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by
ZHOU Jixu

Victor H. Mair, Editor
Sino-Platonic Papers
Department of East Asian Languages and Civilizations
University of Pennsylvania
Philadelphia, PA 19104-6305 USA
vmair@sas.upenn.edu
www.sino-platonic.org

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Correspondences of Cultural Words between Old Chinese and Proto-Indo-European[1]

Zhou Jixu

Chinese Department, Sichuan Normal University, Chengdu, Sichuan, P.R.C. 610068
Institute of Linguistics, Shanghai Normal University, Shanghai, P.R.C. 200234

Abstract This paper lists 97 groups of cultural words that correspond in Old Chinese and Proto-Indo-European, falling into eight categories. The correspondences are further evidence of the close relationship between the Chinese language and Indo-European languages in the prehistoric period, in addition to "basic word correspondences." [2]Moreover, by noting the objects and concepts that are designated by these words, as they refer to features of developing human civilization in ancient times, we may ascertain the approximate period of the intimate relationship between Chinese and Indo-Europeans.

The "basic words" indicate the 100 or 200 words proposed by Morris Swadesh, that represent the most necessary and basic concepts in human life, and that change the most slowly. We have discussed the interesting phenomenon of the correspondence of basic words between Old Chinese and Proto-Indo-European in an earlier paper, published in this journal.[3] We concluded in that paper that OC and PIE shared an intimate relationship in the prehistoric period. Now we will give other evidence to support that conclusion.

In the current paper, "cultural words" are terms related to " basic words." Cultural words represent concepts and things that usually are related to productive and social actions in the human life of a civilized society. We divide the cultural words into eight categories: 1. Production Tools and Techniques, 2. Agricultural Plants and Domestic Animals, 3. Time and Direction, 4. Utensils of Daily Life, 5. Appellations, 6. War and Arms, 7. Religion and Literature, 8. Writing. Exchanging or spreading cultural sectors between two or more civilizations may result in borrowings between languages, so cultural words should be excluded while looking for genetic relationships between languages. But cultural words that different languages share, especially those that can be traced back to the prehistoric period, even to the earliest days of human civilization, are strong evidence of the intimate relationship between those languages and between those peoples in remote ages. We list here 96 groups of correspondences of cultural words between OC and PIE, which are divided into eight categories. We think that these equivalents are evidence that Chinese and Indo-European people shared many common words and cultural factors in the prehistoric period. After every category, we give a short discussion to explain the facts and

[1] The paper is adapted from a part of the author's doctoral dissertation "Comparison of the Words between Old Chinese and Proto-Indo-European." The author presented about 700 corresponding words in OC and PIE to verify that there was an intimate relationship between OC and PIE during the prehistoric period, in the dissertation, which has been published by Sichuan Nationalities Publishing House (China) in July 2002.

[2] Concerning "basic word correspondences", please refer to the author's paper "Comparison of the Basic Words between Old Chinese and Indo-European" (Zhou Jixu 2002 B).

[3] Zhou Jixu, "Correspondences of the Basic Words between Old Chinese and Proto-Indo-European," *Sino-Platonic Papers*, 115 (April, 2002)

meanings on which the correspondences are based. An asterisk * is added before the Chinese character to indicate a few words that belong to the 100-word list of M. Swadesh.

To trace the oldest possible Chinese words, most characters (or words) examined here occur in literatures before the Chin and the Han periods (about 1100 BC-220 AD), even as far back as oracle and bronze inscriptions (about 1300-500 BC). We leave out much evidence in literature due to the length of this paper. Readers can consult the author's work "Comparison of the Words between Old Chinese and Proto-Indo-European" for this evidence and further explanations.

The reconstructed forms of the Old Chinese (OC) rhyme groups that appear in this paper are taken from the OC system of Zhengzhang Shangfang (Zhengzhang 1987). His OC rhyme system and the reconstructed forms are as follows:

	-ø	-g	-ŋ	-u	-ug	-b	-m	-l/-i	-d	(-ds)	-n
i	脂豕	质节	真黾	幽蓼	觉吊	缉揖	侵添	脂齐	质	[至]	真
ɯ	之	职	蒸	幽萧	觉肃	缉涩	侵音	微尾	物讫	[队]气	文欣
u	幽媪	觉睦	终	—	—	缉纳	侵枕	微灰	物术	[队]	文淳
o	侯	屋	东	宵夭	药沃	盍乏	谈	歌戈	月脱	[祭]兑	元算
a	鱼	铎	阳	宵	药	盍赣	谈	歌	月曷	[祭]泰	元寒
e	支	锡	耕	宵尧	药的	盍夹	谈隼	歌地	月灭	[祭]	元仙

The characteristics of this system are: 1. Further division of the traditional OC rhyme groups that are based on the rhymes of "Shi Jing"(1100~550 BC), yielding 58 rhyme groups in all.[4] 2. There are two kinds of vowels in the system: long vowels (expressed with double letters) and short vowels (expressed with single letter), the characters of the first, second, and fourth grade belong to the long, and the characters of the third grade belong to the short. 3. The level tone is expressed with no sign, the rising tone is signed with the glottal stop *-ʔ at the end, and the departing tone is signed with the fricative *-s at the end. The ending tone is signed with the voiced stops *-b or *-d or *-g at the end, in the original Zhengzhang's system, and I adapt them to the voiceless stop *-p or *-t or *-k in this paper.

The reconstructed forms of the Old Chinese initial consonants that are discussed in this paper, which are expressed with *-, adopt several important reconstructions that international scholars have brought forward and that have been generally recognized in recent years. 1. There are two kinds of velars in the OC initial consonant system: *K- (unrounded) and *Kw- (rounded) (S. Yakhontov 1960, Li Fangkuei 1971). 2. The characters of grade II and grade III (B) appear with *-r- before vowels (Yakhontov 1960, Pulleyblank 1962, Li Fangkuei 1971, Baxter 1980, Zhengzhang Shangfang 1987). 3. The OC initial 来 is *r-, 以 is *l-, 邪 is *lj-; they became respectively l- and j- and z- in Middle Chinese (MC) (Bodman 1981). 4. The OC initials 精 group are consonant clusters *sT-, which became Ts- in MC; the 庄 group are consonant clusters *sTr-,

[4] There are many common points between Zhengzhang's OC rhyme system, W. Baxter's (53 rhyme groups), and S. Starostin's (57 rhyme groups). Their results came from independent studies.

which became Tʃ- in MC (Bodman 1969, Li Fangkuei 1971). 5. The OC initial 章 group are reconstructed as *Tj- or *Kj- or *Klj-, which were palatalized as tɕ- or tɕh- or ɕ- in MC (Li Fangkuei 1971). 6. The uvular initials *Q- and *Qw- in OC, became the glottal initials 影-ʔ and 晓-h and 云-ɦ in MC (Pan Wuyun 2000: 333~350). Examples in this paper include: 苑*qonʔ, 园 *ɢon, 垣*ɢon. 7. A part of the initial *s- is the prefix for forming a word.

I reconstructed the Proto-Chinese forms (PC) for some Chinese words, which are expressed with the symbol **- and represent forms found earlier than the period of the Shi Jing.[5] The differences between PC and OC are mainly as follows: 1. The PC rhyme groups of 之、脂、支、鱼、侯、幽 have the tail **-r, which was lost by the OC period. 2. The rhyme groups of 蒸、东 have the tail **-m, which was dissimilated as *-ŋ in the period of OC. 3. The rising tone characters have the voiced stops **-b or **-d or **-g, or have a weak syllable including a consonant and **-ə- in the period of PC; they were weakened further as *-ʔ in the OC period. For example, in this paper: 苑 (garden)**qord, *qonʔ; 马 (horse)**maarg, *mraaʔ; 口 (mouth)**khoob, *khooʔ; 斧(axe) **plag, *paʔ; 土**thaare, *thaaʔ.

With regard to the reconstruction of rising tone characters with a voiced-stop coda, we have evidence from both internal Chinese and comparison between languages. The tones of MC developed from different kinds of consonantal codas in OC and PC, which take on the common characteristic respectively and turn into a kind of tone (Haudricourt 1954). For example: the ending tone is from the voiceless stops *-p or *-t or *-k, the departing tone is from codas with the sibilant *-s or *-ts or *-ks or *-ps, etc. Most scholars studying the OC sound system recognize these. But what is the difference in the consonantal codas between the level tone and the rising tone in the OC period? That remains a question. There is no characteristic that clearly distiguishes between the codas of the level tone and the rising tone in most of the OC reconstruction systems, which include codas such as *-ø, *-w, *-i, *-m, *-n, *-ŋ, *-l, *-r, *-b, *-d, *-g, in both syllables of level tone and rising tone, in for example, the OC systems of Karlren and Li Fangkuei. This doesn't agree with the rule for forming the tones mentioned above. The level tone and rising tone are different; they would have possessed different kinds of codas in the period of OC or PC. In the famous 17 OC rhyme groups of Duan Yucai (1814), the rhyme groups with nasal codas belong only to the level tone. This should tell us that the codas of the level tone include *-m, *-n, *-ŋ. Other codas of level tone should take on a similarity to the phonetic character with the nasals. Excluding *-b, *-d, *-g, the rest of the codas occurring in the level tone and rising tone mentioned above are *-ø, *-w, *-i, *-m, *-n, *-ŋ, *-l, *-r, all of which belong to the resonant. So the codas of level tone in the period of PC should be resonant. Zhengzhang Shangfang reconstructs the rising tone as *-ʔ and the consonantal combinations, such as -mʔ, -nʔ, -ŋʔ, -lʔ, occur in his OC sound system. Maybe the *-ʔ is only the weakened form of a kind of voiced plosive consonant or weakened syllable. There probably had been an evolution as follows: -mb>-mʔ, -nd>-nʔ, -ŋg>-ŋʔ, -ld>-lʔ, -b>-ʔ, -d>-ʔ, -g>-ʔ, -pə>-ʔ, -tə>-ʔ, -kə>-ʔ, that occurred between the PC and the OC period. The opposition of voiced and voiceless stops exsited in the PC period, and the codas of the voiced stops later turned into a part of the rising tone. Laurent Sagart proved that there is correspondence between the codas of the voiced stops of the Austronesian root and the rising tone of OC (L. Sagart 1992: 16). There are many instances of correspondence

[5] Proto-Chinese forms are reconstructed by the internal evidence of Old Chinese and the evidence of comparison between Old Chinese and archaic Indo-European languages. Cf. the author's book *Comparison of the Words between Old Chinese and Proto-Indo-European.*

between the voiced codas of the IE root and the rising tone of OC. The OC word 马 (horse) *mraa? is probably a loan from PIE (cf. item 17 following in this paper). The PIE root *marko- (horse), Proto-Celtic *markā (mare), *markos, Old Welsh march, Cornish margh, march, Breton marh, all have the root coda -ko-, -ka-, -gh-. The OC translated form of the IE *marko- (horse) is the rising tone, which shows that the early form of the rising tone was a voiced stop or a voiceless stop plus *-ə-.

Among Indo-European languages are a few that were preserved in ancient literatures, and their antiquity is as great as that of Chinese. The ancient Indo-European languages were recorded with alphabets, so the forms of words were preserved clearly, and the archaic words in 500~600 BC or earlier, such as those of Sanskrit, Greek, and Latin, don't need to be reconstructed. Through the study of comparative historical linguistics in the 19th century especially, which lasted about a century, the primary roots of PIE were reconstructed, and the etymological relationship of IE languages was clarified systematically. All these factors allow our comparison between OC and IE to be based on a solid foundation. On account of the limitations of space, we only list one IE word or IE root as the representative of all their cognates in the words compared between OC and IE, but in fact the correspondences are supported by all the cognates and is not occasional.

The status of the correspondence between OC and IE is as follows: 1. The correspondence of the consonants with the same place of articulation is direct. 2. Some occurrences of OC initial *s- prove to be prefixes, not an element of a root, so these sometimes don't correspond to the IE root. 3. The middle *-r- and *-j- in OC sometimes don't correspond to the root in IE, a possible explanation is that they are inserted elements or were produced late, especially *-j-, so they don't equate to IE words. 4. There is a system of five vowels in PIE: u, o, a, e, i; there is a system of six vowels in OC: ɯ, u, o, a, e, i. They correspond approximately but are not very regular, so that even the situation where a front-close vowel corresponds to a back-open vowel occurs. Formative, including ablaut as one of its methods, existed in Old Chinese as well as in archaic IE (Pan Wuyun 2000: pp. 127, 128). From this point of view, the corresponding difference in vowels between OC and archaic IE is understandable.

The correspondence of cultural words between OC and IE is abundantly supported by the evidence of the correspondence of homonyms and cognates between OC and IE.

Examples of the parallel homonyms:

(The *- form represents the OC sound; the **- form represents the PC sound. The characters and letters in parentheses at the end of each item note the index of that word as it is listed in the author's book *Comparison of the words between Old Chinese and Proto-Indo-European*, which should be consulted for more materials and further explanation.)

1. 风 *pum (poem) : Greek poēma (poem) (侵部 1A)
   风 *plum (wind) : Greek pneuma (air, wind) (侵部 2)
   讽*pums (read aloud) : Greek phēmi (I say) (侵部 3A)
   凤*bums (the holy bird) : Greek phoinix (phoenix) (侵部 4)
   绯*pui (scarlet silk) : Greek phoinios (the color like blood) (微部 6 A)
   翡*buis (bird with red feathers) : Greek phoinios (id.) (微部 6 B)

2. 盖 *gaap (lid of vessel) : Old English cape (cap) (盍部 7A)
   榼*khaap, khɑp (drinker) : Latin cūpa (barrel) (盍部 8A)
   嗑 *kaap (to rattle) : English gab (to cackle) (盍部 9A)

呿 **khab，*kha（to open mouth） ： Old Norse gapa（to yawn）（盍部 9B）
胳 id. (to open up from side, prize up)：English gap（to make sth. break）（盍部 9C）
口**khoob，*khoo? (mouth) ：Irish gob（mouth）（喉部 13）

3. 卑**pes，*pe（low） ： Late Latin bassus（low）（支部 2A）
狴**breese，*bree?（a kind of short dog） ：Old French basset（basset）（支部 2G）
陴**bes，*be（a kind of defensive wall） ： Italian bastia（bastion, a kind of defensive wall）（支部 3A）
裨**bes，*be（to sew, connecting two pieces of cloth)：Old French bastir（to sew with long stitches）（支部 4）
箄**pes，*pe（a kind of bamboo basket） ： English basket（支部 5）
敝**peeke，*pee?（to bash） ：Middle English passchen（to break into pieces).（支部 6A）
椑*beek（a kind of round drink container, beaker）：Latin bacca（water container）（锡部 2）
臂**preks，*pes（forearm） ：Latin brachium（arm）（支部 7）

The following offer an example of corresponding cognates:
The original meaning of the cognate indicates a thing like a box that consists of two pieces.
甲*kraap（carapace of fruit） ：Latin capsule（capsule）（盍部 3A）
荚*keep （capsule)：(id.)
匣 *graap（wooden box） ：Latin capsa（box, trunk, cabinet）（盍部 3C）
柙 *graap （cage, box)：(id.)
箧 *kheep （box, to store in a box） ：(id.)
甲 *kraap（skull） ：Latin caput（head）（盍部 4A）
陕 *graap（gorge） ：Gothic *skrapa（cliff）（盍部 5A）
胛 *kraap（scapula） ：English scapula（盍部 6）
夹 *kreep（to hold sb. under duress） ：Latin capere（to hold in hand, to control）（盍部 10A）

More corresponding examples for homonyms and cognates between OC and IE can be found in the author's book *Comparison of the Words between Old Chinese and Proto-Indo-European* (Zhou Jixu 2002C). These correspondences provide evidence from other aspects that the following correspondences of cultural words between OC and IE are not occasional or accidental.

I. PRODUCTION TOOLS AND TECHNIQUES

A. CONSTRUCTION:

1. 宫*kum（house)：Old English hām（house）<*k-, Greek kōmē（village）（冬部 1）
2. 防*baŋ（bank of a river)：Old Frisian bank（bank of a river, mound）（阳部 7）
3. 都*taa（city)：Old Italian tota（city）（鱼部 27）
   [the homonymic correspondence：都*taa（all)：Latin tōtus（all）]
4. 苑**qord，*qon? (enclosed garden) ：PIE *ghortos（enclosed garden）（元部 17A）
   (Concerning the alternative *-r / *-n in Old Chinese, cf. Bodman 1995: pp. 90, 94. He reconstructed the earlier form as *-r.)

5. 园*Gon（orchard）：Old Frisian garda（orchard, vegetable garden）（元部 17B）
6. 埤**bes，*be (to increase a building) ：Italian bastire（to build）（支部 3B）
（The spelling 卑 corresponds with the archaic IE bas- , therefore the Old Chinese should be *bes, departing tone, but it does not follow the rule.）
7. 塝 **raugs，*raus (enclosing wall) ：Old Frisian lok（castle），Old High German loh (enclosing wall)（宵部 8A）
8. 垣**Gol，*Gon (wall of a yard)：Latin uallum（railings, fence）（元部 22）
(Concerning the alternative *-l / *-n between Old Chinese and Proto-Chinese, cf. Bodman 1995: pp. 93, 94）
9. 桓**Gool，*Goon (wooden post)：Latin uallus（wooden post）（元部 22D）
10. 坍*blos (to add height to the enclosing wall of a city)：Latin plūs（to add）（侯部 18A）
11. 版**praaŋka，*praan? (wooden plates used as tools in building walls)：Late Latin planca（wooden plank）（元部 3A）
12. 冓**krooks，*koos（wooden crosses that stand on the ground to form the house's frame）：Latin crux (wooden post erected on ground with a level bar near its top), the Cross（the symbol of Christianity）（侯部 6）
13. 溝**kroob，*koo（ditch dug for draining water）：PIE root *ghrobh- (dig), Old Norse grōf（ditch）（侯部 8C）(Old Chinese should be*koo?, rising tone , and does not follow the rule.)
14. 渎*dook （drain ditch in a town）：Old Frisian dīka（to dig a ditch），English dug（past participle, dig）（屋部 2A）

House, enclosed wall, orchard, and vegetable garden, the places in which human beings reside and work, have existed in human life for about 10,000 years. City, the enclosure of the city, and the drain ditches of the city are the marks of urban culture. A bank is a kind of water conservancy facility, which began to be built in China before the Xia dynasty (2070~1600 BC). 埤 and 坍 are technical terms of architecture. 坍 and Latin plūs are correspondent only in etymological meaning; Perhaps *plūs, as an architectural term, had been discarded in archaic IE. 垣 (wall of a yard) was built with rammed earth, but the enclosures of Roman cities were built with many posts. 冓 was a component in construction in China at the time of inscriptions on oracle bones, and perhaps the "cross" had a similar function in the western part of the Eurasian continent in remote antiquity. 沟 and 渎 (drain ditch in town) are facilities for draining water in a city or town, with the characteristic that they were dug by people. All of these are related to the residential life of a city, which is the most important sign of human civilization.

B. COMMUNICATION

15. 车*kaa / *khja (chariot) ：Proto-Celtic *karsos (carriage), Welsh car (chariot)（鱼 1A）
16. 遽*gas (post carriage) ：(id.)（鱼部 1B）
17. 马**maarg，*mraa? (horse)：PIE root *marko- (horse)（鱼部 16）
18. 辔*pruits（bridle） ：Old English brīdel（reins, plaited belt）（微部 1）
19. 桴*bluu (little raft)：Sanskrit plu/pru (to float)（宵部 4C）
20. 筏**blat，*bat (raft) ：Old Norse floti (raft, fleet)（月部 3A）
21. 橃**blat（big ship across the sea）：Old English flota（ship, fleet, flotilla）（月部 3B）

Populations in the Yellow River Valley probably possessed carriages in the Xia dynasty (2070~1600 BC). *Shuo Wen Jie Zi*: "Carriages were created by Xi Zhong (奚仲), the minister of a

king in the Xia dynasty." If there were carriages, of course, there were domesticated horses. From these two words shared by OC and PIE, we can trace back their intimate relationship to 4,000 years ago. The two characters 车 and 马 appear in inscriptions on oracle bones in the Shang dynasty. Are the invention of the carriage and the domestication of the horse cultural dispersions or independent creations? This is a controversial question. Most western scholars regard them as results of dissemination (Pulleyblank 1999: p. 151). According to archeological discoveries in recent years, horse and carriage had developed in the Middle East and the steppe on the north of the Black Sea in 2200~2000 BC, where they were used in war. In the archeology of the Yellow River Valley, the earliest prints of carriage wheels were discovered in the Shang city of Shixiang (尸乡) in Henan province, and the date of these relics is between the Xia dynasty and the Shang dynasty, in about 1600 BC. Horse and carriage were important military equipment and were mainly used in war in China about 2,200 years ago. *Shuo Wen Jie Zi*: "马*mraa?, 武也" (horse is military.) The highest military commander is 司马 in the Western Zhou dynasty (1046~771BC); 司马 (administrating horses) has another alternative compound word 司武 (administrating the military). Considering the time when carriage and horse occurred and their function in social life, OC 车*kaa and 马*mraa? probably are borrowings from PIE. There are not only the correspondence between OC 马*mraa? and PIE *marko-, but also some homonymous correspondences (cf. 28. 模, 95. 巫) and other cognate correspondences (cf. 77. 武, 78. 禡). Besides these, 辔* pruits (bridle) and OE bridel (bridle) offers a good correspondence. According to *Shi Jing* (1100~500 BC), 辔 is a belt plaited with silk, and "braid" (to weave) is the cognate of bridle in Germanic: Many bridles were plaited in ancient times in Europe. All of this linguistic evidence shows that there is a close connection in the technique of carriage and horse between the two nations.

C. TECHNICAL TOOLS AND ABILITY

22. 斧**plag, *pa? (axe) : Sanskrit parasú-ś, Greek pélekys, Sumerian balag (axe)（鱼部 14）
23. 剨**l'aak, *daak（to hack): Latin lacerūre（to hack, cut into pieces）（铎部 8）
24. 磨*mool（stone mill): Latin mola（stone mill）（歌部 3E）
25. 巨**kwad, *kwa?（square, a tool of carpenter): Latin quadra（square）（鱼部 24）
26. 钳*grem（to clamp, clamp): English cramp（to clamp）（谈部 4A）
27. 籥*nip (bamboo nipper): Lithuanian knibti（to pick), English nipper（缉部 1A）
28. 模**maag, *maa（model): Germanic root *mak-（to model）（鱼部 19）
29. 锷*rot (weight unit of bronze) : Middle Persian rōd, Sumerian urudu (copper)（月部 16）

The axe was the most popular stone tool used by humans in the Stone Age. The action of using an axe is "to hack", so OC 剨**l'aak and Latin *lacerūre are forms of one of the oldest words in human language. The word "axe" in both Sanskrit and Greek is related to the Sumerian; Pedersen thought that the word is very old in PIE, and that "this borrowing occurred before the date when the huge unity of PIE had not split." A stone mill is another a utensil in remote antiquity that is made of stone. Pedersen noted: "Latin molō (mill) is the antique term shared by PIE." (Petersen 1933: p. 330) 巨 is the square used by a carpenter, and is also an old symbol of the Yellow River Valley civilization; for example, the figure of Fu Xi (伏羲), a king of Chinese ancestors in legend, held 巨 (a square) in his hand. The IE correspondence of 钳 and 籥 (clamp) is the modern word "nipper," and the cognate is traced back only to the Middle Ages, but the correspondent word in

OC pushes back the date when their common original form occurred at least to 500 BC.

It is interesting that there is correspondence between 锜* rot, the Middle Persian rōd, and the Sumerian urudu (copper). The metal earliest used by humans is bronze. 锜 is the weight unit of metal, according to the explanation of *Shuo Wen Jie Zi*. In the inscriptions on bronze objects of the Zhou dynasty, 锜 were popularly used as the unit of weight. This shows that the original meaning of 锜 indicates bronze. The populations of the Yellow River Valley entered the developed Bronze Civilization period in the Shang dynasty (1600~1046 BC). The copper axe and copper mirror were unearthed in Qijia culture, which existed in the area of the upper reaches of the Yellow River 4,000 years ago. Joseph Needham provided a map showing the chronological relationship of the bonze civilizations between the Yellow River Valley and other areas in the world. (Needham 1990: p. 85) Obviously, the Bronze Age of the west of the Old World, e.g., in ancient Egypt, were much earlier than that of the east of the Old World. Was the technique of bronze metallurgy independent creation in different parts of the world, or the result of dispersion from west to east? (Pulleyblank 1999: p. 50) We here provide evidence from comparative historical linguistics.

II. AGRICULTURAL PLANTS AND DOMESTIC ANIMALS

30. 米*miil? (foxtail millet) : Latin milium (millet)（歌部 4B）
31. *狗*koo? (dog) : Old Irish cū, Tokharian A ku (dog)（侯部 3A）
32. *犬**koond，*koon? (dog) : Old Frisian hund, Gothic hunds (dog)（侯部 3B）
33. 猵**breese，*bree? (dog with short legs): Old French basset (basset, short dog)（支部 2G）
34. 豝*praa (hog) : Old English bār (male hog), Latin porcus (hog)（鱼部 9）
35. 猳*kraa (male hog) : Old English hogg (hog) <*k-（鱼部 23）
36. 牛**kwɯ，*ŋwɯ (cow, bull): PIE root *gwōw- (cow)（之部 14）
37. 犦*bɯs (cow, bull) : Greek bous, Latin bos (cow)（之部 14）
38. 驹**kwor，*kwo (horse) : Old Frisian hors，Old Norse hross (horse)<*k-（侯部 4A）
39. *羖**kaad，*kaa? (goat) : PIE root ghaid- (goat)（鱼部 35A）
40. 罴*prel (bear) : PIE root *bhar- (bear)（歌部 13）

The relics of millet that have been discovered in the Yellow River Valley in archaeological studies date from about 9,000~7,500 years ago, belonging to the Neolithic Age. The area of the Taihang Mountains is probably the original area of millet cultivation. Propagation of the culture of agricultural plants is always fast, so the culture of millet was rapidly spread westward from the Yellow River Valley to Europe.

The relics of dog, hog, deer, horse, bear, etc., in the Neolithic Age, have been discovered accompanying the relics of ancient human activities. Dog is one of the earliest domestic animals, and it became the partner of humans about 10,000 years ago. The cognates of "dog" exist extensively in the languages of the Indo-European family. The character 犬 (dog), which occurs in inscriptions on oracle bones, is not likely to be a borrowing. The word "dog" is adopted into the Swadesh 100-word list. It is interesting that there has been a controversy concerning the semantic difference between 犬* koon? and 狗*koo? in Ancient Chinese, but the correspondences of 犬 and 狗 in Indo-European are clear, cū (Irish), kuōn (Greek), and canis (Latin) being different forms of one root. The 犬 and 狗 in Old Chinese might be different forms of one word; after the morphologic function loosening in Old Chinese, the two forms were used to represent the subtle

difference in the meanings, 犬* koon? (big dog) and 狗* koo? (small dog) (cf. Irish cū [dog, nominative], con [dog, genitive]). 狲 is "ha^{1}ba^{1}gou^{3}" in Mandarin today, and its etymological meaning is "short"; the etymological meaning of Old French basset is the same. This is an example of equivalent words corresponding in both form and original meaning; this kind of correspondence links special details, so it is difficult to regard them as borrowings.

The cow is the animal most closely connected with the life of ancient humans. The PIE root *gwōw- (cow) became the ancient Greek bous, but there are both the 牛*ŋwɯ (<*kw-) and the 犒*bɯs in Old Chinese. Are these parallel changes occurring after the ancient period, or words shared in common at the time of close relationship?

The correspondences between 驹 and Latin equos, Old Frisian hors, show that OC and IE shared in common the different names for "horse" in the prehistoric period. This provides further evidence to support that 马*mraa? (horse) and PIE *marko- (horse) are not equivalent merely by chance. The following evidence justifies this conclusion:

41. 騾*bleus（yellow horse with white speckles)：Old Norse bles（white mark on the forehead of cow or horse）（宵部 5A）
42. 犥*phleu (yellow cow with white speckles) ：（id.）（宵部 5B）

Goats and sheep had a close relationship with human life in early times, and they were domesticated about 8,000 years ago. The ancient Qiang (羌) people, an early nation living in the east of the Qing-Zhang (Kokonor-Tibet) plateau, who are generally regarded as the ancestors of Tibetans, worshiped the goat and used the head of the goat as their totem. This shows the important status of goats in their lives. Among the oriental nations, it appears that the goat was used mainly as food. The character 美 (delicious taste) is composed of 羊(goat or sheep) and 大 (big). Goat is more delicious as food than sheep is. On the other hand, although oriental peoples possessed the developed textile technique very early, they did not develop the technique of making wool textiles. What they raised probably was goat, not sheep with its long wool, so they probably preferred to make textiles with silk rather than with wool. The corresponding words we found between OC and IE were only 羖*kaa? (male goat), the totem animal of the ancient Qiang people, and the PIE *ghaid- (goat).

Holger Pedersen stated: "'Bear' is the name the Germanic nation uses for this kind of animal" (Pedersen 1933: p. 320). If this were true, we should consider why 熊/羆 (bear) corresponds only with Germanic; Is there perhaps a nearer relationship between Chinese and Germanic? Now we discover that there are cognates in Sanskrit and in Baltic. There are precisely correspondent words between Lithuanian beras, Sanskrit *bharlla, Old Norse bera, and Old Chinese *prel. This supports further the hypothesis that there was an intimate relationship between Chinese and PIE, which had not yet split into their descendants in the prehistoric period.

III. TIME AND DIRECTION

43. *望*maŋs（full moon)：Greek mēnē, Tokharian B mān（moon）（阳部 15A）
44. 昼*tos：Latin diēs（day）（支部 1B）
45. 昧*muuls（morning)：Gothic maúrgins，Old Norse morgunn（morning）（物部 5）
46. 夜*l'aaks (night)：Old English darke，Old Irish dorche（dark）（铎部 10A）
47. 岁*skots（Jupiter, the planet)：Old Irish Scot（wanderer）（月部 9）
48. 北*pɯɯk（north)：Old Norse and Old Saxon bak（back）（职部 1）

49. *日*nit（the sun）：Latin nitere（shine, stem nit-）（质部 3）

'Moon' is a basic word in the Swadesh list of 100 words. Because the moon is the brightest natural object in the night sky, all primitive peoples should have had words to represent it. "To measure" is an abstract concept. There is no necessary relationship between "moon" and "measure." So the correspondence could not occur by chance:

PIE mēn-（moon; measure）：Old Chinese *maŋ-（moon; measure）（阳部 15）

This phenomenon eliminates the possibility that the similarity between OC 望*maŋs and PIE mēn- is merely a coincidence.

昼*tos (day) is a cognate of 帝*tees (God); we discovered this etymological connection through comparing it with IE. If we had not compared OC with ancient IE, we could not have perceived such a cognate relationship. If we think of IE as a mirror of OC, we can recognize the characteristics of OC more clearly.

岁 (Jupiter) was named in Chinese after the regular migration of the planet across the sky, based on the explanation of *Shuo Wen Jie Zi*. 岁*skot is exactly equivalent with Old Irish Scot, the etymological meaning of which is "wanderer." We have the following homonyms to prove that this correspondence is not a coincidence:

刿*kos (cut) ： Hittite karss- (cut off), Old Irish scaraim, Gaelic sgar (to split)

刿*kos has the phonetic spelling 岁*skot, which shows that initial *s- is probably a prefix, so 刿 *kos may compare with Old Irish scaraim, Gaelic sgar (to split).

北**puuuk and Germanic bak originally indicate the back of body, which persists in IE and changes in Chinese. The character 北 in oracular inscriptions draws a picture in which two persons sit back to back, expressing the meaning "back of the body" and, further, "to locate on the back." Its extended meaning became "the place with its back to the sunlight," eventually "north." The north is always shaded from the sun in the Northern Hemisphere. And 北, as the meaning "north," was constantly used in oracular inscriptions in the Shang dynasty. Based on this clue, we can infer that OC and PIE shared the word at least 3,300 years ago (Mair 1990a).

The words of this section can be divided into two groups, the first group of three words (望, 昼, 昧), corresponding with the words of IE with regard both to the represented objects and to the meaning. The second group of four words (夜, 岁, 北, 日) corresponds only with regard to the etymological meaning.

IV. UTENSILS OF DAILY LIFE

50. 盌**qoold, *qoon? (drinking bowl) ： Sanskrit kuṇḍám (round container)*<*kel-（元部 18C）
51. 桮**puuul, *puuu (drinking vessel) ： Old Frisian and Old English boolda（bowl）（之部 4）
52. 榼*khaap（drinking vessel）：Latin cūpa（barrel），English cup（cup）（盍部 8）
53. 箄**pes，pe（bamboo basket）：Middle English basket (basket)（支部 5）
54. 椑*beek（drinking vessel with a handle）：Latin bacca（water container）（锡部 2）

The correspondences of 榼，椑，箄 to IE have the support of the homonymous correspondences to IE. (Cf. the homonymous examples 2 and 3 at the end of the first part of this

paper.) Not only are the names of drinking vessels correspondent between OC and IE, but so also is the name of the object contained in the vessel:

55. 醴**riilg，*riil?（light liquor）：Latin liquor（liquor, liquid）*<likw-

V. APPELLATIONS

A. Relative appellations

56. 母**mɯɯd，mɯɯ?（mother）：Greek mētēr（mother）<*mat-（之部 1）

57. 父**bad，ba?（father）：Greek patēr（father）<*pət-（鱼部 12）

58. 爹**daad，*daa?（father, dad）：Sanskrit attas（father）（鱼部 13）

59. 伯**praak（brother）：印欧语*bhrāter（brother）（铎部 12A）

Although the words "mother" and "father" have been recognized as basic words in historical linguistics for a long time, and the IE "father" was used as the typical example of historical phonologic changes (Bloomfield 1980: pp. 386~338), there is still a traditional opinion that believes that the similarities of the words "mother" and "father," etc., in different languages are due to the fact that it is easy for human vocal organs to pronounce these sounds, i.e., bilabials. According to this opinion, "mother" and "father," etc., belong to "baby talk," and cannot be used in historical comparison of languages. Now we see that each phoneme of the words "mother" and "father" between OC and PIE correspond accurately. Why are the pronunciations of babies in different areas of the world so similar? It is even more surprising that the words "dad," the appellation for father used by a baby, corresponds between OC and PIE too. The initial sound of "dad" is not a bilabial but a dental. The cognates of Sanskrit attas (father) exist in IE extensively: Latin and Greek atta, Hittite attas, Gothic atta, Old Irish athir, Cornish tād, etc. Because of the correspondence of the words "dad" between OC and IE, we can trace back the date, since 爹**daad / *daa? occurred in OC, to much earlier time. (爹*daa? first appeared in the dictionary *Guang Ya* at the end of the third century.)

B. Other appellations

60. 君*kwun（king）：Old High German kuning（king）<*g-

61. 民*min / *mun（the lowly people）：Old Frisian mann, monn (man; Old English attendants, domestic servant)

62. 蛮*mraan（man）：(id.)

63. 众*tjums（the common people）：Greek dēmos（the common people, the masses）(*t- and *d- are different in voiced and voiceless, *-j- is an uncertain medial.)

64. 人*nin (human being, person)： Sanskrit nr / nar (human being, man), IE root *ner-

Concerning the correspondence between 君*kwun and OHG kuning, there is a parallel correspondence between 群*gwun (kinsfolk) and OHG kunni <*g- (kinsfolk, patriarchal clan). In spite of their different methods of word-building, in which OC words alternate the voiceless initial with the voiced one and IE words change their codas, they are both cognates in their respective languages (Zhou Jixu 2001). The ancient nations Yuezhi (月支) and Wusun (乌孙) in the western part of Central Asia are probably branches of the Indo-European people. The king of Wusun was called 昆莫*kuun *maas, 莫*maas being the family name of the king; 昆*kuun therefore must be the title of the king in the Wusun language[6]（cf. *Han Shu*: "Account of the Western Regions"）.

[6] 昆莫 has an alternative writing 昆弥 in *Han Shu*, 弥*mil has a similar sound to 靡*mal, and 靡 is the family name of the king of Wusun, so 莫*maas is the alternative character of 靡*mal.

君*kwun and 昆*kuun is a good correspondence.

Shuo Wen Jie Zi: "民，众萌也。" (民*min are the ignorant masses.) "Man" possesses the meaning of "subjects" and "servants" in Old English. 蛮*mraan is the self-appellation of the southern nation that lived in the middle and lower valley of the Yangtze River 2,500 years ago, with the meaning "man," loaned into OC. Miao Yiao nationalities in China today are regarded as the descendants of an ancient 蛮 nation, and their languages are regarded as a branch of the Austro-Tai phylum (P. K. Bennedict). Cf. Yiao-mian dialect:

Longsheng area: mjen^2 (man, woman) ; mjen (self-appellation of that nation)

Mengshan area: mwan^2 (man,woman) ; bjau^2 mwan^2 (self-appellation of that nation)

民*min and 蛮*mraan are cognate, correspondent with Gothic manna, Sanskrit mánuš (man).

Yu Xingwu, a scholar specializing in oracular inscriptions, says: "In oracular inscriptions made for practicing divination or doing farm work, 众 were mentioned constantly; For offerings to gods or ancestors, various kinds of captives frequently were killed as sacrifices, but 众 were never killed. Thus it can be seen that 众 were freemen" (*Jin Wen Bian*). In ancient Greece, it was "dēmos" who were the freemen, with citizenship (Zhou Jixu 2002A).

VI. WAR AND ARMS

65. 戈*kool (a kind of spear), 句*koo (a kind of 戈): PIE root *ghais-, Old English gār (spear), Greek khaios (crook)（侯部 1C）
66. 杖**l'aaŋg，*daaŋʔ (a kind of long weapon): Greek lonkhē (long spear)（阳部 1B）
67. 弓**kum, *kuŋ (bow) : Latin cam- (to bend), Hittite kam（curved down）（蒸部 A）
68. 枹**phog, *phoʔ (bow) : PIE root*bheug(h)- (to bend), Proto-Germanic *bog- (bow)
69. 镝*teek（head of an arrow）: Avestic tighri-（arrow）（支部 10G）
70. 镞*stook（head of an arrow）: PIE root *stig-（stick, to stick）（支部 10W）
71. 固**kaas（wall and moat around a city, fortified city）: Latin castrum (castle)（鱼部 21）
72. 陴**bes，*be（battlements）: Italian bastia (bastion, fortification)（支部 3A）
73. 戕*sdraŋ（to kill）: Greek strangalan（to strangle）（阳部 5）
74. 鬥*toos (fight between two men): Latin duellum (duel) <duo (two)（侯部 14A）
75. 挟*geep (to capture opponents) : Latin capere (to take in one's hands), English captive < PIE root *kap-（盍部 10A）
76. 及*grip (to grasp): Frankish *grīpan，Old Norse grīpa (to grasp)（缉部 2）
77. 敓*l'oot（to loot）: Sanskrit luṇṭati (he loots), Hindustani lūt（to loot）（月部 5A）
78. 武*maʔ（footprint; to march ahead）: Latin marcāre (to step), French marche (march)（鱼部 15A）
79. 祃**maars，*mraas（to worship the war god）: Latin Mars (the war god)（鱼部 15B）

"To a kingdom, there are only two important things: one is to offer sacrifices to gods and ancestors, the other is to practice war" (Zuo Zhuan). In ancient Greek society, those were also the two important things: to worship gods and to fight other city-states. Another correspondent word for a weapon is:

80. 铊（short spear）*djal : Latin tēl-um（throwing spear）
(铊 with the phonophore 它*thal)

The correspondence of 弓*kuŋ and Latin cam- is etymologic. As Stephen Selby has pointed out: "弓 in oracular inscriptions shows the figure of a compound bow" (Selby 2000). Compared

to a simple bow, the compound bow needs a much more complicated technique, as exhaustively recorded in *Zhou Li*. The simple bow has a string like a "D"; the compound bow, or mounted bow, is strung like a "B." The character 弓 in the oracular inscriptions is like the latter. The invention of compound archery marks important progress in the technology of making weapons in the prehistoric period. It is difficult to imagine that such a complex technique was independently invented in different areas with such a similar result. According to E. G. Pulleyblank: "Mounted archery was a later military adaptation that arose on the western steppes around the beginning of the first millennium" and was related to the ancient IE nations (Pulleyblank 1999: p. 81). The common form of "bow" in Germanic languages is bog-, from the Old English būgan (root bū-), and akin to the Sanskrit bhujáti (he bends), from the PIE root *bheug(h)- (to bend). 弓*kuŋ, found in oracular inscriptions (3,300 years ago) does not correspond to the PIE *bheug(h)-. This suggests the possibility that the bows of Asia and Europe really are not related to each other in history. But we found the character 柎/ 跗 , another name of a bow, until now forgotten, in *Zhou Li*. Sun Yirang, a specialist in *Zhou Li* at the end of the Qing dynasty, has pointed out: "柎 is the general name of the frame of a bow" (*Zhou Li Zheng Yi*). 柎 / 跗**phog, *phoʔ is indeed correspondent with PIE *bheug(h)-. The relationship is thus confirmed.

镝*teek corresponds directly with Avestic tighri- (arrow). 镞 / 族*stook is a form of 镝*teek with the prefix s-. 镞*stook corresponds to the PIE root *stig- (stick) etymologically. In terms of correspondent words between OC and PIE, we know that 镝 and 族 are cognate with the original meaning, "pointed stick."

固 and castle are not only correspondent in the lexical forms, but also are similar in their constructions, both built with high walls and deep moats. "城郭溝池以爲固" (The castles are made up of inner and outer city walls and moats [*Li Ji*]). 固 is the defense works of a city in its original meaning; "firm" or "solid" is only its derivative meaning.

From the correspondence between 鬥*toos and Latin duellum, we believe that the explanation of 鬥 in *Shuo Wen Jie Zi*, "two bachelors fight face to face," is correct. The etymological meaning of 鬥 is just like that of duel in European languages. The older meaning of 鬥 and duellum is two, so "two" was used in the explanation of 鬥 in *Shuo Wen Jie Zi*. The explanation of *Shuo Wen* favored the ancient Latin scholars who declared that 'duellum' came from 'duo' (two), and indicates that A. Meillet, who argued that the 'duo' origin of 'duellum' was merely a folk-etymology, was wrong (E. Partridge 1966: duel). This correspondence is supported by another correspondence between 对*tuus (two) and PIE*dwo- (two), which are important basic words.

挟*geep and 夹*kreep (hold) are nicely correspondent to the Latin capere (stem cap-, control), and the *-r- of 夹*kreep is probably an infix. *Shuo Wen*: "夹，持也" (夹*kreep, to grasp) The figure of 夹 in oracular inscriptions is a drawing that shows a big man grasping two little men under his arms. The original meaning of 夹 would have been "to capture opponents in battle." The ancient Persian King Darius (521~486 BC) built a huge stone carving to commemorate his victory over Egypt that shows nine bound captives kneeling down under the feet of a giant man. The statue can be regarded as the symbol of the concept "capture," as can the figure of 夹. The similarity of symbolism between the statue and the figure 夹 could be explained by the similarity of their concepts, but the similarity of lexical forms between 夹*kreep and Latin capere leads us inescapably to the intimate relationship of these different languages. In addition, there are many other homonyms and cognates of 夹. (Cf. the first part of this paper for an example of a cognate

and see Mair 1999 for many more.)

The character 武*ma? has two ordinary meanings in Old Chinese: 1. to go on a punitive expedition or to war, 2. footprints. The two meanings correspond to the two meanings of Old French marcher: 1. to march, 2. to step. The figure 武 on oracle bone inscriptions consists of a dagger-axe over a foot, showing the meaning "to carry dagger-axe on the shoulder and go on an expedition"; the derivative meaning became "military" and "brave." In addition, 武*ma? and 马 *mraa? are similar in sound, corresponding perfectly to the similarity in sound of "march" and "mare." We also can indicate the correspondent words in Tibeto-Burman: Old Tibetan "rmang"(horse) and "dmag" (army), Burmese "mrang" (horse) and "mak" (army).

Another correspondence of cultural words is really astonishing: 祃*mraas and "Mars." The meaning of 祃 ought to be "to worship the god of war," which is explained by the annotation of Duan Yucai to the entry for 祃 in *Shuo Wen Jie Zi Zhu*, not "a god of territory" as seen only in Guangyun (1008 AD) (Zhou Jixu 2002C: pp. 251-252). 祃 occurred in the *Shi Jing*, *Zhou Li*, and *Li Ji*, and has the alternative written form 貉*mraak.[7] 祃*mraas existed 3,000 years ago and possesses the cultural characteristic of the Zhou nation, "Mars," in Roman mythology, is "the god of war" and probably goes back to 1,000 BC. This is an exact correspondence, reinforced by the correspondent cognates 马 : "mare" and 武 : "march".[8]

戈 杖 镝 固 陴 栧 祃 are correspondent both in objects and original meanings; 弓 镞 are correspondent only in their original meanings; and 戕 鬥 挟（夹）及 敫 武 are correspondent in both their current and original meanings.

VII. RELIGION AND LITERATURE

A. NAMES OF GODS

81. 帝*tees（God）: Greek *Diwos（God）< PIE root *dei-（支部 1A）
82. 天**thiim, *thiin (sky): Latin diem, Sanskrit dyām (day, sky)
（忝*theem is written with the phonophore 天, so 天 must go back to the form with a final *-m.）
83. 祜**gaad，*gaa?（the blessing given by God）: Sanskrit *ghūta（God）（鱼部 34A）
84. 祇*ge（the god of the earth）: Greek gaia（Gaea, the goddess of the earth）（鱼部 31B）
85. 社**gjare，*gja?（a god who rules a part of a land）:（id.）（鱼部 31C）
86. 祃（the god of war, cf. 78.）（鱼部 15B）
87. 酺**baaks，*baas（bacchanalia, a festival in which much rice wine is consumed）: Latin Bacchus（the god of wine, Dionysius）< Greek Bakis（鱼部 11B）
88. 羲和**sral-gwaal (>*hral-gool) (the sun god who drives the solar chariot) : PIE root *sawel- (the sun, later the sun god, Helios)
89. 望舒*maŋs·hlja（God of the moon）: Hittite meinulas（crescent）（阳部 15C）
90. 若*nak（the god of the sea）: Greek Nēreus（a sea god, Nereus）（铎部 19）
91. 若*nak (spirits who look like trees and live in the forest) : PIE *na-, Greek naias（naiad, nymph）（铎部 19）

[7] According to the annotation of Zheng Xuan, the sound of "貉" is the same as "百*mbraak", so the initial of the word has lost the consonant "k", which is usually indicated by the spelling "各".

[8] In ancient times, the horse was used mainly in war, so 马 武 祃 ought to be a group of cognates in Old Chinese. "马，武也。"(Mare is military.) (*Shuo Wen*)

92. 羬*ban (a kind of goat with a yellow belly): Greek Pan (the god of shepherds) (元部 12)

The PIE form of god *deiwo(s) has many cognates in Greek, Latin, Sanskrit, Old Persian, Celtic, and Germanic. PIE *diēu(s) (heaven, the supreme god), Latin diem (accusative), Vedic Sanskrit diām, Homeric Greek Zēn (for Dēn), all correspondent to Old Chinese 天**thiim. *Shuowen Jiezi*: " 帝，諦也。王天下之號也。"(*tees, the god who knows everything, whose name (*tees) means ruling the world under heaven.) A famous Chinese scholar, Zhu Junsheng (Qing Dynasty) said: "The original meaning of 帝 indicates heaven"(Zhu Junsheng 1850). His opinion is correct. Now we perceive that 帝 and 天 are cognates, which is supported by the correspondences of ancient IE. We also discover that 帝, 天, 昼(*tos, day) and 照(*tjaus, shine) are cognates; this kind of relationship also is shown by the equivalents of PIE cognates.[9]

god (God) is the popular form in Germanic, Sanskrit -hūta (for *ghūta) is the popular form in the eastern branch of IE. The latter is correspondent to 祜**gaad.

Greek gaia, Doric ga, Attic gē (earth, later the goddess of the earth) corresponds not only to 祇*ge (the god of the earth), but also to 或*gwuuuk, 域*Gwuuuk, 国*kwuuuk (a territory). 社 *qja? is the god of a part of a territory. The Mediterranean root *ga- (the earth) is related to these. The Mediterranean root *ga- has a variant *ta-. Egyptian ta (earth), Latin terra (earth), Proto-Celtic *tērsos, Old Irish , Welsh, Gaelic tēr, all of them correspond to 土**thaare, *thaa?. The character 土 is an alternative writing for 社 in the inscriptions on oracle bones. The phenomenon probably means they were originally cognates, and shows that Proto-Chinese has some roots similar to Mediterranean.

Dionysus, whose other Greek name is Bacchus, had been the chief god in Greek religion. His position was lowered after the worship of the Olympian gods came to dominate Greece. According to Greek myth, Bacchus is young, clever, and fond of mischief. In the period of the Western Han dynasty (221BC~8AD), 酺 indicated "revelry and drinking in national festival" specifically, and the meaning "god" had disappeared. *Shuo Wen Jie Zi*: " 酺，王德布，大饮酒。"(" 酺*baas, the King declares favorably: 'Allow bacchanals to be held all over the country.'") Zheng Xuan, a famous scholar in the Eastern Han Dynasty, annotated *Zhou Li*: " 酺*baas, the god who brings people damage." Sun Yirang, a Qing Dynasty scholar, notes in his *Zhouli Zhengyi*: "The scholars after the Han Dynasty thought that 酺*baas specially indicates bacchanalia, having lost its original meaning of worshipping a god, but they are wrong."

羬*ban, a kind of goat, is etymologically correspondent to the Greek word Pan, the god of shepherds. The image of Pan is a man with horns, ears, hoofs, and even the head of a goat in Greek myth. There is a homonymous word that corresponds to PIE:

93. *番**bal, *ban (the paw of animal): Greek palam (palm, root pal-) (元部 11)

番*ban has a cognate in Old Chinese: 尃**phal, *pha (palm, hand). The root ending -n alternating with -l is common between OC and PIE.

B. Myths

94. 凤*bums (a kind of holy bird): Greek phoinix (phoenix, the immortal bird) <*bh-

The change of the ending -m in PIE to become -n in Greek is normal, so the phonetic forms of the two words are correspondent. The author of this paper thought at first that the Greek word phoenix is probably a loan from Old Chinese, because 凤*bums was very familiar to Chinese people from a very early time. In fact, the figures of the holy bird and the dragon became the

[9] PIE root*deiwo- (god, sky, heaven) and its cognates have meanings similar to the OC root *tee- and its cognates.

symbols of Chinese traditional culture. The characters 凤*bums occurred in inscriptions on oracle bones, showing the shape of a bird with a high crest and long tail. The character 凤 was added to the phonophore 凡*bum, which gives evidence of the sound of 凤. It is surprising but true that the Greek phoinix and its myth did not come from Old Chinese or even Proto-Chinese, but originated in Egypt, which has a much longer recorded history than China. The Greek phoinix has the cognate "phoinios" (a red color like blood), which is correspondent to Old Chinese 绯*pui (a kind of scarlet silk, scarlet), and 翡*buis (a kind of bird with red feathers). We discover further that there are some homonyms of 凤, such as 凤(poem), 凤(wind), 讽(read aloud), which are correspondent to PIE. (Cf. the example for the parallel homonyms under item 1. in the first part of this paper and in item 94.) This amazing phenomenon resembles a closed prehistoric heavy curtain opened for a short duration by chance, which lets us catch a glimpse of human prehistory lost for a very long time.

C. Literature

95. 风*pum (poem) : Greek poēma, Latin poëma (poem) (侵部 1.A)

Both these sounds and their meanings correspond quite directly. In Old Chinese, 风*pum (wind) has another meaning, "poem," for example, in *Shi Jing* (about 1100~550 BC). This has puzzled Chinese scholars. Some have long tried to find a derivational relationship between the two meanings, but all these explanations are farfetched and unbelievable. Now we know that 风 (wind) and 风 (poem) are merely homonyms. We can see evidence of the relationship from the correspondent words of IE:

风*plum (wind): Greek pneuma (air, wind) (侵部 2)

Poetry is the earliest form of literature in human history; maybe that is the reason there are equivalents between Old Chinese and ancient IE.

D. Religion

96. 巫**mag, *ma (wizard, witch) : Greek Magos (sorcerer) < Old Persian Magu (鱼部 18)

According to the OC tone system I have described, characters that have a voiced plosive ending should change to a rising tone in OC, but 巫 is a level tone character. The endings that became level tone, for example, 巫**-g and 溝**-b (cf. item 13), probably had been lost earlier than were the voiced plosive endings that became rising tones.

As there are correspondences of gods between OC and PIE, the correspondence of "magician" is reasonable (Mair 1990b).

We noticed another pair of equivalents:

冓**kroos, *koos (wooden cross beams of houses): Latin crux (wooden cross erected on ground)

The Latin crux indicates a wooden post with a level bar near the top, on which the ancient Romans fastened convicted persons to die. The Cross indicates especially the cross on which Jesus was put to death, and it has the strong color of the Christian religion. 冓 shows the figure of wooden posts crossing each other, in oracle bone inscriptions, which is consistent with the definition of 冓 as "crossed timbers of an house"(*Shuo Wen Jie Zi*). 冓 has no meaning related to religion, which "cross" --the correspondent of 冓--has, showing that the time of close relationship between Chinese and Indo-European is much earlier than the start of the Christian period.

VIII. WRITING

97. *篥*lep (piece of bamboo for writing) : Latin liber (bark for writing, root lib-) (葉部 11.B)

From the correspondence between OC *lep and Latin liber, we know that the archaic peoples who lived respectively in the eastern and western ends of the Old World called written material by the same name. There is another correspondence:

*葉*lep (leaf, leaves) : Old English lēaf (leaf) (葉部 11 A)

Cognates of "leaf" exist extensively in Germanic. Leaf and bark are different matters in the natural world, and ancient people would not have confused them. Swadesh gave the two words in his 100-word list. So Germanic leaf and Latin liber probably originally are two distinct homonymous roots in PIE. 葉*lep (leaf) and 篥*lep (piece of bamboo) are parallel with them in OC. If that is true, the history of the correspondence of 篥 and Latin liber must have been very long.

The earliest Chinese characters existing today are inscriptions on oracle bones used in about 1300 BC, and the most popular material to write on was bamboo, this is known from the figures of the inscriptions on oracle bones "典" and "册" (historical book), which show a picture of pieces of bamboo or wooden strips fastened with cords. The earliest IE characters are Mycenaean Linear B, which was incised on clay tablets and was used to record ancient Greek in about 1400 BC. Later archaic IE writings, e.g., Sanskrit and Greek, are all alphabetic.

The Chinese nation and the Indo-European nation began to use writing at approximately the same time, but the types of written systems they used are entirely different: one is the meaning-sound character based on symbols of figures, the other is phonetic spelling using several alphabets. This shows that they had lost their close connection by this time, at least in the economical and cultural centers of both sides. So we can infer that the period of intimate relationship between OC and PIE must not be later than 1,500 BC.

The correspondent words between OC and PIE belong to several different time levels, for example, productive tools in the Stone Age, buildings, techniques, and military equipment in the early civilized period, and the worship of gods, myths, and the special points of literature in the prehistoric and historic periods. Referring to the correspondences of basic words between OC and PIE (Zhou Jixu 2002B), we can consider that their intimate relationship was not of short duration, but rather lasted a very long time: from the Stone Age to the start of the period of agricultural civilization.

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After I finished my dissertation "Comparison of the Words between Old Chinese and Proto-Indo-European" in Chinese, I sent an abridged version to Professor V. H. Mair. He expressed the hope that I could translate it into English so that it could be read by more people, especially by Western scholars. Appreciating his kind proposal and encouraged by his enthusiasm, I translated two parts of the dissertation into English, which became the paper "Correspondences of the Basic Words between Chinese and Proto-Indo-European" (*Sino-Platonic Papers*, No. 115), and this paper. I would like to thank Professor Mair for his keen insight into the relationship of the histories, cultures, and languages between the Orient and the Occident, and for all of his editorial efforts to revise my mistakes in English expression. Of course, I am responsible for any errors that may still remain in the paper.

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The entries for 1.I, 2 "this," 4 "who," 5 "what," 7 "two," 12 "dog," 17 "egg," 18 "horn," 20 "nose," 23 "hand," 28 "die," 33 "sun," 34 "moon," 35 "water," and 39 "fire" should be marked with shadow backgrounds to show that they belong to S. Yakhontov's list of 35 basic words.

On p. 6, n. 9, l. 6, instead of "So I reconstructed 自," it should be "So I reconstructed  ."

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