 
This correspondence was identified by Moran and Kelley. *Kaph* is generally thought to mean "hand," "palm of the hand" (Moran: 88). Other meanings assigned to it include "to press down" (Diringer). *Kappu* is Assyrian for hand (Moran: 88).

The Egyptian hieroglyph  of the hand with palm down is pronounced *kep* (Ball: cviii); another  of a dog's or lion's foot is pronounced *kap*. "Hand" and "foot" were probably often not distinguished in ancient times. Chinese *zhi* ("toe") is homophonous and synonymous with *zhi* ("finger"). In Chinese, the symbol is sometimes used for claw (which can mean "foot"), sometimes for hand (as in *shou* ["receive"] BS [*XY*: 0197]) . Phoen/Heb *kaph* is very similar to the common Chinese OB sign for hand, .

The Chinese *XY* dictionary cites *Shuo Wen* as saying that the SS radical in depicts two feet, left and right (*XY*: 1090). Moran and Kelley are probably correct when they surmise that the earlier, OB, form of *gui* ( ) depicts hands. I believe the graph is a depiction of "reaching (with hands)". The four crosses in the OB graph would represent hands. The cross is a common symbol for hand(s) in OB, e.g., in *shou* ("receive")  (RS) and *qu* ("take") (RS). The cross is probably a shorthand for the OB hand symbol . Also the OB graph *wu* means "five", and may have represented the hand (five fingers).

The BI, probably later, form of *gui* depicts arrows, leading some Chinese scholars to interpret the earlier OB glyph as a picture of a weapon, later written (*XY*: 1090). This may have been one semantic value of the graph. The arrows probably reflect the later scribe's preference for the symbol of feet over hands. Arrows would symbolize "go/reach" while hands would symbolize "reach", and the word **tia* ("toes") , is also written **tia* ("go/reach") (RS), the glyph of an arrow reaching a line, parallel with English *toe/to* and German *Zehe/zu*. The arrows of appear again in a later, SS, form (by a later scribe) with feet radicals (*XY*: 1090).

I conclude that the word represented by *ganzhi* sign *gui* (**khwiət*) , (vis-a-vis Phoen/Heb *kaph*) is the one that was later written *que* , a word whose meanings

irrigated field. Since irrigation or watering a field is essential for farming or cultivation, it would explain why the glyph 辰 () appears in words that mean "to farm", "to hoe" (or it may have served as a rebus that was pictorially appropriate).

Egyptian *ṭen-t* and *ṭennȧu* (Coptic *thene*) are two of the various words for "field" (Budge: 881, 882). Egyptian *ṭenȧ* means "to embank", "to build the sides of a canal or dyke", and *ṭenȧ-t* means "embankment", "dyke", etc. (Budge: 882). Egyptian *ṭennu* means "canal", "stream" (Budge: 882). These words are phonetically similar to Chinese **djən*, and also fit well with the Chinese pictograph. They may be related. "Irrigated field" in Egyptian hieroglyphs is *shṭi-t*  (Budge: 758), close phonetically to Hebrew *tith*, mud, clay, and may be related to it. A watered field would certainly be a field of mud.

Egyptian *ṭenȧ, ṭenȧ-t*, or *ṭennu* may also account for the two sounds of **djən*, namely **djən* and *nung* or *nu / nou* 農, 耨.

Thus Phoen/Heb *teth* and Chinese **djən* would be similar in sound and meaning. They are also similar in graph in that both  and  represent land crossed by a pathway or waterway. *Teth* and *chen* (**djən*) would then be similar in sound, meaning, and graph.

Yod  ,  and *ji* (**kjəʔ*)  ,OB  ,  .

The graphic resemblance between *yod* and *ji* (**kjəʔ*) is close. *Yod* is commonly glossed as meaning "hand". *Gid, gad, id* is hand in Sumerian. Sumerian *id* also means "skill" and "power" (Ball: 82). *Idu* is "strength" in Assyrian and related Hebrew words mean "strength", "power", "the hand of the Lord", "to handle" (Moran: 87). *Kjəʔ* has among its meanings "to sort silk threads" (later written). *Kjəʔ* also means "regulator", "to guide", "to lead", meanings which imply strength and power emanating from the hand.

The sound of the proto-Phoenician letter *yod* may have been closer to Sumerian *gid*, and Chinese **kjəʔ* may have resembled it. In any case the glide *-y-* and *-j-* are similar in the Hebrew and the Chinese.

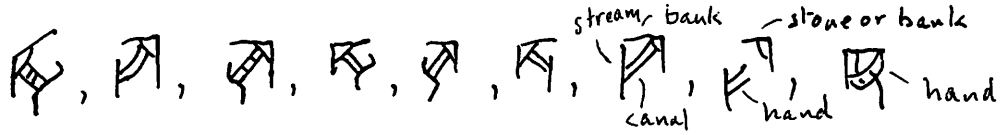
Hence *yod* and **kjəʔ* , are similar in sound, meaning, and graph.

Also, Chinese **ljəw?* ("water-pot", "store water for irrigation") , **ljəd* ("water-pot") and Sumerian *lud* ("water-pot") (Deimel: 99, no. 575.8) are similar in sound and meaning. This is important as I will soon argue that **djən* probably means "irrigated field", "raise an embankment, dyke", "irrigation".

As to the original meaning of the pictogram **djən* , we find in the epigraphical dictionary (*XY*:1855) the explanation of Li Jingzhai that "*Chen* means *chen* , which is to say, *zhen* or *dian* 'to lay out', 'to farm'. It depicts a hand manipulating stone ( )." The well-recognized OB glyph for "stone" is , . The OB glyph (now , *han*) also has the meaning "cliff", or "the high bank along a stream or sheet of water" (*XY*: 186).

Li Jingzhai probably comes close to the original meaning of **djən* . I break down the glyph into its components as the OB logogram for "small stream" (*yi*) (*XY*: 0385, under *chuan*) plus a glyph for "irrigated land" ( ) or "waterway" ( ) plus the OB logogram for "embankment" (*han*) (*XY*: 0186). The combined pictogram would mean "irrigated land", "irrigation canal", or "irrigation".

In some variants, the "canal" sign ( ) becomes a "hand" sign ( ), and the resulting combined pictogram would be a hand raised towards an embankment, which would signify "raising an embankment" or "building a dam" or "irrigation":

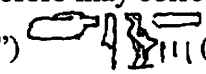
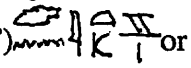


It should be noted that the "stream," "waterway" sign (sometimes straightened to) and seem to be derived from the Sumerian signs for "water", and (Deimel: 184, no. 949). The sign for irrigated land seems also to be derived from the Sumerian sign for "land along a canal"( ) (Deimel: 39, no. 170).

"Raising an embankment", "raising an irrigation dyke", "irrigated field" or "irrigation" would then be the original meaning of the glyph. This meaning would survive vestigially in the word *chen* ("to raise"). It may also survive in the word *dian* ("to raise", "to submerge in water", "to be submerged in water"). This *dian* pictogram is composed of two logograms, *zhi* ("to hold") and *tu* ("earth") . "To submerge in water" or "be submerged in water" could be a description of irrigation or an

that the Phoenician *teth* sign  is probably connected with land, field, or irrigated field (even though one of the semantic values of Sumerian is "sheep").

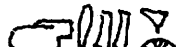
But what about the name of the sign, *teth?* Does it correspond to a Sumerian or Egyptian word meaning "land", "field", or "irrigated field"?

As we have observed, Hebrew *-th* often corresponds to Chinese, Sumerian, or Egyptian *-n* or *-ng*. For example, Hebrew *beth* in the alphabet corresponds to Chinese *bing* in the *ganzhi* and to Egyptian *ben-ti.* Hebrew *teth* therefore may correspond to Egyptian *ṭen-t*  ("a plot of ground, field"), *ṭenau* ("fields")  (Coptic *thene*), *ṭenà-t* ("dyke", "dam")  or *tenn* ("ground", "earth")  (Coptic *eitn*) (Budge: 881, 882, 838). Coptic *thene* ("fields") and Phoen/Heb *teth* (which I conjecture to be "field, land" or "irrigated field, land") would parallel Latin *terra* ("land") and Celtic *tir* ("land").

Let us now consider the OB form  ,  of the *ganzhi* letter *chen* (**djən*) 辰. This pictogram has puzzled Chinese etymologists and has produced imaginative readings, including the explanation that it depicts hands manipulating a farm implement; upper and lower lips and teeth; vegetation emerging with vigor; a crab emerging out of its shell; and an emerging being signifying a woman's pregnancy (*XY*: 1855). More recently, it has been interpreted as "a scorpion in striking position as seen in profile" (Cook). The only interpretation I find plausible is that of Lin Guangfu 林沄圖, who says that **djən* , 辰 must be a pictograph involving farming, because it appears as an element in characters that mean "to farm" (*nung* , 農) and "to plough", "to hoe" (*nou* , 耨) (*XY*: 0667, under *chen* 晨).

Li Jingzhai 李敬齋 pursues this line of thought when he maintains that **djən* (*DEZ*: 68) means "to farm" (*tian*, [**din*] 田 ,) (*XY*:1055).

Djən* ("to farm") 辰 does seem to have two different sets of phonetic values, **djən* and *nong / nu / nou* (nuŋ*) (as in 農, 耨). **Din* 田 ("to farm") also has two different sets of phonetic values, **din* and *lui / nui* (**ljed / *rjuej*), close to *nu / nou*, since *l* and *n* were not phonemically contrasted. Examples are *lui / nui* ("water-pot") and *lui /nui* ("lightning") 雷. This suggests that **djən* 辰 and **din* 田 may have been cognates. Sumerian 田 also has also two phonetic values *dab/dib* and *lu*, similar to the Chinese.

. The glyph ⊕ , ⊗ (*teth*) is probably related to Egyptian  , which has the meanings "city", "town" (Budge: cxxvii). Egyptian  also means "land," "field", for we have the signs: *Taui* ("the Two Lands", that is, Upper and Lower Egypt),  *ta-t* ("land", "country"),  (Budge: 815). (Egyptian *ta* ["land," "earth", etc.] is probably related to Chinese *tu* [**tha?*]["land," "earth"]土 . Also, Egyptian *repa* ("temple estate" – land again) is  (Budge: 423). In these hieroglyphs the glyph appears as a classifier sign. The glyph appears frequently as a classifier with Egyptian words meaning "city", "town", "village", or "hamlet". For example: *Tema* ("town", "village")  ; *ṭemái-t* ("town", "village", "hamlet"),  (Budge: 879). Again we see the "land" or "field" classifier sign. A village or hamlet would mean inhabited and cultivated land, with paths and canals or ditches, not wild land.

The glyph *teth* ⊕ may also be an abbreviation the Egyptian sign  which is a symbol for a plot of land with irrigation canals. Among its meanings are "district", "nome", "garden" (Budge: cxxvi. 47).

Phoen/Heb *teth* ⊕ is also probably related to the Sumerian glyph 田 (Ball: Sign-list, no. 100), which has the pronunciation *lú, dab, dib,* in various meanings. It means "sheep", but also means "to hold", "to contain" (Deimel: 173). *Dab, tab, dib* has the meanings of "dwelling", "field" (Waddell 1927: 46). *Dab, tab, dib* also has the meanings of "pour out", "dam" (Waddell 1927: 46). Perhaps "dam" also means "to hold", "to contain" water in a field, hence 田 ?

Both Phoen/Heb ⊕ and Sumerian 田 are very similar to Chinese *tian* (**din*) ("land," "earth", "cultivated field," "to cultivate the land") 田 , implying an irrigated field. (**Din* is probably also related to English *till* ["to cultivate the land"], another instance of English final *-l* corresponding to Chinese final *-n*; and to Welsh *trin* ["to till", Buck: 8:15—compare with Chinese **din*], New Irish *tir* ["land"], and Welsh *tir* ["land"][Buck:1.21]. Chinese **din*, meant both "land" and "to till". Chinese *di* [**diarh*] ["earth", "land"]土也 would correspond to Celtic *tir* ["land"] and Latin *terra* ["earth", "land"].)

The conceptual similarity of these Sumerian, Egyptian, and Chinese glyphs, namely intersecting lines or pathways over space to suggest pathways, canals, or ditches, suggests

a room or other enclosure is represented by  as in *nei* ("inside")  , where means "enter".

Evidence supporting the conjecture that **kəraŋ*  is related to **kwəran* ("gate", "barrier"), is also found in the BS graph *han,*ganh*  (modern ), which contains the "wooden staff", "to fend off" semagram  , which here serves also as phonogram, as well as the  ("gate") semagram. *Han*  means "hamlet gates", "hamlet" (or enclosure), "surrounding wall" (i.e., enclosure), and "to fend off" (XY: 1958). (Would *han* ["hamlet"]  be related to English *home, hamlet* , from Old English *ham* ["village"]?) Baxter gives **xan?* for  , which has the same "staff" radical (*OCP:* 761), suggesting that the initial in **kəraŋ*[**krang*] , may have been a velar fricative and therefore closer to *kh-* in Hebrew *kheth.*)

Furthermore, **kəraŋ*  is written  in the scribal script, with the  , "building", "shelter", semagram, indicating that the later, Chou dynasty (1122-255 BCE) scribe understood  as some kind of enclosure or barrier.

Thus Phoen/Heb *kheth*  , Sumerian *gan*  ,  Egyptian *khen*  , Chinese **ga?*  ,  , , **kwəran*  and **kraŋ* (*geng, gen*)  ,  are probably all related at some deep, ancient level. (Perhaps *corral, kraal* [from Portuguese *curral*,"enclosure"] are also related to them? Here again a final *-l* would correspond to Chinese final *-n*, as in *reel, roll,* and *ren*  ,  .)

In short, *kheth*  and *geng* (*gen, *kraŋ*) are similar in sound and meaning. *Kheth*  and *geng*  are also similar in graphs in that both have two parallel vertical lines joined by parallel horizontal lines. There is then a three-way resemblance in this correspondence.

Teth  ,  and *chen* (**djən*)  , OB , , , .

Again, Hebrew final *-th* corresponds to a *ganzhi* final nasal, as noted above.

Scholars of the alphabet have found the meaning of *teth* problematic. Jensen says: "...*teth* (coil? tube? bale?)..." (Jensen: 282). Moran and Kelley surmise that *teth* means "mud", "clay", "potter's clay", *tith* in Hebrew. They may be close to the original meaning of , as shall be explained.

holding up a staff,  , and that the glyph represents a weapon. This is plausible since  is a well-recognized graph for "hand" and is a well-recognized graph for "staff". My own interpretation is close to his, as will be explained.

In C. J. Ball's volume, we find that the Sumerian glyphs  , are pronounced *gan*, meaning "enclosure", "garden", "field" (Ball: Sign-list, no. 9). Elsewhere he says that *kana*, *kan*, and *ka* mean "a gate", and that *kana* and *kan* also mean "part of a gate", "a latch" (Ball: 88). Deimel has Sumerian *ka*, *kan* ("door", "gate") (Deimel: 49.234). The Sumerian *gan* ("enclosure") , glyphs are similar to Phoenician *kheth* ("fence") , and Chinese *hu* (**ga?*) ("gate ", "door", "household") , . In Egyptian hieroglyphs, we find *khent* ("to be enclosed"), *khen* ("walled enclosure") , and *khen* ("the most private or sacred part of a building, house, temple, palace") (*jin* 禁 ["the most private part of a building, palace", "the women's quarters"] is the Chinese parallel, also comparable to Egyptian *khent* ["harem"]) (Budge: 575, 557). All these words are similar in sound and meaning, that is, all related to the concept "gate", "door", "barrier", "enclosure". They are plausibly all related to Hebrew *kheth,* interpreted as "fence".

These words, Sumerian *gan*, *kan* , *ka*, Egyptian *khent* and *khen*, and Chinese **ga?* 戶, all relating to gate and enclosure, bring us closer to *geng* (*gen / kraŋ /*kəraŋ*) , . But what is the meaning of **kəraŋ* ? I conjectured that **kəraŋ* and *kuan* (**kran*, **kwəraŋ*) ("gate", "barrier") are related. This turned out to be indeed so, for the *XY* dictionary tells us in the gloss on *gan* (**kan*) 干 , (*DEZ*: 187), whose primary meanings include "staff", "shield", that **kan* 干 , and **krang* 關 , are interchangeable in modern Chinese in the meaning of "related to", 幸連 , 干連 (*XY*: 399.4) Here lies the clue. The sounds of the two characters were probably not distinguished in ancient times either. **Kan* ("wooden staff", "fend off", "defend", "a shield") is the element in the glyph **kəraŋ* , , where is the phonetic sign **kan*, and is the signific or classifier, determinative sign. In the OB forms , the glyph does look like a shield, or the meaning "to fend off". However in the OB forms   the glyph looks like some sort of enclosed structure, for , are typically glyphs representing a house, building, structure, room, etc., as in *zhai* ("dwelling") (modern form 宅), *shi* ("house") , (室), *gong* ("dwelling", "temple") (宮). Sometimes

meaning as *luan* (**ruans*) 亂 ("to sort and reel", "to order"), and a reel is also a wheel. They are probably cognates. It is possible, then, that Chinese *lun* (**rjuɔn*) ("wheel", "reel") 侖 ,輪 , *luan* (**ruans*) ("reel", "wheel") 𤔔 ,亂 and *ren*, ("reel", "beam", "pole") 𠂤 ,壬 are also related to Latin *rota*, Sanskrit *ratha*, German *Rad*, French *rouet*, German *Rolle*, and English *roll*, all words with related meanings, namely "wheel", "wagon", "cylinder", "reel", "roll", where Chinese final *-n* and *-m* correspond to Indo-European *-t*, *-th-*, *-d*, or *-l*.

3) If Chinese *ren* ("beam", "reel") 𠂤 is related to English *rod* ("beam") and *reel*, words derived from IE **ret, *rot* ("pole", "trunk"), and to German *Rad* ("wheel"), which in turn is derived from IE **ret*[*h*] ("run"), could IE **ret* ("pole", "trunk") be related to IE **ret*[*h*] ("run")? After all, a "beam" ("pole") was originally a log and a log rolls or runs.

To summarize, Phoen/Heb *zayin* 𐤆 (Greek *zeta* 𐌆 , 王) and Chinese *ren* (**nzjɔm*) 壬 are similar in sound, meaning ("beam", "reel", perhaps "axle"), and graph.

Kheth 𐤇 , 𐤄 and *geng* (*gen* [Hubei/Hunan]/**kraŋ*/**kəraŋ*) 庚 , OB 𠂤 , 𠂤 , 𠂤 , 𠂤 , 𠂤 . The Hebrew and Chinese initials are similar in that both are guttural sounds. The consistent correspondence of Hebrew final *-th* and Chinese final nasal has already been noted.

A number of scholars, including Sir Arthur Evans, have proposed that *kheth* 𐤇 , 𐤄 , means "fence" (Jensen: 282). This is probably correct. The Egyptian sign 𓉐 , with the phonetic value *šsp*, means "fence" (Brunner: 67.42). The Phoen/Heb glyphs for *kheth* 𐤇 are very similar to the Chinese OB glyphs 𠂤 , 𠂤 , which are the original forms of the word *hu* (**ga?*) 戶 (*DEZ*: 242) , meaning "door", "gate", "house". I conjectured, as a first step, that *geng*, *gen* (**kraŋ* , *DEZ*: 195) 庚 , 𠂤 is related to *kheth* 𐤄 , 𐤇 and *hu* (**ga?*) 𠂤 , 𠂤 .

The Chinese dictionary meanings of *geng* 庚 (OB 𠂤) are varied (ranging from "musical instrument" to "silk rack") and do not include "fence", "gate", or "house" (*Cihai*). The interpretation of the elements in the glyph 𠂤 is disputed (*XY*: 404). One scholar, Li Yangbing 李陽冰 however is cited as saying that the glyph 𠂤 depicts hands, 𠂤

know that speech changes much faster than writing; therefore Egyptian writing may not accurately represent the actual spoken sound of the word at the time of the transfer. Thus Egyptian *za-t* ("pole") may also be related to Hebrew *zayin*.

4) Phoen/Heb *zayin* corresponds to Sumerian *zi-n* ("life") and Egyptian *sen-t* ("beam", "pole") while Greek *zeta* corresponds to Egyptian *za-t* ("beam", "pole"). It is highly probable that *zayin* 𐤆 was originally the same word and symbol as Chinese *ren* (**nzjə m*) 壬 since both are similar in sound, look almost identical, and both are alternately written as 壬. Thus both would have meant "beam", "pole", and English *reel* (German [*Garn*]-*rolle*), which we conjectured to be related to Chinese *ren*, may have derived from IE **ret*, *rot* ("pole", "stem", "trunk") (Pokorny: 866).

Here are some further observations relating to Chinese *ren* ("beam", "frame", "reel"):

1) In Latin *rota* means "wheel". This is related to Sanskrit *ratha* ("wagon"), Old High German *Rad* and German *Rad* ("wheel"), French *rouet* ("spinning wheel"), German *Rolle* ("cylinder", "pulley", "reel", "spool", "coil of rope") and English *roll*. Here Latin *-t-* corresponds to Germanic *-d* and *-l*, and we have already pointed out the correspondence of Germanic *-l* and Chinese *-n*, and also of Hebrew *-th* and Chinese *-n*. In other words, all these alveolars tend to interchange. These Indo-European words for wheel are thought to be derived from Indo-European **ret*[*h*]- ("run", "roll") (Buck: 10.76; Pokorny: 866).

2) In Chinese the common word for "wheel" is *lun* (SS)輪, which also means "to reel silk" (*jun si* 鈞絲) (XY: 1836). (The semagram *lun* 侖, however, is generally understood to mean "gathering together [viz., sorting]" 亼 "bamboo strips" (i.e., records)冊, an activity analogous to sorting silk threads). This word *lun* 輪 is not found in oracle bone script but only in the later small-seal script, which probably means that earlier it was written without the "chariot" classifier (車); that is, *lun* ("wheel")輪would have been written as 侖. The dictionary tells us that this *lun* 侖 originally meant "to order" (理). In other words, *lun* meant "wheel" and "to order" or "to reel silk" (*jun si* 鈞絲). The reconstructed sound of *lun* 輪 is **rjuɔn* (*DEZ*: 400). Thus, *lun* (**rjuɔn*)輪 is almost the same in sound and

reasons for this conclusion is that the symbol  , *zayin* in Phoen/Heb and *ren* in Chinese, is the sign for *z* (*zeta*)in the ancient Greek alphabet and is interchangeably used with the symbols  and  (Chinese *ren*) (Jensen: 452). The symbol is also used interchangeably with to represent  (*xi)* in the ancient Greek alphabet. Later in this paper, I demonstrate that Phoen/Heb *samekh* is a symbol for "tree", "plant(s)". It is an abbreviation for such tree and plant symbols as Egyptian ("tree") and ("tree") (Budge: cxxiii, cxxi) and Sumerian *se* ("corn") ,  (Deimel: 125, no. 669).

Here is my interpretation of *zayin* :

1) *Zayin* is probably related to Sumerian *se* ("grain") (Deimel: 125.669), *sham* ("herb", "plant", "to sprout", "to grow") (Ball: 133, 135), Sumerian *zi, zi-n* ("life", "living creature") (Moran: 79); to Egyptian *sa-t* (*sau, sen*-t) meaning "pole", "beam", "shaft", etc. (Budge: 583b, 635b, 675b); to Greek *axon* ("pole", "beam", "shaft", "axis"), and perhaps to Hebrew *seren* ("axle", an English word related to Greek *axon*) (*HD*: 236). These are also probably related to Chinese *sheng* (dialectal *sen, sang*, etc.) ("to grow", "life", "living being"). All these words are similar in sound and meaning.

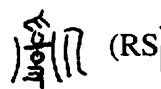
2) The Egyptian consonant sign is now transcribed *z* (Loprieno: 15), so Budge's transcription of Egyptian *sa-t* ("pole", "beam", "pillar") would be *za-t*. This would correspond with Greek *zeta* , , (ancient Greek forms [Jensen: 452]). It is well-recognized that the Greek alphabet was borrowed from the Phoenician (Jensen: 453). Jensen cites Schwyzer as explaining that the final *-a* was added to Greek letters of the alphabet because the Greeks were averse to ending words with consonants, quoting Noldeke: "...the final *-a* is a purely Greek addition, so as to make the names pronounceable." (Jensen: 455). That would make the *zeta* originally *zet*, close to Egyptian *za-t*.

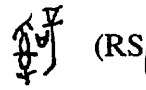
3) Egyptian *za-t* and *sen-t* ("beam", "pole") are similar to Hebrew *zayin* , especially since *-t* and *-n* often alternate across dialects and languages, both being alveolars (e.g., English *run* and IE**ret*[*h*]- ["*run*", "roll"][Pokorny: 866]). Also, Budge gives Coptic *coi* (*soi*) as the word corresponding to Egyptian *za-t* ("pole", etc.), and *coi* contains the *-i-* (*-y-*) found in *zayin*, making the vowel a diphthong. We

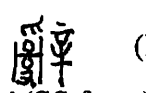
would be similar in phonetic shape to *ren* (**nzjəm*) 壬 , 𠂇 . It is therefore reasonable to assume that *luan* (**ruans / *C-rons*) 亂 was a cognate of *ren* (*nzjəm*) 壬 , 𠂇 and meant "to order [sort] and reel silk" in its original, pictorial, sense. (Sorting out threads was part of the reeling process.)

English *reel* is probably related to Chinese *ren* (**nzjəm*). *Reel* (Old English *hreol*) resembles Chinese *ren* (cognate **C-rons*, **ruans*) in phonetic shape. Note also the similarity between *hreol* and **C-rons*. Final *-l* and *-n* are both alveolars, and there is evidence that other Germanic words ending in *-l* correspond to Chinese words ending in *n* (an extended discussion of this correspondence is outside the scope of this paper). *Reel* (*hreol*) and Chinese *ren* (**C-rons*) also appear to have the same meaning ("spool" or "to spool").

The character *ren* (**nzjəm*) 壬 , 𠂇 also appears in other graphic forms in Chinese characters, shedding further light on its original meaning:

 (RS 亂) *luan* (SS form) ("to order")

 (RS 辛) *ci* (BI form) ("testimony")

 (RS 辛) *ci* (SS form) ("testimony")

(XY: 0030; 1852*)*.

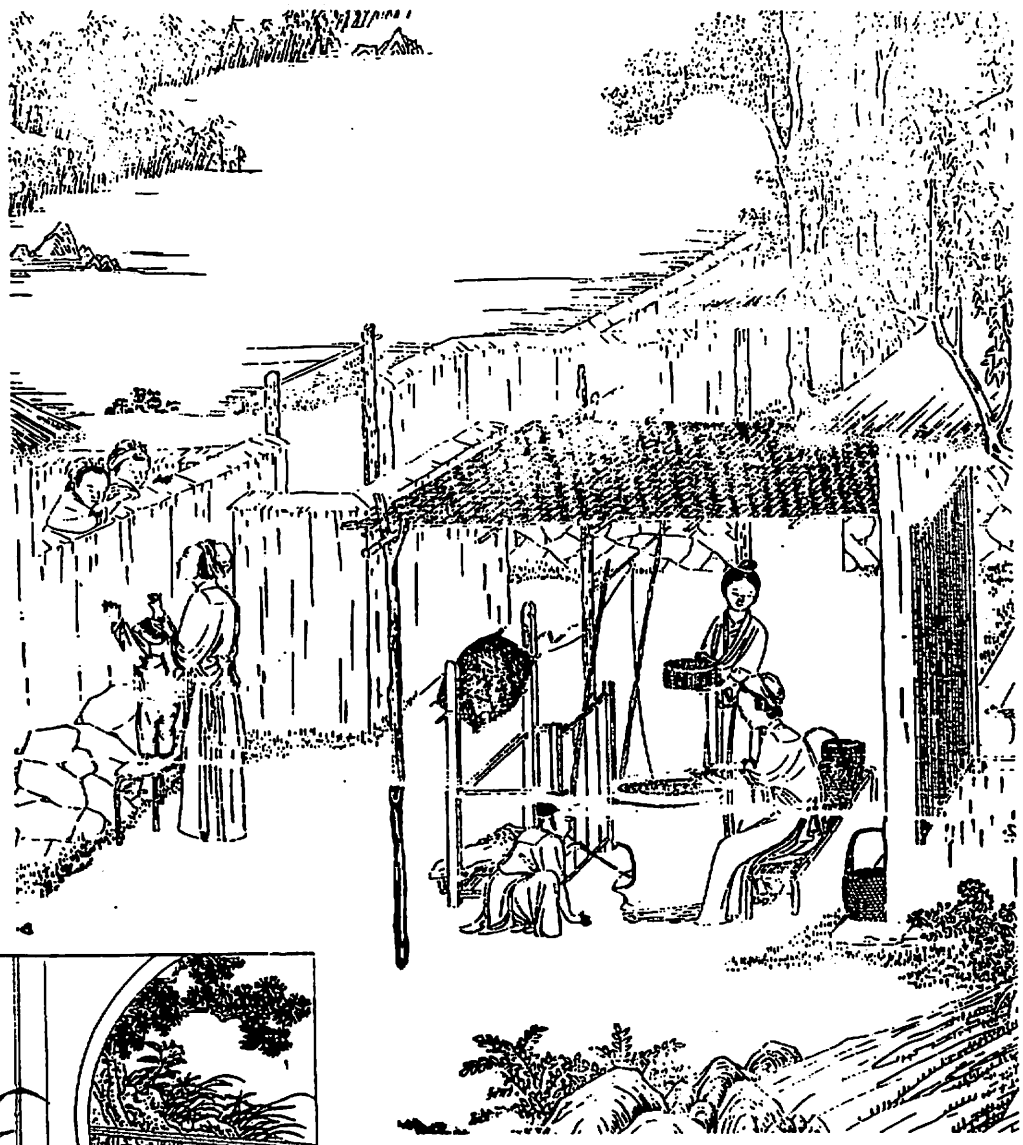
Here the forms of *ren* 𠂇 appear variously as  (a frame),  (a rod or beam), and  (again a frame). *Ren* 𠂇 would then appear to have the meaning of "beam" or "frame". The meaning of "frame" would be consistent with the word *ren* 紝 (probably earlier written 𠂇 or 𠂇 , since radicals would be later additions to the grapheme), which means "frame for holding the warp" (*XY*: 1300). Here we see the element *ren* 壬 (𠂇). Now, the frame consists of two vertical components with a rod or beam across them. My conjecture is that *ren* 壬 , 𠂇 originally meant "rod", "beam", "pole" The IE base for "rod" ("beam") is given as **ret-*, **rot-* ("pole", "stem", "trunk") (Pokorny: 866), and Chinese *ren* (cognate **C-rons*) resembles **ret-*, **rot-* in sound and meaning. I believe *ren* 𠂇 (壬) originally meant "beam", "rod" because the beam or rod is common to all the forms of this pictogram in Chinese logograms and because the glyph 𠂇 is probably related to the glyphs 丰 and 干 , meaning "plant", "tree" (later extended to mean "beam", "rod", "pole", "pillar", "axle", "pulley", "reel", etc. in different languages). One of the

"order" in ancient texts. The word does not seem to appear in OSBI, but first appears in bronze inscriptions. A BS glyph for *luan* is  , which is composed of several elements: one is a radical (classifier sign) for "hand",  ; another the logogram for "silk", ; another a different radical for "hand", ; and then the element  . The dictionary quotes Li Jingzhai  as saying that the combined pictogram means "to put silk in order", for it depicts hands sorting out silk, and he says that the component is equivalent to the character . But the dictionary does not give an explanation of that fits the graph (RS). What then does mean? In the context of the other components of the pictogram, we may safely assume that *jen* ( ) means the reel (or spool) for reeling or winding silk thread from the silk cocoon. Obviously, looks like a reel or spool. Silk-reeling is an essential step in the silk-making process. It is described by the author of a book on silk-making early this century:

> Cocoons peeled and selected for reeling were then boiled and brushed in a basin for about five minutes. In Shanghai, girls from eight to twelve years old were given the unpleasant and steamy task of tending these basins and finding the ends of silk loosened from the cocoons. The actual job of attaching the loose ends to the mechanically rotated reels was entrusted to older women. The thicker the silk thread desired, the greater the number of cocoons needed. After the silk was reeled, it was rereeled in order to make it more even. Finally it was packed in skeins to be shipped. (Li:29)

Figure 1 shows a woman reeling silk in old China. Figure 2 is another picture of silk-reeling. The cocoons are in a pan. What the reel does is pull or draw silk thread from the cocoon.

The word *luan* has been reconstructed as **ruans* (*DEZ*: 399) and **C-rons* (*OCP*: 775). A guttural before an initial *r-* or *l-* seems to have been common in Central Asia. For example, Loulan was Kroran, and Rome was Hrome in some Central Asian languages. Making allowance for the initial guttural, as well as the frequent alternation between *l* and *r* and between *n* and *l*, and *n* and *r*, in Chinese words, **C-rons* and **ruans*



From Lillian Li, China's Silk Trade

From Robert Collins, East to Cathay:The Silk Road

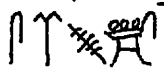
Figures 1 & 2. Silk reeling.

phonetic signs usually precede the classifiers. There can be redundancies or "complements", where the scribe uses extra phonograms or semagrams to clarify the sound or the meaning. Budge's dictionary adopts the convention of writing the hieroglyphs from left to right. He also puts an *e* between consonants when a word is written without a vowel, but the *e* is simply a convention employed to make the word readable, and does not represent any particular vowel.

In the first hieroglyph of *sem* above, the sign comes first in the word, which leads one to suppose that is pronounced *sem*, since the pronunciation usually comes before the classifier. In the second example of *sem* above, the sign and the  sign are used as classifiers to let the reader know that *sem* here means "herb", "grass", "crop", etc. Here are some more examples:

a) *sem-t* ("herbs", "vegetables") 

b) *semit* ("herbs", "field produce") 

c) *sem* ("to pile offerings upon an altar") 

d) *sem* ("form", "image", "manner", etc.) 

e) *sem* ("deed", "undertaking") 

f) *su-t* ("corn", "grain", "wheat") 

(Chinese *su*  , means "grain")

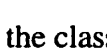
(Budge: 648, 666, 667)

g) *sām* ("a plant", "a flower")  (Budge: 645)

h) *simu* ("field produce", "herbs")  , Coptic *sim* (Budge: 647)

In example d), the sign comes first again, indicating that has the pronunciation *sem*. In example e) the sign seems to be used as a rebus, a redundancy here, in order to repeat that the word has the sound *sem*. Redundancies occur frequently, since, like Chinese, ancient Egyptian has numerous homonyms.

I conclude from these and other examples that the sign has a phonetic value *sem* (i.e., *sm*) meaning "grass", "herbs", "vegetables", "crop", "offerings on an altar" and "to make offerings on an altar" (the sign hasother phonetic values and other semantic

values as well). From here it is easy to go to the next step, which is to conclude that the glyph *samekh* 丰 is related to Egyptian  since it looks like it and resembles it in sound.

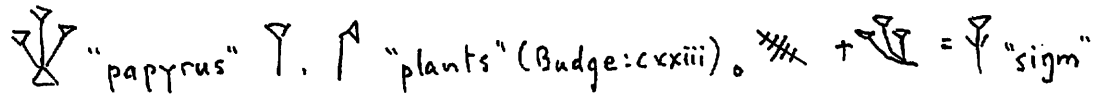
Example f) above shows  as the classifier "corn", etc. The glyph is probably shorthand for a number of glyphs for "tree", "plant", etc:  ("tree"), ("spelt"), ("tree"). (Budge: cxxiii, cxxi). In Chinese the sinograph *jie* means "grass", and the sinograph *feng* means "luxuriant growth of grass, foliage, etc." (*XY*: 0017, 0016). Similar symbols appear in the Mediterranean region, for example, for *h* in Old Cretan, and in Cypro-Minoan inscriptions (Jensen: 104). The symbols , would seem to have been trans-cultural symbols for grass, trees, vegetation, etc. in the ancient world.

It is also reasonable to conclude from the above and other instances, a) to h), for Egyptian *sem* that the sign also means "vegetables", "field produce", "corn", "grain", "wheat", since it looks like a plant and appears to be a classifier in the list of words. Budge says that Egyptian , *hen*, means "plant, vegetable, herb, dried up" (Budge: cxxii). As we shall see later, plants with bent stems are often symbols of cut plants or offerings (they are no longer standing upright in the field).

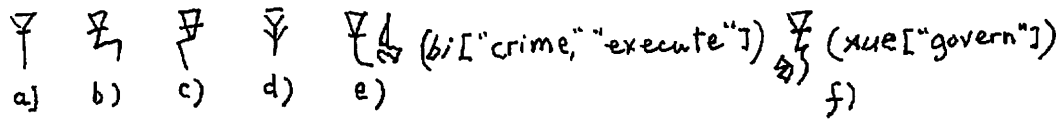
In Sumerian, *shim* means "scented plants and trees" (Ball: 135), *sham* means "herb", "plant", "to sprout", "to grow" (Ball: 133, 135), and *sim*, *sum* means "to present, offer" (Ball: 125). These words are very similar in sound and meaning to Egyptian *sem* (*sm*, "plants", "vegetables", "crop", "to pile offerings on the altar", etc.).

Let us now take a look at Chinese *siŋm*, . Conceptually, this glyph would appear to be a combination of two pictorial concepts that appear in Egyptian: *sem* and *hen* .

They are not necesssarily exclusively Egyptian, but may have been trans-cultural symbols for plants in ancient times:



Gao Hongjin高鴻縉, quoted in the *XY* dictionary, maintains that 辛 and 辛 were originally the same word (*XY*: 1848), a view that is plausible since they are close in graph and meaning. Here are variant OB forms of *siŋm* 辛 and *xin* ("crime") 辛 as they appear in two OSBI dictionaries (*Jiagu* and *XY*), some of them standing alone and some as components of other words:



Various scholars cited in the *XY* and *Jiagu* dictionaries maintain that *siŋm* , etc., shown in these glyphs, depicts a knife that is used to tattoo the foreheads of felons . That seems rather forced. The objects representing *siŋm* clearly resemble plants. In example e), looks like an abbreviation of Egyptian *hen* . Examples b) , c) , and f) have curved stems, reminiscent of the curved stems of Egyptian , , and , meaning "sacrifice", "offering" (Budge: cxxiii; 62,63) . Obviously, plants offered as sacrifice are no longer standing upright in the field and will wilt and bend. And the bent plant would be a metaphor for sacrifice. Likewise the horizontal symbol of a tree or plant is also used in words meaning "to cut", "to cut down trees", as in *shā, shāi* ("to cut", "to cut down trees", "to slay", etc.) (Budge: 730). (Chinese *sha / sat* [**sriat*]) means "to kill" [*DEZ*: 523].)

The interpretation of *siŋm* as "knife" would seem to have stemmed from the association of the pictogram with words meaning "crime" and "execution". And "execution" may have stemmed from the association of the pictogram with "sacrifice" and "sacrificial slaughtering" of animals—and of humans, as I shall indicate below.

Let us look at forms of the word *shang* , OB , which is the name of the Shang dynasty, in which the character *siŋm* appears. The following forms are from the earliest period, according to the *Jiagu* dictionary, though not necessarily in chronological order:

This character *shang* , , etc., is composed of two elements, a lower one, which looks like the word *bing* (RS) and an upper one, the word *siŋm* in its various mutations. The "mouth" sign is optional and will be put aside for the moment. In the dictionaries (*XY, Jiagu*) OB *bing* is said to depict a table because it looks like a table. It certainly resembles the Egyptian hieroglyph for "a stand for a vessel", (Budge: cxxxi, no. 25) and the Sumerian sign for a table or stand (as in *gan* [pictogram of pot on a stand] ["surplus", "plenty"]) (Deimel: 53.271).

I believe that the lower element is the word *bing* (**pjiaŋx*) ("woman", "child", "to nurture", etc.)  used as a rebus for *bing* (**prjem?*) ("respectfully petition," "supplicate", "respectfully present")  and *bing* (**pjiaŋx*) ("hold", "uphold", "preside over")  . *Bing* (**pjiaŋx*) ("handle", "control", "authority")  is written as  or  (Mathews': no. 5286), indicating that *bing* and *bing* were homophones or near-homophones. In *bing* ("handle"), we see *bing* (originally "vulva" or "ancestress") used as a phonogram (bringing to mind Egyptian *met* ["phallus"], also employed as a phonogram.)

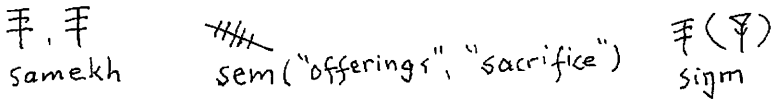
A glyph that looked like an altar table and had the sound *bing* would have been most appropriate as a rebus for *bing* ("respectfully present", etc.) and *bing* ("hold", "uphold", "preside over").

The object or objects above the *bing* glyph in the character *shang* are well recognized to be variants or abbreviations of the glyph *siŋm*  interpreted as a picture of a knife by Gao Hongjin高鴻縉and others (*Jiagu* and *Cihai*) but which I maintain to have been originally the depiction of a plant, symbolizing offerings (presentations) of produce or crop. The original meaning of *shang* would be "to present offerings on the altar", "presenting offerings on the altar" and the associated "sacrificing at the altar", "worshipping"; later the associated meaning of "execution", "punishment", etc. would have developed. *Shang* could also have meant "holding fast to [upholding] and presiding over sacrifices at the altar"—certainly a judicious choice of name for a ruling house.

Simultaneously, the graph *shang* could be understood as composing of two elements *bing* and *yen* (here the *kou* ["mouth"] element in is taken into account). *Yen* is composed of *siŋm* + *kou*, the *kou* added to accentuate the special meaning of *siŋm* in this context. One of the meanings of *yen* is "the name of a sacrificial rite, the Telling [i.e., Reporting] Rite" (*gao ji*告祭), i.e., a rite in which an accounting is given to ancestral and heavenly spirits (*Jiagu*: 222). *Shang* would then mean "offering, upholding and presiding over the Telling Rite". *Shang,* earlier pronounced *syang*, may be a phonetic mutation of *siŋm*, since *-n*, *-m*, and *-ng* alternate across Chinese dialects and *-n-* and *-ng-* are often not phonemically contrasted in Hunan,

Hubei and other dialects. *Yen* 囟 (notwithstanding the prevailing reconstruction**ŋjan* and **ngjan* [*DEZ*: 711, *OCP*: 800]) probably also had a phonetic value *sjin* or *sim* since *xin* 囟亻,信 was **sjin* (*DEZ*: 684). Now **sjin* 囟亻,信 was used interchangeably with **hlin* 乑,申, and one of the common meanings of **hlin* 申 was (and still is) "to tell", "to report", "to declare" (*gao* 告, *chen* 陳) (*Cihai*: 236, *XY*: 0078, 0018). **Sjin* 囟亻,信 must have also been pronounced **sjing*, since the pronunciation *xin* (**sjin*)信 alternates with *xing* in many dialects (e.g., Hubei, Hunan, Sichuan). And the sound **sjing* (囟,信) certainly resembles *syang*, one of the phonetic values of *shang* 商 (*OCP*: 786). Baxter gives the sounds of **hlin* 申 as *shen / syin / *hlin* and the sounds of *shang* 商 as *shang / syang / *h(l)jang* (**sjaŋ / *stjaŋx*, according to Schuessler and Li Fang-kuei, *DEZ*: 526). The two sets are certainly similar, especially if we remember the *-n* and *-ng* were often not differentiated.

What is particularly interesting about the *siŋm* glyphs (丙, 商 etc.) in the word *shang* 商 is that they appear together with the 𐤔 glyph, reminiscent of the conjoint appearance of the 𓇋 and 𓅱 glyphs in Egyptian hieroglyphs that mean "field produce", "crop", etc. Since the *shang* glyphs show that 𐤔 and 𐤎 are both glyphs of the same word *siŋm* the glyph 𐤎 must mean and sound the same as the glyph 𐤔. And since 𐤎 is the same sign as Phoen/Heb *samekh* 𐤎,ס this is further evidence that *siŋm* 𐤔, which has a sound similar to Egyptian *sem* 𓇋, indeed means "field produce", "crop", "offerings placed at the altar", "sacrifice at the altar", "worship":



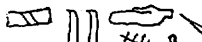
This is consistent with Kwang-chih Chang's observation that "the few identifiable names of high ancestors were generally sacrificed to on the *xin* 辛 day of the week." This would have been most appropriate since *xin* (*siŋm*) 𐤔, 辛 simply meant "sacrifice on the altar."

That *siŋm* referred originally to plants is indicated further by the word *siŋm* (*sim* in the Amoy dialect [*AMD*: 434])莘 (莘) meaning "dense and luxuriant", of grass or foliage, and *sim* (Amoyese)薪 (薪) meaning "fire-wood". *Samahu* (*shamahu)* in Assyrian means "growing thickly" (of vegetation) and "to flourish" (*AD*: 17:I:288), similar to *siŋm* 𐤔

in sound and meaning. Hebrew *samekh* may be a corruption of Assyrian *shamahu*, or perhaps *samekh* and *shamahu* were reflexes of an earlier word. (I have been told by Victor Mair that the connection between grass or straw and sacrifice is quite evident in ancient Iranian, especially Zoroastrian, ritual, where the *barsom*, a bundle of reeds or straw, is always present. Cognate practices and terms also existed in ancient Indian rites.

Sjŋm ("offerings", "sacrifice")  may also have been used as a rebus for *sjŋm* ("crime"). Could *sjŋm* ("crime", "hardship", "pain") be related to English *sin* (Old Norse *synd*), Ugaritic  ("to sin") (Gordon: 535), and Arabic *sum* ("calamity") and *sirra* ("calamity", "harm", "sin", etc.) ?

The semantic associations of *sjŋm* ("sacrifice") with "punishment" and "the law" have parallels in Egyptian hieroglyphs, for the glyph  appears both as phonetic and semantic sign in the word *shā-t* ("knife", "butcher's knife") . (Budge: 730). It also appears in:

shāiṭ ("slaughter")  and *shāaut* ("human sacrifices")  . (Budge: 731). (*Sha* [*sat* / **sriat*]  is "to kill" in Chinese [*DEZ*: 523].)

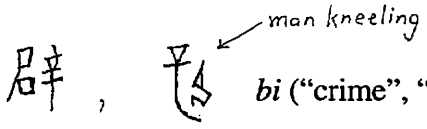
Moreover, sacrificial offerings are also associated with criminals and punishment (execution), since criminals and prisoners, especially if they are enemies, would be natural candidates for human sacrifice:

Menḥu ("sacrificial priest," "slaughterer", "butcher", "executioner"),  .

Kherit ("the dead", "the damned", "creatures slain for sacrifice"),  .

Kheru ("enemy," "criminal"),  (Budge: 303, 560, 561)

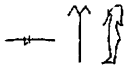
"Offerings" of vegetables and other field crops have become offerings of animals and humans, and the Egyptian *sem*, Hebrew *samekh*, and Chinese *siŋm* would describe or denote not only plants and "offerings" but "sacrifice" and "slaughter", and from there it is a short step to the associations of "crime", "punishment", "the law" etc. as in the word *pi* ("crime", "to execute", "the law", etc.) , where the *siŋm* glph is not a phonetic sign but a semantic sign and a majestic one as well:



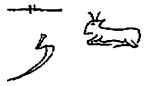
bi ("crime", "punishment") (*XY*: 1849)

Moran and Kelley are probably correct in their conjecture that Hebrew *samekh* is close in meaning to Hebrew *samakh*, "to lift up" a carcass at a sacrifice. Hebrew *zabach* ("to slaughter", "to sacrifice") and *samach* would seem to be cognates, perhaps dialectal variants. The *z-* in *zabach* may have a parallel in alternate pronunciations of Egyptian *sem* and other words related to sacrificial offerings. Thus the following (contrasted with other spellings of *sem*, etc., with initial) began with initial , which is now transcribed as the consonant *z* (Loprieno: 15):

sem [*zem*] ("herbs", "vegetables", etc.) 

sem [*zem*] ("form", "image", "kind", manner) 

sma [*zma*] ("to slay", "to cut up") 

sma [*zma*] ("a beast slain as offering") 

(Budge: 598, 601)

In short, Hebrew *samekh* would appear to be related in sound and meaning to

1) Assyrian *samahu* ("growing thickly", of vegetation)
2) Hebrew *samakh* ("to lift up" a carcass in sacrifice)
3) Hebrew *zabakh* ("to sacrifice")
4) Old Babylonian *zibu* ("food offering") (*AD*: 21:84)
5) Standard Babylonian *zebu* ("to slaughter", "sacrifice") (*AD*: 21:84)
6) Egyptian *sem* ("plants", "crop", "offerings on the altar")
7) Egyptian *sma* ("animal offering")
8) Sumerian *shim* ("scented plants"), *sham* ("herb", "plant")
9) Sumerian *sum*, *sim* ("to present", "to offer")
10) Chinese *siŋm*, , ("plants", "offerings", "sacrifice", etc.), and
11) Chinese *siŋm* used as a phonetic and/or semantic sign in words meaning "crime", "punishment", "the law", etc.).

Phoen/Heb *samekh* and Chinese *siŋm* would therefore have similarities in sound, graph, and meaning ("field produce", "offerings at the altar", "sacrifice").

'Ain O, o and *yin* (**ljən*) , OB , .

There is general agreement that *'ain* ○ means "eye". Assyrian *enu, inu*, means "an eye", "a spring of water". Hebrew a*yin* also means "an eye", "a well", or "spring of water".

The Egyptian hieroglyph *ar* ○ means pupil of the eye (Budge: cvi). *'Ain* ○ is similar to *yin* (**lj n*)  pictorially in that both graphs have a small circle. In Chinese, "eye" often means "small circle", "small hole", as in English "eye of the needle".

There is also similarity of meaning. Li Jingzhai is cited in a dictionary as saying that the *yin* glyph  depicts an arrow entering a target (*XY*: 0348), an explanation consonant with the depiction. A meaning of *yin* (**lj n*)  ,  ,  that corresponds to *'ain* ○ is "respectful in the archery contest" (later written  ,  , *DEZ*: 753).

Archery implies the action of taking aim, and taking aim means use of the eyes; hence we have French *viser* ("to aim"), from Latin *videre* ("to see").

Moreover *st*  is an Egyptian hieroglyph meaning "shoot, aim at, target" (Budge, cxiii); it is pictorially similar to *yin* , and would suggest that *yin* also formerly meant "to shoot", "to aim". The hieroglyph means "arrow", "shoot" (Budge: cxxxviii, no. 31) and would suggest a parallel meaning for *yin* ( ) also an arrow.

Hence *'ain* ○ and *yin* , , would correspond in sound, symbol, and meaning (relating to the eye).

Pe 𐤐 and *wei* (*be / bi* [Amoyese])  , OB .

Pe 𐤐 is generally interpreted as meaning "mouth" (Jensen: 282). Assyrian *pu* is "mouth", and *panu* is "face" (Moran, 104). H. Grimme and I. Taylor believed that *pe* 𐤐, 𐤐 was derived from the Egyptian hieratic sign for "mouth",  ,  (Jensen: 266; Diringer: 196, fig. 98). Among the later South Semitic scripts *pe* is written as  ,  (Jensen: 338), similar to the Chinese logogram for "mouth", *kou* (OB).

The sound *wei* (*be / bi / mei*, etc.in various dialects) has among its meanings *wei* (later RS) ("taste") ; *wei* ("not", "did not", "do not"); *mei* ("sister"), and *mei* ("sheep") . The negative was pronounced with initial *w, m, b, p, f*, or *v*, in various dialects and at various periods (e.g. *bu, fu, mo, wu, vu*, as evidenced by , , , ,).

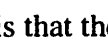
Wei 未 is still pronounced *be* and *bi* in the Amoy and other southern Fujian dialects. *Wei* 未 was probably close to the *pe* 𐤐 sound during our ancient scribe's time in his/her topolect since some of the southern Fujian dialects (e.g. Taiwanese) are known to have retained many archaic sounds. I therefore conjecture that the Shang pronunciation of *wei* vis-a-vis the alphabet was **be* instead of Schuessler's **mjats* (which may very well reflect certain other Shang topolects) or Baxter's **mits*.

The *Shuo Wen* quotes various old texts to gloss *wei* (**be* according to my conjecture) as "tasty", "mature", referring to farm crops and livestock. It cites *Lü Shu* 律書 as saying: "*Wei* (**be*) 未 [now written 味] means that all things are mature and tasty." "未者,言萬物皆成有滋味也" (*Shuo Wen*: 746). Taste, of course, relates to the mouth, and thus Phoen/Heb *pe* ("mouth") and *wei* (**be*) intersect in meaning. **Be* 未 ("mouth") was a homophone of **be* 未 (RS羊未) ("ram") (*Shuo Wen*: 879), a word with many positive associations. "Moral duty" (*yi* 義), "auspicious" (*xiang*祥), and "good" (*mei* 美) were some of the words containing the ram glyph (羊). Thus *be* ("taste") as a translation of *pe* ("mouth") would pun with *be* ("ram"), with its rich symbolism. This day on the calendar may have been a day for worshipping the ram god, or an ancestor associated with the ram.

Pe 𐤐 and *wei* (**be*) 未 , 米 then, are similar in sound and meaning ("mouth", "taste"). Pictographically, *pe* 𐤐 would resemble an element (the lower left quadrant) in the pictogram *be* 米, just as *'ain* 𐤏 resembles an element (the small circle) in the pictogram **ljən* 𐤏 , 𐤏. Thus Phoen/Hebrew *pe* 𐤐 and Chinese *be* 未 would have a three-way resemblance in sound, meaning, and symbol.

Sadhe (*tsude*) 𐤑, 𐤑, 𐤑 and *xu* (*sjwet* / **smjit*?) 戌, OB 𐤔, 𐤔.

Here there are resemblances of sound, symbol, and meaning between the Phoenician and Chinese. Earlier researchers such as Arthur Evans and E. Grumach have found *sadhe* baffling. Jensen says: "...*sadhe* (fish-hook? a flight of steps?)..." Moran and Kelley see the *sadhe* glyph 𐤑 as depicting an arrow. They theorize that it is related to Hebrew *tsud* ("to hunt"), *tsad* ("the hunt"), and Assyrian *ṣadu* ("hunt").

My interpretation is that the Phoenician letter  looks like a man-made contraption, resembling a side view of a net or trap. Sumerian *sad* means "a net" (Ball: 122). *Setu* in Old Babylonian means "a net used for hunting or fowling", and Old Babylonian *setu* also means "hunter" or "fowler" (*AD*: 17.III.340). I believe the glyph *sadhe* corresponds to *sētu* ("a net used for hunting or fowling"), a view not too far from that of Moran and Kelley.

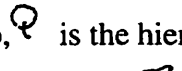
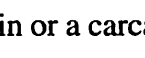
The Chinese *xu* (**sjwət*)  is a weapon, likewise a contraption for capturing or killing, also composed of a staff and a head.

Moreover, Chinese **sjwət* resembles Phoen/Heb *sadhe*, *tsude*, Hebrew *tsud*, *tsad* and Assyrian *ṣadu*, *sētu* in consonantal profile.

Thus there are resemblances in sound, meaning, and symbol between the Phoen/Heb and the Chinese.

Qoph  and *jia* (**krap*)  , OB  , stone inscription form  .
Victor Mair identified this correspondence (Mair: 1990). *Qoph* has been problematic and has been interpreted by some researchers as meaning "the occiput" or perhaps "a monkey" (Jensen: 282).

The symbols  are probably related to the Egyptian hieroglyphs  and  , symbols for "skin", "hide" (Budge: cxiii.55); also,  is the hieroglyph for "limb", "flesh", with the sound *f* (Budge, cxiii, cix). Thus Egyptian , would be either an animal skin or a carcass (showing the tail).

Ka ("hide") is a word found in African languages, with mutations in sound: e.g., Ancient Egyptian *kha* (carcass of a sheep or goat),  (*kha* may be related to English *carcass*); *khau-t* ("skins", "hides")  (Budge: 530), and *khaut* ("skins", "hides")  ; and in various Niger-Congo languages, *koro*, *kor*, *ku* ("skin") (Greenberg: 21). (Egyptian *khaut* is probably related to English *coat*, Middle Latin *cota*, Frankish *cotta* ["*coat*"], Latin *cutis*, Old Norse *hud*, Old High German *hut*, English *hide* [all words meaning "hide", "skin"][Buck 4.12].)

Chinese *jia* (**krap*)  ,  ,  means "shell", "armor", close in meaning, sound and symbol to the Egyptian words and glyphs for "carcass" and "hide". The multi-angled

shape of Egyptian  would have been reduced to a circle for reasons of graphic economy—a circular shape is faster to draw than a many-angled one.

Thus Phoen/Heb *qoph*  ,  and Chinese *jia* (**krap*)  ,  ,  are a corresponding pair with resemblances in sound, meaning, and symbol.

Resh  ,  and *si* (**rjagx / *sljəʔ*)  , OB  ,  ,  .

Here there is similarity in sound, meaning, and symbol between the Phoen/Heb and the Chinese. The word *resh* is generally taken to mean "head", "first", "chief", from Hebrew *rosh*, Assyrian *resu*, Aramaic *resha* (Moran: 110, Diringer: 219). The glyphs , for *resh* resemble Sumerian *sag* ("the head", "chief", "front", etc.) (Ball: Sign-list, no.62).

Si (**rjagx*) is a logogram meaning "son" (RS), representing head, body, and arms. Chinese and are similar to *resh* in that all three represent the head by an abstract outline of a head with a stem. The phonetic value of Hebrew *resh* also has some resemblance to Chinese **rjagx*.

According to the *Jiagu* dictionary *si* (**rjagx*) was normally written as in OB script, but when used as a calendrical sign the letter (*zi* ["seed", "son"]) was substituted, with *zi* simultaneously taking the pronunciation of *si* (**rjagx*) (RS). For in rites of worship (*jisi*) a small boy was used to represent the presiding spirit of the ancestor being worshipped. As such he was the "head" of the ceremony (*Jiagu*: 19). No doubt a boy (*zi* ["seed", "son"]) was an auspicious symbol both for fertility and for planting and harvest.

Si (**rjagx*) probably had a semantic value *si* (**rjagx*) ("to perform sacrificial rites", "worship"), later written . In any case **rjagx* , , and **rjagx* , would have been homophones, and **rjagx* would therefore have been a most meaningful name for a calendar day.

Resh and *si* (**rjagx*) , , would have a three-way correspondence in sound, meaning, and symbol.

Sin, shin (perhaps *hljin*) and *shen* (**hljin*) , OB , , , BI .

The meaning of Phoen/Heb *shin* W is generally thought to be "tooth". *Shinnu* is "tooth" in Assyrian. Moran and Kelley speculate on various other meanings: "unlucky", "hatred", "hairy", "he-god", "urine" and so on (Moran: 112). I believe Hebrew *shin* did indeed mean "tooth", or was an abbreviation of Assyrian *shinnu* ("tooth"). First, because some early alphabets draw various recognizable pictures of human teeth for *shin*. For example, *shin* is depicted on Maccabee coins (2nd-1st century), as ⱳ (Jensen: 295) The earliest *shin* glyph W would look like some kinds of animal teeth or the "teeth" of a saw. My second reason for believing that *shin* means "tooth" is because of the meaning of the corresponding Chinese *ganzhi* letter *shen* (**hljin*)  , which will be examined below.

The Hebrews pronounced this Phoenician *s* in two ways, as *s* and *sh*, the *sh* perhaps an *hl* sound (Healey: 30). This differentiation in the Hebrew is known to have taken place in later periods but may have been the case very early on, since the *ganzhi* letter corresponding to *shin* W is **hljin*  . This does not preclude the possibility that Chinese **hljin*  , 申 had several phonetic values.

The early glyphs for *shen* (**hljin*) 申 are, in chronological order  ,  ,  . The original meaning is disputed. One version is that it means "to tie up [as with a belt or girdle]". Gao Hongjin, quoting Hsu Shen's *Shuo Wen*, maintains it is a symbol of lightning flashing in clouds (*XY*: 0018). Later attested meanings include "to stretch out", "to restrain", "to reiterate a command", "to declare", and so forth.

Are any of the interpretations of the original meaning correct? As a first step, I assumed the glyph to depict an object and not an action, a relation, an attribute, etc. I then decided that it was not an object in nature but, if an object at all, must be a man-made object. But what on earth could it possibly be? Hebrew *shin*—"tooth", "teeth"...it then occurred to me that the hooks in the object must be "teeth", and the object depicted must be...a buckle, a belt buckle, since *shen* (**hljin*)  written as *shen* 申 , 紳 means "girdle", "sash", etc. The hooks on the object would be "catches" to hook the belt or girdle. Later I found that Assyrian *shinnu* ("tooth") also means "fangs", "tine", "blade", "saw", and "harrow" (*AD*: 17.III.48-52).

When subsequently I related the buckle conjecture to Dora Kuo of the Asian Art Museum of San Francisco, she took out a volume by Jenny F. So and Emma C. Bunker, *Traders and Raiders on China's North Frontier,* which showed Chinese belt-hooks of the Warring States period, 403-221 BCE. Indeed, there was a belt-hook that looked almost exactly like the *shen* 𠂤 glyph (So: 167) Here are sketches of two belt-hooks (which function as buckles) from the 5th century BCE, shown in So and Bunker's book:

Clearly, there are protuberances which we could call "catches", "teeth", or "fangs".

Later I found in the dictionary this note made by a commentator to the *Li Ji* (*Book of Rites*): "Teeth (*chi* 齒)were originally called *shen* 𠂤." "齒本曰𠂤" (*XY*:1144).

Schuessler's reconstruction of the ancient pronunciation of *shen* ("teeth")𠂤 is **hljin?* (*DEZ*: 534), almost identical to **hljin* ("belt") 𠂤,紳. **Hljin* 𠂤 then, was probably an alternate graph or a cognate of **hljin?* ("teeth")𠂤.

But why is a belt or girdle, **hljin* 𠂤 ,紳 called a buckle (**hljin*𠂤)? Was it a coincidence of sound? Could the buckle have once been named "belt" or the "belt" once named "buckle" through association? It then occurred to me that **hljin* ("belt") might have meant "to fasten" or "fastener" and the belt-hook (buckle) would then apply to both belt-hook and belt. An analogy would be English "to tie" and "a tie".

Looking at *shen* (**hljin?*) ("teeth")𠂤 again, I was reminded of a homophone, *shen* (**hljin?*)𠃌 , meaning "to smile", "to smirk" (*Cihai*). This **hljin?* ("smirk") would be close in sound and meaning to English *grin*, which means "showing the teeth when smiling", "baring the teeth in pain", etc. English *grin* comes from Old English *grennen* ("gnash or bare teeth"). Then I looked at English *clench* (Middle English *clenchen*, Old English *clencan*). The stems *clench-* and *clenc-* resembles Chinese **hljin?* ("teeth") in phonetic shape and meaning. *Clench* means "to close (the teeth or fist) firmly", "to grip tightly".

I think **hljin?* ("teeth")𠂤 and **hljin?* ("smile","smirk")𠃌 were formerly the same word and related to English *grin* ("smile exposing teeth", "expose teeth") and English *clench* ("to close [the teeth or fist] firmly"). **Hljin* ("belt-hook") 𠂤 is probably a

cognate of **hljin?* ("teeth")  and meant "to fasten with teeth". **Hljin* ("belt-hook") probably evolved from meaning "to fasten with teeth" to the meaning of "fasten", "buckle", and then to "girdle", "belt", and so on.

Chinese **hljin?* ("teeth")  , **hljin?* ("smirk") , and **hljin* ("belt-hook") resemble Assyrian *shin*nu ("tooth") in sound and meaning and they are probably related from a time before the creation of the 22 correspondences.

Here we come to an interesting twist in our story. We remember that Gao Hongjin pointed out that *shen* (now) depicts lightning flashing in the clouds. He turns out to be correct. This is an obsolete meaning of *shen* , now surviving in the word *dian* .

Shen (**hljin*) , , then, is a graph with several iconic and phonetic values. Again, we see an example of visual wit. The graph is also the OB logogram *dian* (**dinh*) ("lightning", "thunder") (now written) (*XY*: 1998). *Shen* (**hljin*) , has a second reconstructed sound **sthjin* (*DEZ*: 533), resembling the sound *dian* (**dinh*) , , . And *dian* has a second reconstructed sound **glins* (*DEZ*: 127), resembling *shen* (**hlin*) , . Perhaps *dian* (**dinh / *glins*) , and *shen* (**sthjin / *hljin*) are cognates, both meaning "tooth/teeth", and "lightning/thunder". If so, then *dian* (**dinh*) ("tooth") may be related to Latin *dens* ("tooth"), from IE base **edont-*.

We have the expression "forks of lighting". This could just as well be "prongs (fangs, teeth) of lightning". In any case, the graph of *shen* (**hljin*)("teeth") also once meant "lightning" and from association, "thunder" (*Jiagu*: 1241). Even more interesting is that another OB logogram for "thunder" is *lui* (later written), composed of plus two signs (*kou* is the graph for "mouth" or "speech"), meaning that the lightning is speaking— thundering (*XY*: 1997). *Lui* ("thunder") was also written , , where the dots appear to represent rain (*Jiagu*: 1241). Now *ting* (*dien / *din*) is another word for "thunder", probably a cognate of *dian* ("lightning", "thunder") (*DEZ*: 612). *Dian* and *ting* are probably related to English *thunder* (Old English *tunor*, IE. base **[s]ten-*), and to ancient Egyptian *s-teḥen* ("lightning", "storm") (similar to Chinese **sthjin* ["lightning"]) and *teḥen* ("lightning") (Budge: 631b, 842a). Chinese *lui* ("thunder") , would probably be related to English *lightning* (Old

English *leoht*, IE base **legwh-*), and Sumerian *nu* ("light") (Deimel: 23.115) (Chinese *lui* is *nui* in some dialects, e.g., Hubei).

Thunder, lighting, and rain would be Heaven or God in His most palpable, awe-inspiring form. Thus the words for lightning, Chinese *dian* (**din*), and *shen* (**sthjin*) , 申 , English *thunder*, German *Donner* (and other IE *[*s*] *ten-* based words for thunder or lightning), and Egyptian *s-tehen*, *tehen* ("lightning") may be related to Sumerian *i-din* ("heaven") (Ball: 56), *dingir*, *dir* ("heaven", "God") (Deimel: 5.14) and to Chinese *tien* (*tin* / **thin*) ("heaven") 天 , since they are all similar in sound and meaning (the last correspondence was pointed out by Ball).

Finally, the graph , with the phonetic and semantic values of *shen* (**hljin*) ("belt-hook") 申 and *dian* (**din* / *shen* / **sthjin*) ("lightning", "thunder") also had the semantic value *shen* (**hljin*) ,神 ("spirits of heaven", "ancestral spirits"). *Shen* (**hljin*), 神 was therefore a word most pertinent to the Shang calendar, whose main purpose was to maintain a schedule of sacrifices to the spirits of heaven and ancestors (Keightley: 283).

Phoen/Heb *shin* W would be similar to Chinese *shen* (**hljin* / **sthjin*) , 申 in sound and meaning ("tooth", "belt-hook", "prongs of lightning"). There is moreover a conceptual resemblance between the pictographs. Each is a depiction of sharp protuberances, each a literal depiction of teeth or fangs. Thus there is a three-way resemblance.

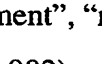
Taw †, × and *zi* (**tsjə?*) , OB , , , , , .

Moran and Kelley interpret *taw* as meaning bull here, maintaining that *alpha* and *taw*, the first and the last of the letters of the Phoenician alphabet, correspond to the two bull's heads, Alam and Alad that C. J. Ball described as standing on either side of the gate to the temple or king's palace in Sumerian cities (Moran: 113). They also accept the interpretation that *taw* is probaby a cognate of *thau*, meaning "mark", in the Vulgate. *Taw* is generally understood to mean "sign", "mark", "cross".

Phoen/Heb *taw* †,X and Chinese *ganzhi* letter *zi* (**tsjə?*) , (*DEZ*: 862) are similar graphically in that both have a cross. The Chinese character *zi* (**tsjə?*) , alternately

written in OB as 𠫓, means "son" and "seed". (*Zi* ["son"] 𠫓 would seem to be related to Sumerian 𒀀, 𒀀 ["male"] [Deimel: 14.89; Ball: Sign-list, 19].) The normal form of *zi* 𠫓 is replaced in the *ganzhi* by the forms 𠬜 and 𠫔 probably because these convey the religious and ceremonial function played by the small boy in ceremonies of ancestor worship. The small boy serves as a symbolic figure of the ancestor during the ceremonies (*Jiagu*). Both symbols for this ceremonial *zi* ("son") 𠬜 and 𠫔 seem to have been deliberately drawn in the shape of sacrificial cauldrons, again examples of visual wit. In the first graph 𠬜 the cauldron with rising steam looks as if it has a head with hair and two legs. In 𠫔, what looks very much like the Sumerian sign for male 𒀀 now takes the shape of a cauldron.

Zi (**tsjə?*) ("seed") would be a suitable initial character for the *tizhi* (earthly branches) list of calendar signs, just as *hai* 亥, 𠦂 would be an appropriate last letter of the list, since it means "boundary." (Similarly *gui*, **kwiət* 癸 punning with **kwiət* 闋 ["rest", "reaching the end"] is also appropriately the last letter of the *tiangan* [heavenly stems] list [see Table 3]).

Finally, *zi* (**tsjə?*) 𠬜, 子 also had a semantic value, later written 字 , which means "letter" (as in "letter of the alphabet"), "writing", "mark", "name". *Zi* ("seed", "son") 𠬜, 子 puns with *zi* ("mark", "letter", "writing", etc.) 𡧓, 字 . This character *zi* ("mark", etc.) 字 was used interchangeably with *zhi* (**tjəh*) 誌 and *zhi* (**tjəkh*) 識 meaning "mark", "sign", "record", "remember" (*Cihai*: 1694, 1725; *DEZ*: 841, 842). And **tjəh* was used interchangeably with *ji* (**kjə h*) ("sign", "mark" "remember", "record") 𢆶, 記 (*DEZ*: 282). Another variant may have been *ji* (perhaps **djəp* / **gjiəp*) ("record", "calculate", "calculations", "strategy", etc.) 𠷎, 計 (I have used the reconstruction of 十 for 計 [*DEZ*: 547]). Here "record" and "calculate" are clearly linked. **Djəp* ("record", "calculate") would be similar in sound and meaning to Sumerian *tab* ("to add to"), Sumerian *dub* ("document", "record") and Egptian *tchab*  ("to count", "calculate") (Ball: 59, 138; Budge: 902).

These words for "mark", "record", **tsjə?* 字, **tjəh* 誌, and **tjəkh* 識 may be reflexes of *ji* (**tsjik*) ("footprint", "track") 蹟 and *ji* (**tsjək*) ("footprint", "track") 跡 . The words **kjəh* 記 and **djəp* / **gjiəp* 計 may be reflexes of *ji* (**kjə?*)("to tie") 𢆶, *jie*

(**tsit*) ("knot", "notch")  , and *jie* (**kit*) ("to tie", "knot"). Footprints and knots were both marks or markers.

The initials of these Chinese words for "mark", "sign", etc., include reconstructed **tsj-* , **tj-*, and **dj-*, which are similar in sound to *t-* in Phoen/Heb *taw*. *Taw* may have earlier had an initial closer to Chinese **tsj-*, **tj-*, or **dj-*. The Egyptian word for "hand", for example, had two sounds, *ṯet* and *tcha-t,* indicating an alternation between initial *ṯ-* and *tch-* (Budge: *lx, cviii*). Egyptian *ṯaus* ("to cut into", "to engrave") also had an alternate sound *ṯius* (Budge: 867). There probably are other examples, indicating the tendency of *ṯ-* and *ṯi-* to alternate.

Thus Hebrew *taw* + , × and Chinese *zi* (**tsjə ?*)  , would have similarities in sound, meaning ("mark"), and symbol.

With the last letter *taw* we conclude our examination of the 22 correspondences. All 22 have three-way resemblances, in sound, meaning, and graph. In seeking a resemblance in sound and meaning the ancient translator takes "meaning" in a broad sense, to include both literal and figurative meaning, as well as semantic, visual, and aural association. Ample use is made of verbal and visual punning. The sound of words in Shang times would have assumed a much greater significance than they do today since knowledge of writing was probably confined to only a handful of diviners and scribes. Hence the importance of homophones or near-homophones. The ancient translator has also taken "pictographic resemblance" in a broad sense, to mean not only geometric resemblance (similarity of shape) but also conceptual resemblance and resemblance through shared element. The resulting set of calendar signs is a thoughtful artifact, rich in verbal and visual play and signification. It is a foreign product introduced from the West, but one with Chinese characteristics.

Conclusion

One conclusion to be drawn from the 22 correspondences is that all of the *ganzhi* letters had meanings, although some of them are now lost. Likewise with the letters of the Phoenician alphabet. As we know, the English names of days of the week had meanings

that are now largely forgotten: Sun-day, Moon-day, Tiw (god of war)'s day, Wotan (chief of gods)'s day, Thor (Thunr, god of the sky and thunder)'s day, Fria (goddess of love)'s day, Saturn (god of agriculture)'s day, translated from the corresponding Roman deities. So too did the names of days of the Chinese ten-day week have meaning, which I have reconstructed and translated freely as follows: *Jia* ("hides") 甲, hunting day; *yi* ("stream") 乙, fishing day; *bing* 丙, maid's day; *ding* 丁, man's day; *wu* ("halberd") 戊 war-games day; *ji* 己, silk-sorting day; *geng* ("gate") 庚, village fortifications day; *xin* 辛, sacrifices day; *jen* 壬, silk-reeling and weaving day; *gui* 癸, resting day. (*Jen* could have meant weaving, since *jen* 紝 also means the frame for holding the warp, and is paired with "weaving" in the word *zhijen* ["to weave"] 織紝).

Similarly, the 12 earthly branches have meanings that can be interpreted as designating activities (see Table 3). Besides designating activities the *ganzhi* could have also stood as symbols for patron deities, perhaps deified ancestors. For instance, *wu* ("halberd") could have also been a day to honor the god of war. *Shen* 申 could have been a day of devotions to the god of thunder-lightning-rain. There is still the term *Leiweng* ("Old Man Thunder"), the Chinese version of Thor, Zeus, or Jupiter. The day after *shen* is *you* ("store water for irrigation"). *Chou* ("ox", "bull") could have stood for the bull deity, perhaps patron of agriculture and fertility. This would be analogous to the devotional calender of the Catholic church, where every day in the year is a feast-day for a different saint or a holy day. Patron saints of mundane affairs include St. Cecilia, patroness of music; St. Luke, patron of medicine; St. Christopher, patron of travellers, and so on.

Besides confirming Victor Mair's discovery of more than 10 years ago that the Phoenician alphabet and the Chinese calendrical signs correspond to each other one to one (Mair: 1990), the results of this study would be consonant with findings of recent researchers in many fields, such as archaeology, linguistics, anthropology, metallurgy, textiles, mythology, ethnology, etc., pointing to ancient communication and interaction between Indo-European, Middle Eastern, and East Asian peoples (Mair: 1998). They would also confirm previous research by Tsung-tung Chang indicating that there is a large number of Indo-European words in the Chinese language (Chang: 1988). They would confirm the view of C. J. Ball and other earlier Assyriologists that the Chinese language

shares many words with the Sumerian and Akkadian languages. Peripherally, they would also confirm the view of L. A. Waddell that there are many Sumerian words in the Indo-European languages. And finally, they would seem to confirm Mair's theory, published in *Early China,* that there were probably Iranian magi at the Shang court (Mair: 1990).

Because this study has revealed a sizable number of words common to Shang Chinese, Germanic, Celtic, and other Indo-European languages, and to Sumerian, Akkadian, Assyrian, and Ancient Egyptian, we can only conclude that, since this is a study of a small number of words—22, the number of common words revealed here is only the tip of an iceberg.

A linguistic question raised by the results of this paper is: What is natively Chinese (Sinitic, Hannic) in the Chinese language, when so many words are shared with other peoples, basic words for body parts (e.g., "hand", "head", "mouth", "teeth", "pudenda"), for gender and kinship (e.g.,"man","woman", "child" "beget"), and for the natural world (e.g., "heaven", "lightning", "thunder", "grass", "earth", "land", "plants", "stream", "water", "bull")? Who borrowed from whom, where, and when? What is the origin of the Chinese language, or for that matter, of the Chinese people? These questions have been asked before, but they are raised again by the results of this study.

Another question is: Who brought the alphabet to China? Was it the Akkadians? The Phoenicians? The Iranians? Or some other people? Certainly quite a few of the Chinese *ganzhi* letters are closer to the Sumerian, Akkadian, or Egptian than to the later Hebrew names of the alphabet.

Although it is my belief that the many resemblances between the Phoenician alphabet and the Chinese calendar signs observed here are neither imaginary nor accidental, this study is nonetheless preliminary, and its presumptions, assumptions, and conjectures do require further study. Since resemblances can all too often be in the eyes of the beholder, it remains to be seen whether the 22 correspondences delineated here will stand up to examination by eyes other than my own.

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To my father Lee Chih-fu李直夫 and mother Lay Juo-chao雷若昭 I dedicate this paper.

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