

“The CELESTIAL DRAGON in Xia and Shang”

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ABSTRACT

From Neolithic painted pots, to Bronze Age ritual vessels, to the *Book of Changes*, to temple roof finials, to imperial ceremonial robes, the iconic image of the dragon is ubiquitous in the Chinese cultural sphere. From its archaic origin in mythic imagination, this iconic creature came to symbolize the power of nature at its most awesome – the generative *yang* force, apotropaic potency, and the overawing imperial charisma. This essay offers an account of the astral and naturalistic associations of the dragonic image in China in an effort to uncover the origins of this potent symbol.

“It is difficult to think of any creature that has exercised an equal power over the imagination of any nation, let alone for so long.”¹

1. DRAGONS IN THE FORMATIVE PERIOD

There is no more quintessentially Chinese symbol than the *lóng*, or dragon. Dragon images are virtually ubiquitous in the East Asian cultural sphere and have been in China since the Neolithic. In spite of a superficial similarity with the fire-breathing reptilian familiar from Western mythology, by nature the Chinese

dragon differs dramatically from the fearsome creatures battled by heroic figures in the West.² The Chinese *lóng*, while still awful in the true sense of the word, symbolizes instead the overwhelmingly powerful and protean, but ultimately, beneficent, forces of nature. Our aim here is to trace the iconic symbol of the Chinese dragon to its source in the life-world and imagination of the people of 4,000 years ago. Such study suggests that the symbolism of the *lóng* arose from close observation of nature and the stars in the Neolithic and was strongly conditioned by the implications of such observations for human adaptation to the environment. The *lóng* derives its dual nature – awesome power and changeability – from its associations in both astral and terrestrial domains.



Figure 1: Neolithic shaman’s burial at Puyang 濮陽, Xishuipo 西水坡, ca. 3000 BCE. The clamshell mosaics depict the Dragon (right) and Tiger (left) in their correct positions according to the cosmology of two-and-a-half millennia later; after Chang (1999), 51, fig. 1.5.

I will not attempt to survey all the primary sources and commentarial literature on the dragon in all its iconic manifestations. Such a catalogue has already been capably compiled and translated by Jean-Pierre

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Diény.³ Moreover, John Hay published a study of the symbolism of the *lóng* in later Chinese tradition in which he memorably characterized its symbolism this way:

[The dragon's] inseparable association with the flux of substance, seen in water and mist . . . its emergence from this flux and inevitable disappearance back into it, embodied the transformational processes of actualization itself. The transformations of the [dragon] along the axes and across the categories of existence were inherent in its nature.⁴

Clearly, we are dealing with something altogether different from the malevolent creature familiar from European mythology.⁵ Neither Diény nor Hay concerned himself with the most ancient period, however. Indeed, for his part Diény dismissed out of hand the possibility of tracing the symbol to its origins and discounted previous efforts to do so. Nevertheless, I propose to show that those origins are not quite so obscure as Diény imagined. In the process I will refer to the later symbolic significance of the *lóng*, but my principal aim will be to see what can be learned about the origins of the iconic symbol and its possible significance.

The first, extended account of how dragons and humans connected is found in the 4th century BCE annalistic narrative *Zuozhuan* 左傳 (*Tradition of Zuo*), which chronicles the two-and-a-half centuries of the Spring and Autumn period (722-481 BCE) during which the vassals of the great Zhou dynasty (1046-256 BCE) contended for hegemony.

Duke Zhao, 29th year (513 BCE)

In autumn, a *lóng* (dragon) was seen in the outskirts of Jiang. Wei Xianzi asked Cai Mo about this:⁶ “I hear that there is no reptile wiser than the *lóng* because they are never taken alive. Is it correct to call them wise”?

[Cai Mo] replied, “**The truth is that people are unwise, not that dragons are truly wise.** The ancients raised dragons, and therefore the state had a clan of dragon breeders, the Huan Long, and a clan of dragon tamers (lit. ‘drivers’), the Yu Long”.

Xianzi said, “I have indeed heard of these two clans, but did not know their origin; why were they so called”?

[Cai Mo] said, “In ancient times, there was Liu Shu'an, whose descendant was Dong Fu. In truth, [Dong Fu] greatly loved dragons, and he managed to discover their tastes and appetites in order to feed and water them. Dragons flocked to him in great number. So he raised them and employed them in the service of Emperor Shun. [Shun] bestowed upon him the surname Dong, and his clan was called Huan Long, ‘Breeders of Dragons’. He was enfeoffed at Zhong Chuan, and the Zhong Yi clan are his descendants. Thus, in the days of Emperor Shun and for generations afterward, there were domesticated dragons. Then it came to the days Kong Jia of the Xia, who was obedient and faithful to Di.⁷ Di bestowed upon him a team of dragons, two from the Yellow River and two from the Han River, each pair with one male and one female. Kong Jia could not feed them, and he could not obtain [the help of] the Huan Long clan. The Tao Tang clan had already fallen into decay, but there was among their descendants one Liu Lei, who had studied the keeping of dragons with the Huan Long clan. In this way he came to serve Kong Jia and was able to feed and water the dragons. The Lord of Xia (Kong Jia) praised him, and granted him the clan name Yu Long, Driver of Dragons, employing him in place of the descendants of the Shiwei.⁸ One of the female dragons died, so he (Liu Lei) secretly made it into mincemeat, which he served to the Lord of Xia. The Lord of Xia liked it, and when it was finished he sent for more. Liu Lei was frightened, and fled to the district of Lu, whose Fan clan are his descendants”.

Xianzi asked, “Why is it that there are no dragons now”?

[Cai Mo] replied, “Now, as to the iconic creatures, each has its official who must adhere to the rules [of his office], bearing them in mind from dawn to dusk. If he should neglect his duty even for a single day, then death will come to him; he will forfeit his office

and starve. If the official is diligent in his duties, then his iconic creature will come to him. If he abandons his duty, the creature will go into hiding, be cut off, and fail to flourish. Therefore, there were officials of the Five Elemental-Phases called the Five Officials, who in fact all received clan names and surnames; they were invested as Senior Grandees, and received sacrifices as noble spirits during the Five Sacrifices at the altars of grain and soil, being thus honored and revered. The Regulator of Wood was called Gou Mang, the Regulator of Fire was called Zhu Rong, the Regulator of Metal was called Ru Shou, the Regulator of Water was called Xuan Ming, and the Regulator of Earth was called Hou Tu. Dragons are creatures of water, but the Office of Water has been abandoned, so that dragons cannot be taken alive. Does not the *Book of Changes* say of the first [changing] line of the *Qian* hexagram, ‘*the Dragon is hidden; do not act*’; of the second [changing] line, ‘*the Dragon appears in the field*’; of the fifth [changing] line, ‘*the soaring Dragon is in the sky*’; of the sixth [changing] line, ‘*the recalcitrant Dragon will have regret*’; and of all the (changing) lines, ‘*there appears a flock of Dragons with no head; auspicious?*’ And of the sixth [changing] line of the *Kun* hexagram, it says, ‘*Dragons battle in the wild*’. **If Dragons had not been seen morning and night, who could have made them iconic?**⁹

Why is it, Wei Xianzi wonders, that dragons can no longer be caught? Is it because they are so much cleverer than men, so that they are able to elude capture? Cai Mo’s somewhat cryptic reply, “**The truth is that people are unwise, not that the dragons are truly wise**”, is key to the meaning of the passage. On the surface it would seem that what follows is a straightforward account of legendary history, but in fact, the author is alerting the knowledgeable listener that there is a subtext to be attended to. What that subtext is will presently become clear. In specific, then, what material facts do we learn about dragons?

1. A certain individual initially acquired the secret knowledge of how to tend dragons, which knowledge was considered so valuable that he was called upon to serve the earliest rulers. He was rewarded with official duties, emoluments, and hereditary title, and his descendants carried on the same responsibilities generation after generation, down through the two dynasties of the 2nd millennium BCE, Xia (1953 – 1555 BCE) and Shang (1554 – 1046 BCE).
2. Anciently, *lóng*-Dragons might be bestowed by the High God on rulers of conspicuous virtue who displayed reverence toward the spirits. The flourishing of dragons signifies divine approval of the ruler.
3. The *lóng* being the iconic ‘watery’ creature (associated with clouds, thunder, rain, and the watery abyss beneath the earth), in course of time the function of ‘dragon tamer’ became institutionalized as the hereditary royal office responsible for the elemental force of Water. Diligent performance of the duties of this office was of vital importance; indeed, it was a matter of life or death. If the responsible official should neglect his duties, the *lóng* would disappear (signifying the High God’s displeasure), with ominous consequences for the state.
4. The reason why *lóng* can no longer be seen, much less tamed, is because the secret knowledge (“wisdom”) of how to attract and tame dragons has fallen into disuse, government has become disorderly, royal virtue has declined, and the spirits no longer smile on human society.
5. It is certainly not the case that *lóng* are a fiction, for if that were true how could a canonical

authority such as the *Book of Changes* 周易 possibly portray their behavior so vividly in its oracular imagery? Hence in ancient times 龙 were regularly seen (i.e., rational skepticism in Zuo Qiuming's 左丘明 day notwithstanding).

2. ASTRONOMY AND THE HARNESSING OF DRAGONS

We will ignore the layers of metaphysical commentary in the *Book of Changes* that have

accumulated through the ages around the first hexagram *qián* 乾 ☰ and simply consider the earliest stratum of the text, the individual line texts associated with the lines of the hexagram:

- 1: hidden Dragon, do no work
- 2: Dragon appearing in the fields
- 3. [unrelated]
- 4: perhaps bounding in the void
- 5: soaring Dragon in the sky
- 6: recalcitrant Dragon has cause for regret

And about the lines collectively: *a flock of Dragons with no head; auspicious.*

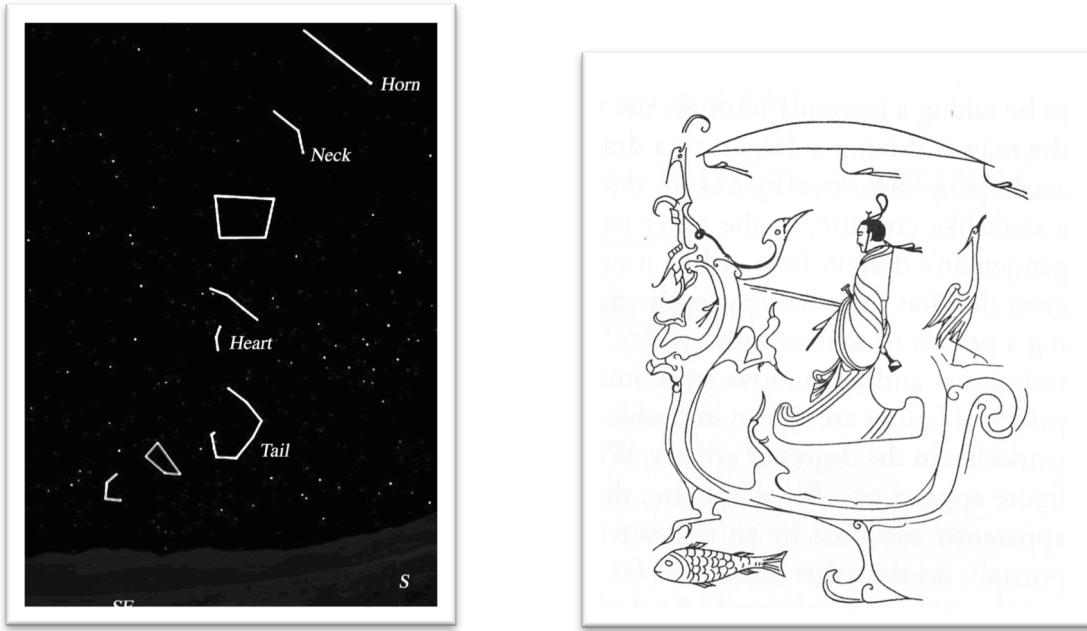


Fig. 2 (a) The DRAGON constellation, comprising stars from Vir—Sco; (b) silk painting of a figure (immortal?) riding a dragon from the early W. Han tomb M1 at Manwangdui; after Wu Hung (1997), 743, fig. 10.41b.

Now, though generally ignored in the commentaries, it is really no secret that these line texts of hexagram *qián* refer to the seasonal appearance of the CERULEAN DRAGON, a huge constellation comprising stars from Virgo through Scorpius (Fig. 2a). Wen Yiduo was the first modern Chinese scholar to make the connection and elaborate on it in detail. As Wen says, “when ancient texts mention ‘dragon’, most often they are referring to the DRAGON constellation.”¹⁰ *Qián* hexagram, consisting of all solid lines, symbolized the

pure *yang* force: bright, warming, energetic, quickening all of nature, like the stirring of the dragon in the depths under the ground. China's first etymological dictionary, the *Shuowen jiezi* (*Explicating graphs and analyzing composite characters*) by Xu Shen 許慎 (ca. 58 CE – ca. 147 CE), in glossing the character *lóng* says: “at autumn equinox it conceals [itself] in the watery void; at spring equinox it climbs into the sky”.¹¹ In the past, discussion of the seasonal appearance of the DRAGON has focused almost exclusively on the DRAGON'S changing appearance and orientation as it slowly makes its way across the southern sky throughout the spring and summer.

Initially, during the winter when the fields lie inert and farm work is at a standstill, the DRAGON supposedly hides in the watery void under the earth: “*hidden Dragon, do no work*”. The first achronycal (evening) rising of the dragon's horn (α Vir, Spica) above the eastern horizon “*in the fields*”, accompanied by the first full moon of spring (the pearl the Dragon is often depicted chasing), signaled the quickening of vegetative life and the approach of spring planting. When the DRAGON rose it was the time to conduct the great rain sacrifice *da yu* 大雩, according to the *Zuozhuan* (Duke Huan, 5th year, 707 BCE). Commentator Du Yu 杜預 (222 – 285 CE) says this rite was held the month before the summer solstice. The Confucian *Analects* 論語 (XI, ‘*Xian jin*’ 先進) indicates that this ceremony included ritual dancing.¹² Here in Cai Mo's narrative, I believe we have the explanation for the account in the 17th year of Duke Zhao where, according to the *Zuozhuan*, “Tai Hao used DRAGON(s) for recording, so he made a DRAGON Master and named him for the DRAGON” 大皞氏以龍紀, 故為龍師而龍名. Tai Hao 大皞 is none other than the mythic progenitor and benefactor of humanity, Fu Xi 伏羲氏. *Zuozhuan* is vague about exactly what was recorded (lit. 紀 *ji* ‘threaded, strung’) and how dragons were implicated, but since traditional time reckoning typically involved keeping track of events by the days, months, and seasons (hence the title of the chronicle *Spring and Autumn Annals*), it seems certain that the reference is to the scribe (*taishi* 太史) in charge of astro-calendrical functions like seasonal observations of the DRAGON and the Sun.¹³

After his auspicious appearance the DRAGON leapt nearly vertically into the sky, only leveling off by summer solstice (“*soaring dragon in the sky*”) when its enormous 75° length extended horizontally across the southern sky.¹⁴ By mid-August, as harvest season approached, the DRAGON'S horns and head (*Vir-Lib*) had already disappeared beneath the horizon in the southwest, and the whole constellation was on the verge of plunging obliquely into the depths once again. A DRAGON constellation lingering in the sky at this season (“*recalcitrant Dragon has cause for regret*”) meant the count of the lunar months and the tropical year were out of synchronization and in need of recalibration through intercalation.¹⁵ On the other hand, the sequential changes in the DRAGON'S appearance signified by all six lines of the hexagram, when in step with the calendar, meant that nature and human affairs were in harmony: “*there appears a flock of Dragons with no head — auspicious*”.¹⁶ There it would appear the story ends, since we have run out of lines in the hexagram. As the

“Great Commentary” on the *Book of Changes* says: “Great indeed is *qián* . . . it responds to the season, driving six DRAGONS through the heavens!”

But hexagram *qián* ☰, the pure *yang* 陽 half of the complementary binary pair of *yin* 陰 and *yang*, is

followed by the *kūn* 坤 hexagram ☷ (made up of six broken lines), the quintessential symbol of the *yin* force. *Kūn* follows *qián* just as the withering of vegetation, the lengthening of shadows, and growing hours of darkness all signal the onset of winter, the season when the *yin* force reaches its peak. Hence the first line of *kūn* hexagram references the season when it says: “*treading on frost [one knows] the hard freeze is coming.*” In fact, however, as any ancient farmer or sky-watcher knew, the DRAGON never really disappears from the sky during the season of cold and darkness, just as the *yin* force never completely overcomes the *yang*.¹⁷ Instead, after a month-long period of invisibility around the autumnal equinox, by mid-October the horns of the DRAGON would reappear above the eastern horizon, *only now in the pre-dawn hours* instead of in the evening dusk. After this, the dragon would follow the same soaring path across the heavens as in spring and summer, only now in half the time. Numerous references to this ‘off-season’ phenomenon appear in ancient texts (though not explicitly in the *Changes*), showing that the DRAGON’S behavior served as a seasonal indicator throughout the entire year, not merely during the growing season.¹⁸ For example, in *Guoyu* 國語 (*Discourses of the States*) there is the following:

When [the asterism DRAGON'S] HORN [LM #1, α Vir] appears [sc. before dawn], the rain stops. When [the asterism] HEAVEN'S ROOT [Vir/Lib] appears, the rivers dry up. When [the asterism] BASE [Libra] appears, the plants shed their leaves. When [HEAVENLY] QUADRIGA [i.e., LM # 4 CHAMBER, π Sco] appears, frost falls. When [GREAT] FIRE [LM #5 XIN, α Sco] appears, the clear wind forewarns of cold. Thus the teachings of the Former Kings say, “When the rains stop, clear the roads. When the rivers dry up, complete the bridges. When the plants shed their leaves, finish storing the harvest. When the frost falls, make ready the fur garments. When the clear wind comes, repair the inner and outer defense walls and the palaces and halls”. Therefore, the *Ordinances of Xia* says: “in the 9th month, clear the roads; in the 10th month, finish the bridges.”¹⁹

夫辰角見而雨畢，天根見而水涸，本見而草木節解，駟見而隕霜，火見而清風戒寒。故先王之教曰，雨畢而除道，水涸而成梁，草木節解而備藏，隕霜而冬裘具，清風至而修成郭宮室。故夏令曰，九月除道，十月成梁。

Following this, the all-important astral sign of the New Year and the arrival of spring, some six weeks after winter solstice, is said to be “when FARMER’S AUSPICE [i.e., lunar lodge #4 CHAMBER, in ‘mid-dragon’] is upright on the meridian at dawn, and Sun and Moon are beneath the CELESTIAL TEMPLE [Great Square of Pegasus; i.e., in lodges 13-14, *Yingshi*~*Dongbi* 營室~東壁], the [*qi* of the] soil emerges in pulsations” 農祥晨正，日月底於天廟，土乃脈發.²⁰

By this time, of course, the *yang* force is in the ascendant and *yin* is receding with the winter cold. This

explains why the DRAGON puts in a final appearance in the sixth, or topmost line of the *kūn* hexagram, as Cai Mo recites: “*Dragons battle in the wild*”. After only four months the *yin* force is showing signs of exhaustion, and this line appears to be suggestive of a contest for ascendancy, but what kind of contest? Again the answer lies in the behavior of the DRAGON constellation, for at this time of year its performance is quite special. We saw above that during the winter months the DRAGON reproduces its spring and summer ballet, though in half the time — that is, it leaps quickly into the sky until fully visible, as it levels off and soars across the southern sky toward an oblique setting in the west. There the parallel ends, however, for just before the lunar New Year this magical creature performs an extraordinary feat. Recall now the DRAGON’S size, some 75° from Spica in Virgo through the tail of Scorpius. After setting in the west in February, instead of disappearing completely from the sky as it did before the autumnal equinox, the DRAGON’S horn Spica (α Vir) would reappear above the eastern horizon at dusk while another DRAGON *could still be seen setting in the western sky the very same day before dawn*. Given the appearance of differently postured DRAGONS in both pre-dawn and evening skies it follows that *two* DRAGONS would have been assumed to coexist at the margins of the sky, one *yin* and one *yang*, contending with each other for dominance. This phenomenon explains why the climactic line of the *kūn* (*yin*) hexagram concludes with a combat: “*Dragons battle in the wilds; ascendancy is troubled.*”²¹ Their contest symbolizes the *yang* force stirring in the soil (yellow) succeeding the *yin* force as it sinks into the watery abyss as night falls (dark). Confirming this, the ‘Commentary on the Image’, *Xiang zhuan* 象傳, says, “*Dragons battle in the wilds, their Way is at an end*”; that is, the cycle is complete and renewal is at hand.²² This curious phenomenon explains why the climactic line of the *kūn* (*yin*) hexagram says “*Dragons battle in the wild; their blood is reddish-brown*”, and it explains why DRAGONS were bestowed in pairs. Their contest symbolizes the *yang* force emerging from the earth (yellow) succeeding the *yin* force sinking into the watery abyss as night falls (dark).

Above, I alluded to the likelihood that Cai Mo knew more about the lost lore of DRAGONS than he was letting on— “The truth is that people are unwise, not that the DRAGONS are truly wise”. As an astrologer and court diviner, it was his business to read and interpret the patterns of the stars.²³ Recall now his comment on the significance of the lines he quotes from the *Changes*: “If DRAGONS had not been seen morning and night, who could have made them iconic?” Here in a remark seemingly intended to deflect skepticism about the existence of DRAGONS, Cai Mo reveals his detailed knowledge of the CELESTIAL DRAGON’S behavior — “if DRAGONS had not been seen **morning and night**”.²⁴ Since we now know that already by 2100 BCE at Taosi (and probably long before at Yaoshan in Zhejiang) the Chinese were regularly watching for sunrise on the eastern horizon, no doubt they also observed the seasonal rising of the stars of the DRAGON constellation.²⁵ Clearly Cai Mo, (and, of course, Master Zuo), had a good understanding of the DRAGON constellation’s year-round function as both heliacal and achronykal seasonal indicator.

The increasingly rational and questioning spirit of the times also overtook the practice of divination.

As Marc Kalinowski says: “the role assigned in the *Commentary* [i.e., *Zuožhuan*] to the counselors and scribes leaves no doubt of the existence of a deep crisis of belief in the traditional techniques of divination . . . It is, incidentally, in the *Commentary* that the first stirrings of a philosophical approach to the idea of individual fate may be found.”²⁶ John S. Major has also reflected on the growing obscurity surrounding such cosmological myths that was well under way by the time the *Zuožhuan* was composed:

It is clear that natural philosophers in the late Chou and early Han were involved in some very complex and abstract speculation linking schematic cosmography, numerology, and the operations of the Tao as expressed in the cyclical transformation of the Five Phases. At the same time . . . the myths in which the antecedents of the philosophical concepts had been conserved were being written down. They would no doubt have been intelligible as cosmological myths to educated men of the Warring States, but the frontier of scientific activity had long since moved elsewhere; the myths were understood increasingly in a religious sense only. Finally the scientific meaning of the language of myth was lost almost beyond retrieval; by the Latter Han skeptics could comment that if heaven were round and earth square, the corners would not fit.²⁷

There is strong evidence that rain-seeking rituals using dragon effigies occurred at least as early as the Shang.²⁸ Cai Mo, (aka Zuo Qiuming), obviously had a good understanding of the DRAGON’s year-round function as both heliacal and achronyical seasonal indicator. Compare this now with the nearly contemporaneous discussion of the now mythicized dragon’s protean nature from the 管子 (*Book of Master Guan*):

Those who, lying in obscurity, are able [to determine] survival and extinction, are the mantic turtle and the dragon. The mantic turtle is born of water and expresses itself by fire, so it is prior to all things and the arbiter of misfortune and prosperity. The dragon is born of the generative waters and is mantled in the five colors; hence it is a divine power. When it wishes to be small, it becomes as a silkworm; when it wishes to become large, it encompasses the entire sub-celestial realm; when it wishes to ascend it rises with the cloud-vapor (*qi*); when it wishes to descend it enters the abyssal springs. Its transformations are not given in days, nor its ascending and descending in seasons – thus it is called divine power.²⁹

伏暗能存而能亡者，蓍龜與龍是也，龜生於水，發之於火，於是為萬物先，為禍福正。龍生乾水，被五色而游，故神，欲小則化如蠶蠋，欲大則（藏）【函】於天（下）【地】，欲尚則凌於雲氣，欲下則入千深泉，變化無日，上下無時，謂之神。

Clearly, by the mid-Warring States period (403 – 221 BCE) the DRAGON had already made the transition from being an ancient feature of Cai Mo’s hermetic calendrical science to its more familiar perennial role in the realm of mythic cosmology. Indeed, Guanzi even denies the creature’s seasonality. Evidently, by the Warring States period (403 – 221 BCE) the DRAGON had already made the transition from being a feature of Cai Mo’s astro-calendrical science (now thoroughly mathematized) to its more familiar perennial role in the realm of mythic cosmology. It was shortly after this in Qin and Han times that the DRAGON began to be associated with the ultimate authority and charisma of the emperor. This was inevitable because, according to the *Huainanzi* 淮南子: “of the most honored spirits of Heaven none is more honored than CERULEAN

DRAGON, *qing long* 青龍, who is sometimes called *Tian yi* 天一 (Heavenly One) and sometimes called *Tai Yin* 太陰 (Grand Yin).³⁰ In this way the DRAGON became identified both as an astral deity and as a central cosmological principle.

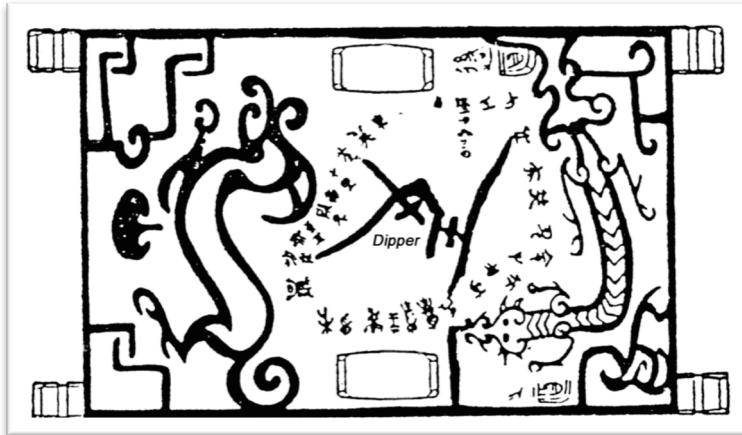


Figure 3: The astral-temporal diagram with the DRAGON on the lacquer hamper lid from the tomb of Marquis Yi of Zeng, ca 433 BCE; after Harper (1999), 820, fig. 12.1.

3. A NATURALISTIC ORIGIN FOR THE CHINESE DRAGON

The question arises, how early is it possible to document this focus on the astronomical function of the DRAGON constellation? Although dragon motifs of many kinds are nearly ubiquitous in early Chinese Bronze Age art, their abstract representation long discouraged speculation about a naturalistic origin for the iconic *long*. Some art historians consider the abstract dragon images entirely fanciful, a pure product of human imagination. Others have made a connection with the endangered Yangtze alligator, *Alligator sinensis*.³¹ In fact, the climate of North China, where the Dragon motif was widespread by the early 2nd millennium BCE, was much warmer and wetter then than at present. Abundant textual and archaeological evidence shows that the alligator, together with Asian elephant, rhinoceros, and many other sub-tropical flora and fauna were common in North China, especially in marshlands and swampy areas in the east.³² Archaeological finds of polished alligator scales in Neolithic burials at Dawenkou³³ and drums made of alligator skin at Taosi, some containing alligator bones,³⁴ attest to the presence of that creature in the Yellow River drainage, and to the dragon's importance in ritual. Throughout Chinese history, drumming was an essential feature of rites intended to entreat the DRAGON spirit to deliver rain and may have been intended to simulate the alligator's bellowing mating call.³⁵ One of the most striking artifacts discovered at the late-Neolithic city site of Erlitou was a dragon-shaped scepter or mace made of bronze with elaborate turquoise inlay.³⁶ Thus there is considerable circumstantial evidence to suggest that the *long* ranked high in the pantheon of powerful spirits revered by those early Bronze Age Chinese. The behavioral characteristics of the Chinese alligator suggest the reason why.

Today, this Chinese reptile is called the Yangtze alligator because it lives almost entirely in or near the Yangtze River. They prefer swampland, which explains their gradual retreat southward as a result of the increasing aridity of the north during the past three millennia. A noteworthy characteristic of their behavior is that during the winter they hibernate in underground burrows to keep warm, emerging in spring to hunt during the warmth of the day. During the summer, in contrast, they switch to a nocturnal schedule. They store up caloric reserves from March through October to see them safely through winter hibernation. Thus the seasonal behavior of this intimidating and sometimes aggressive creature is a perfect analog of the DRAGON constellation's nightly appearance and it corresponds closely to the seasonal occupation of the late-Neolithic farmer.

4. AN ECCENTRIC DRAGON

The discovery of another extraordinary bronze artifact now appears to offer convincing evidence of the linkage between the alligator and the celestial DRAGON. In western Shanxi province a number of archaeological finds have been made, representative of a Northern Complex, so-called because of the mix of stylistic influences they exhibit, which clearly distinguish them from the Central Plains style. Many share hybrid characteristics that reflect a mixing of Sinitic and steppe cultures indicative of the complex archaeological picture of this area, where “northerners adopted into their own culture the manufacture and use of bronze vessels” some of which “have repeatedly been found together with vessels so eccentric that they must be local castings”.³⁷ One such eccentric bronze is a zoomorphic wine pourer called a *gōng* (*guāng*) 長 in the shape of a “bottle-horned” dragon (Fig. 4a).³⁸ On the lid is a prominent knob, which serves as a handle. More than merely eccentric, this bronze is exceptional in several respects. It is the only artifact known to juxtapose a realistic representation of an alligator (Fig. 4b) with the iconic bottle-horned dragon motif familiar from the late-Shang dynasty bronzes of the Central Plains area. Discovered barely fifty kilometers north of Taosi in the heart of the ancient Xia homeland, this vessel’s realistic representation of an alligator makes it unique. The juxtaposition of the naturalistic and imaginative depictions of the two creatures, alligator and dragon, is clearly intended to suggest their intimate connection. The diamond-back dragons depicted on the vessel’s sides are repeated on the lid, only now with their tails curling together, the much larger dragon forming the body of the vessel as a whole. Surrounding the bottle-horned dragons and alligators on the sides are various other scaly or serpentine creatures, indicating common membership in the same category of iconic animals. In this respect, the iconography of this vessel is perfectly consistent with later traditions according to which the dragon is chief of the reptilian or ‘scaly’ clan.

Figure 3: Bottle-horned DRAGON gōng in the Shanxi Provincial Museum;
<http://www.art-and-archaeology.com/china/taiyuan/museum/pm05.html>.



Figure 4: Ink rubbing of the vessel's side (above) and top.



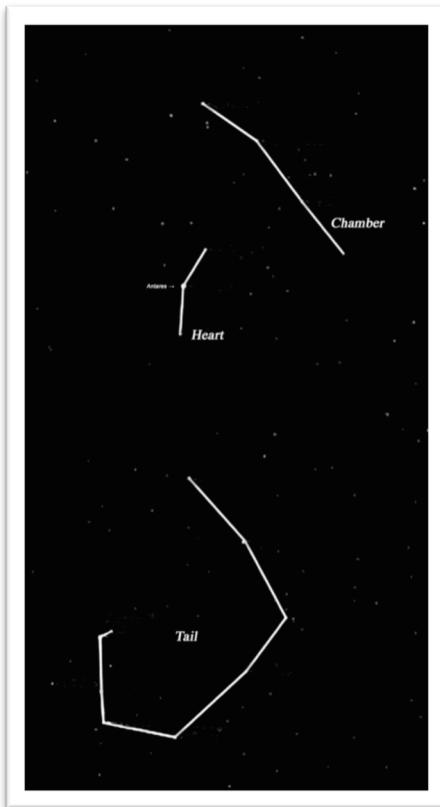


Figure 5: The CELESTIAL DRAGON’s mid-section and tail (*Starry Night Pro 6*).

The most idiosyncratic feature of this object, however, is the asymmetry of the design on the lid, where seven so-called ‘whorl-circles’ or roundels are arranged around and atop the large dragon. Three straddle the dragon’s mid-section, the central and largest of the three forming the raised knob itself, while four others are arranged alongside the dragon’s body between the knob and the head. In addition, the two bottle-shaped horns on the dragon’s head also bear the roundel pattern. For anyone familiar with Chinese bronzes, what is most immediately eye-catching about these whorl-circles is their asymmetric arrangement and differing sizes, a curious and rare feature, since strict bilateral symmetry is the norm in bronze art. Although roundels regularly occur as an ornamental motif on later Shang bronzes, their presentation here in such an idiosyncratic fashion in association with the iconic dragon demands an explanation. Do they have special meaning?



Figure 6: Han dynasty stone relief of the CELESTIAL DRAGON, ca. 100 CE; after Zhongguo shehui-kexueyuan kaogu-yanjiusuo (1980), 49, Pl. 47.

I think the answer is a definite ‘yes’. If we consider the depiction of the *lóng*-DRAGON constellation in Figure 5, it will be seen that the two asterisms comprising the dragon’s midsection, lunar lodge #4 FANG 房, CHAMBER ($\pi, \rho, \delta, \beta_1$ Sco), and #5 XIN 心, HEART (σ, α, τ Sco), are made up of four and three stars respectively. The prominent middle star of HEART is α Sco or Antares, the important FIRE STAR 火星, so-called for its dull orange-red color. Antares is one of only two or three stars

mentioned in the earliest written documents, the 13th century BCE Shang dynasty oracle bone divinations, and the star is well known to have served a very important function as a seasonal harbinger throughout the early period, both as the symbolic heart of the DRAGON constellation and in its own right. Between FANG and the two horns of the DRAGON in lodge JIAO 角, HORN (α Vir Spica, ζ Vir), lie the two somewhat

nondescript lunar lodges #3 DI 氐, ROOT (α^1 , L, γ , β Lib), and #2 KANG 亢, NECK (κ , ι , ϕ , λ Vir). Neither is particularly bright or eye-catching, in contrast to FANG and XIN. Compare now the stone relief carving from the Han dynasty (206 BCE – 220 CE) in Figure 6, where we also see FANG and XIN represented, the latter again straddling the DRAGON'S midsection. It is apparent to any naked-eye observer that the stars in FANG and XIN vary significantly in brightness, with Antares being especially prominent, not least because of its distinctive color. Here, I believe, we have the explanation for the varying sizes of the roundels depicted on the dragon vessel — they are actually intended to suggest the variations in the stars' apparent visual magnitude, with Antares rendered especially prominently due to its brightness and importance in regulating the calendar.³⁹

Even more significant, of course, is this the earliest depiction of the stars themselves, so that we may well ask, “could similar motifs have a similar meaning on other Shang period artifacts, such as in the tail of the bird on the *Niu fang ding* 牛方鼎 (Fig. 7)?” In a society so preoccupied with the ‘celestial’, I think this is highly likely. Even if the appearance of the term *niǎo xīng* 鳥星 in the Shang oracle-bones is still disputed,⁴⁰ the prominent mention in the *Canon of Yao* (*Yao dian* 堯典) of a BIRD STAR connected with the summer solstice in the 2nd millennium BCE, and its certain identification with the giant constellation later called the



VERMILION BIRD (lunar lodges #23 – 28, roughly Cancer to Crater), makes it fairly certain that such a constellation existed in Shang times.⁴¹ Furthermore, strong evidence in support of this conclusion was excavated at the site of the pre-dynastic Zhou capital of Fengjing 豊京. An eave tile *wǎdāng* 瓦當 prominently displaying the graph *fēng* 丰丰 was discovered with the four iconic creatures deployed in their proper cardinal directions: the DRAGON to the east, a Fish to the north, a Bird to the south, and what is thought to be a Bear to the west (Figure 8).⁴² This is the earliest known depiction of all Four Iconic Figures *sìxiàng* 象四 and only a slight variation on the later Warring States and Han configuration in which a Tiger takes the place of the Bear and the Somber Warrior *xuánwǔ* 玄武 replaces the Fish in the north.⁴³

Figure 7: Detail of plumed bird image from the late Shang *Niu fang ding* found in tomb M1004 at Anyang in 1935.



Figure 8: Pottery eave tile from the pre-dynastic Zhou capital of Fengjing with Four Iconic Creatures (ca 1055 BCE); after Yi Ding 一丁 (1996), 14, fig. 1-15.

CONCLUSION

If the above interpretations are correct, then in this curious zoomorphic bronze from a zone of mixed cultural influences in the mid-2nd millennium BCE, we have the earliest confirmed depiction in any medium of the DRAGON constellation and individual stars. This artifact provides the best evidence to date that by the late Shang dynasty at the latest the *lóng*-DRAGON had already been placed in the sky, that its inspiration ultimately derived from the alligator, and that there was an elite class of priest-astronomers, Cai Mo's predecessors, who were responsible for maintenance of the calendar and management of ritual time. Their esoteric knowledge, emblematised by this artifact from the tomb of one of their number, was precisely the sort of 'wisdom' alluded to in the story from *Zuozhuan*, whose obsolescence astrologer Cai Mo indirectly laments in recounting the passing of the age when DRAGONS could still be domesticated.

APPENDIX ONE:

Duke Zhao, 29th year (513 BCE)

秋，龍見於絳郊。魏獻子問於蔡墨曰：「吾聞之，蟲莫知於龍，以其不生得也。謂之知，信乎？」對曰：「人實不知，非龍實知。古者畜龍，故國有豢龍氏，有御龍氏。」獻子曰：「是二氏者，吾亦聞之，而知其故，是何謂也？」對曰：「昔有鯀叔安，有裔子曰董父，實甚好龍，能求其耆欲以飲食之，龍多歸之。乃擾畜龍，以服事帝舜。帝賜之姓曰董，氏曰豢龍。封諸鬷川，鬷夷氏其後也。故帝舜氏世有畜龍。及有夏孔甲，擾於有帝，帝賜之乘龍，河、漢各二，各有雌雄，孔甲不能食，而未獲豢龍氏。有陶唐氏既衰，其後有劉累，學擾龍於豢龍氏，以事孔甲，能飲食之。夏後嘉之，賜氏曰御龍，以更豕韋之後。龍一雌死，潛醢以食夏後。夏後饗之，既而使求之。懼而遷於魯縣，範氏其後也。」獻子曰：「今何故無之？」對曰：「夫物，物有其官，官修其方，朝夕思之。一日失職，則死及之。失官不食。官宿其業，其物乃至。若泯棄之，物乃坼伏，鬱湮不育。故有五行之官，是謂五官。實列受氏姓，封為上公，祀為貴神。社稷五祀，是尊是奉。木正曰句芒，火正曰祝融，金正曰蓐收，水正曰玄冥，土正曰后土。龍，水物也。水官棄矣，故龍不生得。不然，《周易》有之，在《乾》i i 之《姤》i iv，曰：『潛龍勿用。』其《同人》i vi 曰：『見龍在田。』其《大有》vi i 曰：『飛龍在天。』其《夬》vii i 曰：『亢龍有悔。』其《坤》ii ii 曰：『見群龍無首，吉。』《坤》之《剝》vii ii 曰：『龍戰於野。』若不朝夕見，誰能物之？」



Niu fang ding 牛方鼎

¹ Hay (1994), 119.

² For a preliminary survey of the dragon as a cosmological symbol in a variety of cultures from the Hindu *makara* to the Andean *machácuay*, see Carlson (1982).

³ Diény (1987). For other recent studies of the dragon in Chinese tradition, particularly in the pre-classical period, see *ibid*, 119, n. 2; and for the pre-imperial period, Yan Yunxiang 閻雲翔 (1987), 131-3.

⁴ Hay (1994), 149.

⁵ Barber and Barber (2004), 231-44.

⁶ Cai Mo 蔡墨 is the most famous astrologer-diviner in the *Zuo zhuan*, famed for the accuracy of his predictions. As Marc Kalinowski observed: “Cai Mo of the state of Jin (fl. 513 – 475 BC) . . . appears as a scholar of renown. His speeches are often the occasion of a vast display of knowledge of both astronomy and annalistic as well as ritual traditions. He is also involved in political debates. In one account, his opinions are considered on a par with the judgments of Confucius, and his clairvoyance earns him the privilege of being called a gentleman (*yünzì* 君子)” ; Kalinowski (2009), 370.

⁷ The account of Kong Jia’s 孔甲 reign in *Shiji* 史記 (*The Grand Scribe’s Records*) closely follows *Zuo zhuan* here, except that Kong Jia is there portrayed as the degenerate and dissipated late ruler of a dynastic house in decline. His misrule is said to have provoked rebellion; tr. Nienhauser *et al.* (1994), 37.

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⁹ Tr. Legge (1955), 731 (modified); original text is Appendix One. This is certainly one of the earliest accounts to imply that, "there was a time that was blessed," in the sense that everything succeeded, that occasions were all favorable – this was the Golden Age. All succeeding times, and ours more than others, are, by comparison, unfortunate, untimely"; Ricoeur (1985), 22.

¹⁰ Wen Yiduo 聞一多 (1993), vol. 2, 231. Wen also proposes that *qián* was originally an astronym whose meaning was 'to revolve' and that it referred specifically to the DIPPER. Hsien-chi Tseng cites a colophon by Ouyang Yuan 歐陽元 (1273 - 1357) on the wonderful 'Nine Dragons' hand-scroll by Song Dynasty painter Chen Rong 陳容 (fl. ca 1244) in which Ouyang states explicitly that the 'Nine Dragons' drew its inspiration from the lines of the *qián* hexagram and the first line of the "Commentary on the Image," *xiāng zhuan* 象傳; Tseng (1957), 23. See http://scrolls.uchicago.edu/view.php?env=STD_PUB&scroll_id=54&lang=default. Several other scholars have taken up the astronomical significance of the hexagram's line texts, as have I earlier: de Saussure (1930), 378; Li Jingchi 李鏡池 (1978), 198, (1981), 1-4; Pankenier (1981); Pankenier (1981-82), 29, n. 56; Xia Hanyi 夏含義 (1985); Kunst (1985), 380-419; Chen Jiujin 陳久金 (1987); Feng Shi 馮時 (1990), 113; Porter (1996), 46, 73; Shaughnessy (1997); Feng Shi (2007), 416-7. My interpretation of the astronomical significance of the line texts differs from the others in many respects, not least in providing an account of the two CELESTIAL DRAGONS' seasonal role throughout the year.

¹¹ Even today there is the common expression, *èr-yuè-èr lóng tái-tóu* 二月二龍抬頭 "on the second of the second month (of the lunar calendar), the DRAGON lifts its head," is heard at *lóng tóu jié* 龍頭節 "DRAGON'S head festival" in early spring. On that date "dragon scale cakes" and "dragon whisker noodles" are consumed, and other activities are performed to entice the DRAGON to deliver mild spring breezes and timely rainfall; Chen (1987), 208.

¹² Michael Loewe discerns in the rite traces of its ancient origins: "both the theory and the practice demonstrate a process that is seen in other aspects of China's cultural development; a comparatively late rationalisation and standardisation, based on philosophical principle, becomes imposed on an original act of faith that could well have been of a very early mythological origin"; Loewe (1987), 195.

¹³ 'Threaded' 紀 stands for *jīnián* 紀年 'sequentially arrange the years; reckon time', as in the story of the Old Man of Jiang District in *Zuozhuan*, Duke Zhao 30th year. For more on the significance of 紀年 'reckon time' see Pankenier (in press), Chapter 13.

¹⁴ The third line has the DRAGON "sometimes bounding in the abyss", suggesting that half the constellation has become visible while half is still immersed below the horizon. The text of line three, "*the perfected man is steadfast throughout the day; at night cautious*", does not mention the DRAGON'S behavior.

¹⁵ Twelve lunar months of 29.5 days amount to 354 days, 11.25 days less than the solar year. This means that a calendar based solely on a count of lunations will grow increasingly out of step with the seasons, the discrepancy amounting to more than a month after three years. Actual records of the intercalation of thirteenth months into the calendar to synchronize the lunar and solar calendars appears first in the 13th century BCE Shang oracle-bones.

¹⁶ Another possible reading of 'flock' *qún* 群 is 'nobleman, lord' *jūn* 君. The third and the sixth lines of the hexagram are thought to signify tenuous circumstances so that their interpretations stress caution and timeliness – knowing when to act and when to refrain from acting. The sixth or uppermost line is especially vulnerable since it completes the hexagram, so it is not hard to grasp the analogy between inappropriate seasonal behavior of the DRAGON and arrogance on the part of the aspiring 'lordly' man. Among the oldest commentaries this line is also interpreted as alluding to the equanimity and beneficent impartiality of the sagely ruler; see *Shuyuan* 說苑, 'Ultimate Impartiality' 至公; Yang Shuda 楊樹達 (1974), 20. The six lines of the hexagram are the monthly DRAGONS, of course.

¹⁷ Since the sun advances 1° per day against the background of the stars, and the DRAGON constellation is roughly 75° long, it stands to reason that the DRAGON could not be invisible for the entire winter.

¹⁸ Wen Yiduo, Gao Heng and Gao Wence all display some degree of awareness of the seeming contradictions among the classical passages which mention the seasonal appearance of the lunar lodges comprising the DRAGON, but without being able to present a coherent explanation for the phenomenon; Gao Heng 高亨

(1973), Gao Wence 高文策 (1961). Richard Kunst mentions the conflicting passages in passing; Kunst (1985), 409.

¹⁹ *Guoyu*, ‘*Zhouyu*’ 周語中 (1975), 2.9a.

²⁰ *Ibid.* 2.9b.

²¹ Cai Mo has truncated the line, which continues, ‘their blood is reddish-brown.’ Wen Yiduo shows that translating *xuán huáng* 玄黃 ‘black and yellow’ is mistaken. *Xuán* is dark red, bordering on black, the color of old coagulated blood, while *huáng* (present-day “yellow”) shades all the way into brown; Wen Yiduo (1993), 229-30.

²² Philological analysis of recently excavated *Changes*-related texts and commentary by Liao Mingchun supports this interpretation of the climactic line of the *kūn* hexagram; Liao (1999), 38-49. Glossing this sixth and final *yin* line designated by cyclical sign *rén* 壬, in *Shuowen jiezi* 說文解字, Xu Shen says, “‘fight’ means to ‘join’ [i.e., ‘to couple’],” and that it mimics the shape of a pregnant person.

²³ As Donald Harper notes, “Sima Tan and the *Han shu* bibliographic treatise attribute the emergence of *yin-yang* ideas . . . to men with knowledge of celestial and seasonal cycles, that is, astrological and calendrical knowledge”; Harper (1999), 823.

²⁴ ‘Morning and night’ is a cliché, of course, but that does not preclude the author’s ironic intent that it should be taken literally.

²⁵ Pankenier (2008), 141-48.

²⁶ Kalinowski (2009), 394.

²⁷ Major (1978), 14-15. For the passage on the poor fit between round heaven and square earth from *The Record of Rites of the Dai the Elder*, see Needham and Wang (1959), 213.

²⁸ Qiu Xigui (1983-85), 9-10.

²⁹ *Guanzi*, chap. 14, ‘*Shui di*’ 水地. Trans. Hay (1994), 132 (trans. modified).

³⁰ Trans. Major (1993), 135.

³¹ Porter (1996), 53-55; Feng (1990), 114.

³² Needham and Wang (1959), 464, n. b.; Keightley (1999), 30-36.

³³ Porter (1996), 53.

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³⁴ LI Xueqin 李學勤 (1989), 7. The discovery of a pottery basin decorated with a *lóng*-dragon motif at Taosi has been interpreted to mean the DRAGON was a totemic creature for the Xia 夏 people; see Li (1995); also Porter (1996), 39.

³⁵ Loewe (1987); Porter (1996), 54.

³⁶ Liu and Xu (2007), 891, Fig. 4.

³⁷ Bagley (1999), 225-26.

³⁸ Shanxi Provincial Museum; <http://www.art-and-archaeology.com/china/taiyuan/museum/pm05.html>. Xie Qingshan 謝青山 and Yang Shaoshun 楊紹舜 (1960), 51; Feng (1990), 114.

³⁹ Feng (2007), 418; identification of the raised knob as Antares was first proposed by Feng (1990), 114 (cited in Porter, 1996, 41).

http://www.ihp.sinica.edu.tw/~museum/tw/artifacts_detail.php?dc_id=9&class_plan=138; see the large image following Appendix One.

⁴⁰ Li Xueqin 李學勤 (1999), Li Xueqin (2000).

⁴¹ Indeed, as Hwang Ming-chorng 黃銘崇 has shown: “almost all elements in the *Yaodian* can find an earlier and more complete example in the *Dahuangjing*. This match between the *Dahuangjing* and *Yaodian* has important implications in the understanding of the intellectual history in early China. Assuming that our reading of the *Dahuangjing* as a Shang cosmology is a reasonable proposition, from the *Dahuangjing* to *Yaodian* there seems to be a transformation from cosmology to history”; Hwang (1996), 664.

⁴² Itō Chūta 伊東忠太 (1938), 87; Yi D. 一丁(1996), 14, fig. 1-15.

⁴³ The Bear still survives as the spirit animal of the west in the “Artificer’s Record” (*Kao gong ji* 考工紀) in the *Rites of Zhou* (*Zhou li* 周禮). There, the two main components of Orion, TRIASTER, SHEN 參 (Belt), and ATTACK, FA 伐 (Sword), are identified with the Bear and Tiger, respectively; Yi D. 一丁(1996), 11-15. The

late duplication may be the result of the Tiger's inclusion after the southlands joined the Hua-Xia cultural orbit, since the tiger motif is especially prominent in the iconography of the south. But see Jao Tsung-yi 饒宗頤 (1998), 39, 44, for a possible TIGER STAR in the oracle-bone inscriptions (along with several others).