

After almost thirty years from the discovery in 1993 of the Guodian Chu Slips in the Guodian tombs in Jingmen, Hubei Province, the significance of the fourteen bamboo slips collected by the editors of the *Guodian Chu mu zhujian* 郭店楚墓竹簡 under the name *Taiyi sheng shui* 太一生水¹ (The Great One Makes Water Alive²) remains mysterious: Scholarship is still divided on the interpre-

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- * My deepest gratitude to Richard King for discussing the theme of this article with me and commenting on earlier drafts. I am also very grateful for Kai Vogelsang and an anonymous OE reviewer's valuable comments on this article. Any mistakes are mine. Translations are my own, unless otherwise noted.
- 1 The *Guodian Chu mu zhujian*, edited by Jingmenshi Bowuguan 荆門市博物館 in 1998, is the reference edition for this study. The passages from the *Taiyi sheng shui* are referred to by the number of the slip followed by the character number. Reconstructions of missing characters are enclosed in square brackets.
- 2 Another syntactically possible translation of the opening verse of the manuscript (1.1–1.4) is “Taiyi Comes Forth From Water,” presupposing that the preposition *yu* 於 had been, purposely or not, omitted. The same omission occurs, for example, in the opening verse of the *Kongzi Shijia* 孔子世家 section of the *Shiji* 史記 (Records of the Grand Historian): 孔子生魯 (*Shiji*, 47), “Kongzi was born in Lu.” This understanding of the incipit of the *Taiyi sheng shui* would still fit with the reading of Taiyi as an alternative name for the sun. It might be read along the lines of the sentence 太一藏於水 (6.9–6.13), “Taiyi hides in water,” in slip 6, which I interpret as the sunset: as long as the sun sets in water in the evening, it emerges from water in the morning. The arguments in support of this reading of slip 6 will be addressed below. Here, I propose two equally plausible possibilities for the translation of the first verse. One reads *sheng* 生 as a causative verb, i.e. “Taiyi makes water alive,” assuming that Taiyi represents the sun. This reading highlights the role of the sun in enhancing the cycle of water; that is, it makes water alive in the sense of causing its circular movement across the sky and the earth, through the phenomena of evaporation and rain. The second hypothesis, rendered in translation as “Taiyi comes forth from water,” would imply that the cosmological cycle exposed in the first six slips of the manuscript concerns at least three temporal frameworks: the days, inferred by the sun rising from water at dawn; the four seasons, explicitly mentioned; the year, also explicitly mentioned as the end point

tation of the text. In particular, there is still no consensus about what the first two characters, Taiyi 太一, mean. The purpose of this paper is to show that Taiyi in this fourth century BCE manuscript is an alternative name for the sun. The argument for this claim relies on the concrete vocabulary employed in the manuscript, which finds striking parallels in other texts from early China; and it avoids forcing on it Laozian connotations. Other preimperial and early imperial texts describe the sun both as a celestial body that runs its path through the sky and as a god to be revered, and point out its role in granting and maintaining the existence of the “ten thousand things” on earth, providing images similar to those which imbue the *Taiyi sheng shui*. Taiyi in the *Taiyi sheng shui* manuscript is in fact depicted as moving with the seasons, completing a cycle and beginning anew, and hiding in water, and is defined as the mother and the warp of the ten thousand things—all descriptions that may support the claim that Taiyi refers to the sun. In trying to understand the meaning of the compound Taiyi in the context of Chu culture and in the light of the sun’s relevance in ancient China to timekeeping and spatial orientation, the proposed interpretation appears plausible. It allows a reading of the text as a coherent whole in which the sun, running its path through the sky, draws the way of the sky that men should follow in managing human affairs, particularly the agricultural and ritual domains.

1 The Problem of Taiyi’s Identification with the Laozian *Dao* and the Pole Star

The *Taiyi sheng shui* was discovered in Guodian Tomb no. 1 as part of three bundles of bamboo slips containing sections of the text later known as *Daodejing* 道德經 (Classic of the Way and Virtue). It is possible that the manuscript was originally bound together with one of these scrolls (*Guodian Laozi* 郭店老

of the process. These two translations for the first verse both appear to solve the mystery of Taiyi’s hiding or storing in water in slip 6 that, as underlined by Wang 2016, poses some difficulties if the first line is understood as “Taiyi generates or gives birth to water.” Furthermore, such a translation would entail a concept of primeval generation that does not fit with the cyclicity implied by the culmination of the process with the completion of the year (slips 1–4) and Taiyi’s circular motion with the seasons (slip 6).

子; bundle C). For this reason, the majority of scholarly works that analyze it take for granted the correspondence of Taiyi to the Laozian *dao* 道 (way) rather than investigating the particularities of the manuscript. They thus confer to the referent of this compound word a series of characteristics that are not attributed to it in the actual text, despite the text differing in many respects from the *Daodejing* in content, wording, and structure.

The most evident consequence of this approach is the understanding of the first eight slips of the manuscript as a cosmogony, a process of creation of the universe, despite: (a) the fact that the lines which are usually understood as cosmogonic do not refer to the coming into being of the *wanwu* 萬物 (ten thousand things), since the process ends with the completion of the year; (b) the lack of a temporal framework that suggests that those lines recount a primeval beginning, rather than a recurring cycle; (c) the lack of a description of the state preceding the beginning of the process; and (d) the employment of a vocabulary that explicitly suggests the reiteration of a cycle, as, for example, in slip 6: 太一 [...] 行於時，周而又 [始] (6.9–6.10 [...] 6.14–6.19[6.20]), “Taiyi [...] proceeds with the seasons, makes a cycle and [begins] anew.”

Scott Cook underlines the commonalities between the *Taiyi sheng shui* and the *Daodejing* based on the assumption that the two works must bear a close relationship to one another. Starting from this premise, he ends up attaching to Taiyi Laozian connotations that are nowhere found in the text, such as being unnamable and ineffable.³ Erica Brindley defines Taiyi as a single source that stands alone (clearly recalling *Daodejing* chapter 25⁴) and timeless in its constancy.⁵ Wang Zhongjiang identifies Taiyi with the primordial state of pure undifferentiated unity that is the origin of the cosmos, the totality and unity of the ten thousand things and their natural order.⁶ Sarah Allan defines Taiyi as unnamable because of its assumed identification with an ancestor, whose name

3 S. Cook 2012, 323–341.

4 有物混成，先天地生。寂兮寥兮，獨立不改，周行而不殆，可以為天下母，“there is a thing, turbid and complete, living before the sky and the earth. So still and empty! It stands alone and does not change, proceeds cycling, never in danger, it can be taken as the mother of the *tianxia*.”

5 Brindley 2019.

6 Z. Wang 2016, 15–47.

was tabooed, and considers the *Guodian Laozi* bundle C and the *Taiyi sheng shui* as a single text. She bases this conclusion both on the similarity of physical features and calligraphy and on a hypothetical literary and thematic continuity.⁷

However, as Dirk Meyer underlines, beyond pointing to structural discrepancies between the two works (the *Taiyi sheng shui* is much longer than any section of the *Laozi*), having two texts collected in the same bunch of bamboo slips does not necessarily imply that they share a close relationship, since in Warring States China (475–221 BCE) it was rather common to have two or more unrelated texts sharing the same material carrier.⁸ Regarding the supposed thematic continuity, Allan highlights the recurrence of words such as *da* 大 (great), *fu* 輔 (to assist), and *wanwu* 萬物 both in bundle C of the *Guodian Laozi* and in the *Taiyi sheng shui*, as well as a strong relation between the Laozian concept of *wuwei* 無為 (doing nothing) and the *shui* 水 (water) of the *Taiyi sheng shui*.⁹ The recurrence of such characters, widely employed in the literature of this period, is not a stable basis on which to build a hypothesis about the unity of these two texts, especially since associating *wuwei* with the water of the *Taiyi sheng shui* would imply enriching *shui* with characteristics that are alien to the text. Cook, as well as other scholars, tried to find parallels to the preeminence of water in the *Taiyi sheng shui* in other texts.¹⁰ In the *Shui di* 水地 chapter of the *Guanzi* 管子, water has a central role as the root of everything and the source of all life. It is defined as an “instrumental material,” *jucai* 具材 (39/1.3), because “none of the ten thousand things live without it,” 萬物莫不以生 (39/3.2). Nevertheless, except from the priority given to water, there are no other features that would suggest any correlation between the two works. The *Daodejing* also ascribes great importance to water: In chapter 8, water is said to be similar to the

7 Allan 2003 reads the second half of the *Taiyi sheng shui* as a section of the former *Laozi*, excluded from later versions of the text, and its first half as an appended text that has to be read together with the *Laozi*.

8 For instance, among the Guodian Tomb no. 1 corpus of bamboo slips, the *Qiong da yi shi* 窮達以時 and the *Lu Mu gong wen Zi Si* 魯穆公問子思, which do not share a close relationship, were nevertheless collected together in the same bundle of strips. Meyer 2012, 209–226.

9 Allan 2003.

10 S. Cook 2012.

dao in benefiting all things and occupying low positions without striving, while in chapter 78 it is praised for being the softest and weakest thing under the sky. Nonetheless, *none* of these characteristics of water, which are explicitly valued in the *Daodejing*, is associated with it in the *Taiyi sheng shui*.

Another widespread attitude to this text is the association of Taiyi with the homonymous deity found in later sources such as the *Chunqiu yuanmingbao* 春秋元命苞, sometimes related to the Pole Star, which, during the Warring States, was not the star Polaris (α Ursae Minoris), but the star Kochab (β Ursae Minoris).¹¹ Allan defines it as a female deity (inferring its gender from the use of the word *mu* 母, “mother,” in slip 7) corresponding to the Pole Star (and to the *dao*): “the ultimate ancestress and never-ending source for the celestial river and all living things.” She reads *shui* as a river, in particular the celestial river of the Milky Way, and claims that the Pole Star, Taiyi, hides in it. To support her understanding, she also makes reference to cosmographs (*shi* 式), divinatory instruments with a round heaven mounted on a square earth, and with the handle of the Dipper as a pointer. She claims the Pole Star is represented by the pivot of the cosmograph and thus of the sky, a focal point that does not move and has no point of opposition.¹² The main concern with this interpretation lies in the fact that the identification with both the Laozian *dao* and the Pole Star presupposes an understanding of Taiyi that contradicts what the *Taiyi sheng shui* actually says. In particular, it seems to ignore the many references to the *movement* of Taiyi, which is said to proceed with the seasons, to circle, and to hide. The use of all these verbs in the text contradicts the idea of a fixed point in the sky around which the sky itself revolves. This goes against the proposed identification of Taiyi with the Pole Star.

The *Taiyi sheng shui* differs in many respects from any other known text: for example, in having water, rather than *qi* 氣, as the first step in the cosmological

11 Throughout the centuries, different stars served as the Pole Star, due to the rotation axis of the earth that makes a circular trajectory (axial precession) in about 26,000 years.

12 Allan 2003.

process¹³; in giving precedence to *shen* 神 and *ming* 明¹⁴ rather than to Yin 陰

- 13 In the *Taiyi sheng shui*, the character *qi* appears only once, not in the sense of primeval breath or energy, but in the naturalistic acceptance of air or vapor, which is what the sky is made of: 下，土也，而謂之地；上，氣也，而謂之天 (10.1–10.14), “below is the soil, and it is called earth. Above is the vapor, and it is called sky.”
- 14 The understanding of the two characters *shen ming* 神明 in the text is controversial, since they are found in numerous early texts both in the form of a compound and as single characters with opposite and complementary connotations. Both Small 2018 and Szabó 2003 have investigated the topic, coming to the conclusion that, as suggested by the structure of the text and by the locution *xiang fu* 相輔, they should be intended as two separate words. Wang Bo interprets *shen* and *ming* as the sun and the moon, based on the facts that the structure of the first part of the text is obviously pairwise, therefore *shen* and *ming* should not be an exception, and that the meaning of this pair should not be vague, since the meanings of all the other pairs are incredibly clear and specific (Wang Bo 2001). Based on the same assumption—that is, that all the other pairs have a very clear and concrete meaning—it is not very plausible to have the sun and moon referred to by a name which was not commonly associated with them. Furthermore, if Yin and Yang are read in the sense of abstract principles, the assumption of having only concrete pairs is no longer valid and the logic of a cosmogonic reading in which the sun and the moon are a middle phase of formation would suggest having the sun and the moon follow and be brought to completion by the Yin and Yang principles, rather than vice versa. Since an in-depth analysis of these characters would go beyond the scope of this study, suffice it to say that their significance can be traced to the primary meaning of *ming* as something related to light or something that makes sight (and understanding) possible, and to the origins of the character *shen* deriving from *shen* 申 (rod), and therefore from the early pictograph for “lightning” (*lei* 電), connected to cloudy weather and, probably, night, as pointed out by Small. Therefore, while *ming* can be understood in its basic acceptance of light and visibility, *shen* (which, as noted by Szabó, seems also to appear as a synonym for characters indicating darkness such as *you* 幽, *an* 暗, *hui* 晦, and *ming* 冥) can be intended as something outshining light, such as clouds darkening the sun on a stormy day, or the moon covering the sun during an eclipse, or things obstructing light and casting shadows, connecting the dyad *shen ming* to the following one in the text, Yin Yang, which primarily indicate the sunny and the shadowy sides of a mountain.

and Yang 陽; and in having the dyadic steps that form the cosmological process assist each other rather than separate from each other, as expressed by the verb *fu* 輔. This suggests that it would be sensible to explore the possible meaning of Taiyi based on the characteristics that the text directly attributes to it, and avoid an understanding of the compound word primarily based on its hypothetical association with the *dao* of the *Daodejing* or with the philosophical content of later sources in which Taiyi is defined in different and, often, contrasting ways.

2 The Sun, the Completion of the Year, and the Cosmograph

The *Taiyi sheng shui* appears to be possibly related to agriculture. The text both emphasizes the central role of water in bringing to completion the sky and lists the climatic and seasonal conditions connected to the management of the annual harvest, such as cold and warmth and wetness and dryness, which are all obviously related to the daily and annual path of the sun in the sky. In an agricultural society, rain and fresh water are fundamental to achieving a successful harvest. Therefore, the sky cannot be considered complete without water in the form of clouds that bring the rain that is then stored in bodies of water.¹⁵ This is a simple and obvious reason for thinking that the *Taiyi sheng shui* might be concerned with the processes occurring in the cosmos as we know it, which are cyclical—“a cosmological cycle,” as I will call it. The first six bamboo slips of the *Taiyi sheng shui* are focused on the various steps of a cosmological cycle. The last one, which brings the whole process to its culmination, is the completion of the year after which the cycle begins anew: 濕燥復相輔也，成歲而止 (3.21–4.2), “wetness and dryness repeatedly assist each other, completing the year (harvest), and bringing (the process) to a halt.”¹⁶ The character employed for “year” here

15 In the *Shui di* chapter of the *Guanzi*, the fact that water also collects in the sky (and on the earth) is explicitly noted: 是以無不滿無不居也，集於天地，而藏於萬物 (39/1.13), “therefore, there is no thing that it does not fill, no place where it does not stay: it collects in the sky and on earth, and it is stored in the ten thousand things.”

16 The idea of a process that brings about the completion of the year also appears in the *Huangdi neijing* 皇帝內經 (Inner Classics of the Yellow Emperor), *Suwen* 素問 book, section *Yinyang libe lun* 陰陽離合論 (6.1). The opening verses of the section read: 黃帝問曰：餘聞天為陽，地為陰，日為陽，月為陰，大小月三

is *sui* 歲, which means both “year” and “harvest”¹⁷ and directly recalls the apparent cycle of the sun in the sky, starting its journey again after having completed one year; but also of course, the agricultural year, which culminates in a harvest. In fact, according to Christopher Cullen, still in the early imperial period the word *sui* was used to indicate both the tropical year (the interval between two consecutive winter solstices) and the sidereal year (the time needed by the sun to return to the same apparent position relative to the stars). Thus the character implies a clear reference to the movement of the sun in the sky, differing from the other character generally used to indicate the year, *nian* 年, defined by Cullen as a “civil year”, a calendrical unit which is instead the count of a whole number of lunar months.¹⁸ In the *Tianwen* 天文 chapter of the *Huainanzi* 淮南子 (The Masters of Huainan), there is a detailed explanation of the way in which the sun brings to completion the year or solar cycle:

日行一度，以周於天，日冬至峻狼之山，日移一度，凡行百八十二度八分度之五，而夏至牛首之山，反覆三百六十五度四分度之一而成一歲。

The sun proceeds one *du* to cycle around the sky. At the winter solstice, the sun is in the High Wolf Mountain. It shifts one *du* each day, it approximately proceeds 182 *du* and 5/8 and, at the summer solstice, it is in the Ox Head Mountain. It cycles and with 365 *du* and a quarter completes one year.

百六十日成一歲，人亦應之。“The Yellow Emperor said: ‘It is heard that the sky is Yang, and the earth is Yin. The sun is Yang, and the moon is Yin. The great and the small months take three hundred and sixty days to bring to completion one year, and people also accord to it.’” Also in the *Xici* 繫辭 commentary to the *Yijing* 易經 (Classic of Change) the theme of the completion of the year is raised: 日往則月來，月往則日來，日月相推而明生焉。寒往則暑來，暑往則寒來，寒暑相推而歲成焉 (*Xici xia zhuan* 繫辭下傳, 5), “the sun goes and the moon comes, the moon goes and the sun comes, the sun and the moon shift and the light lights up. The cold goes and the heat comes, the heat goes and the cold comes, cold and heat shift and the year is brought to completion.”

17 Smith 2012 analyzes the origins and early usages of the character *sui*, in the acceptations of year, harvest, and sacrifice, and connects it to the yearly passage of the sun through a particular constellation during the winter solstice.

18 Cullen 2017, 34–35.

The apparent movement of the sun across the sky, and in particular across the *xiu* 宿 (lunar lodges), is traced using the above-mentioned divinatory instrument called *shi*, “cosmograph,” that, according to Sarah Allan, serves as evidence to prove the correspondence between Taiyi and the Pole Star. The cosmograph presents a central immovable pivot which is identifiable with a point standing between the seven stars of the asterism of the Northern Dipper, α to η Ursae Majoris, not the Pole Star, which is found in the asterism of the Little Dipper. However, the celestial body which moves across the lodges, circling with the passing of the seasons, is the sun: In fact, the twelve numbers usually written on the disk representing the sky¹⁹ serve to indicate the lodge in which the sun is expected to be found in a given month, providing a schematized model of the basic time sequences of the cosmos.²⁰ According to Li Ling 李零, an exchange often happened between Taiyi and *Zhaoyao* 招搖 (the last star in the handle of the *Beidou* 北斗, Northern Dipper, from the constellation of the Boötes) in divination devices similar to the *shi*, the *Taiyi Dunjia* 太一遁甲 and other types of Nine Palace (*Jiu gong* 九宮) divination devices: “It is significant that, although the Nine Palace divination devices indicate Taiyi’s rotation around the Nine Palaces, Taiyi is often replaced at the center by *Zhaoyao*.”²¹ While in such divination devices *Zhaoyao* appears as a substitute for Taiyi, in written records *Zhaoyao* is in fact a substitute for the sun as an indicator of the seasons or time. This important and consistent variation happened between the *Ji* 紀 section of the *Lüshi Chunqiu* 呂氏春秋 (Master Lü’s Spring and Autumn Annals), the *Yue Ling* 月令 section of the *Liji* 禮記 (Book of Rites), and the *Huainanzi*, *Shi ze* 時則 section, in particular in the introductory formula for each of the twelve months. In fact, while in the earlier texts from the *Lüshi Chunqiu* and the *Liji* the main benchmark was identified with the sun (located in a particular lunar lodge), later, as it is evident from the *Huainanzi*, *Zhaoyao* was used as the main reference point, indicating a particular *dizhi* 地支, “terrestrial branch.”²²

19 As they appear, for example, in the model drawing of a cosmograph from the second century BCE reported by the journal *Kaogu* 考古 1978: 5.

20 Cullen 1996, 46.

21 Li Ling and Harper 1995.

22 Compare, for example, the introduction to the first month of spring in the three

3 Taiyi's Motion and the Apparent Course of the Sun in the Sky

The *Taiyi sheng shui* manuscript describes Taiyi's motion in a way that strongly recalls the motion of the sun as it is referred to both in contemporary and slightly later sources: it hides in water, 太一藏於水²³ (6.9–6.13), proceeds with the seasons, and makes a cycle and [begins] anew, 行於時, 周而又[始]²⁴ (6.14–6.19 [6.20]). Both the proceeding with seasons and the cyclical circling of Taiyi offer a striking reference to the apparent annual path covered by the sun in the sky. It is remarkable that the two verbs employed here to define the motion of Taiyi, *xing* 行 (to proceed) and *zhou* 周 (to cycle), are recurrently found in descriptions of the motion of the sun in Warring States and Han (202 BCE–220 CE) literature, while the motion of other celestial bodies is usually defined by using different verbs.²⁵ The recurrent association of the verb *xing* (often followed by

texts. The *Lüshi Chunqiu*, *ji* section, *Meng Chun* 孟春 chapter (1.1/1), and the *Yue Ling* of the *Liji* read: 孟春之月: 日在營室, 昏參中, 旦尾中, “in the first month of spring, the sun is located in *Ying shi*, at dusk *Shen* culminates, at dawn *Wei* culminates.” The *Huainanzi*: 孟春之月, 招搖指寅, 昏參中, 旦尾中, “in the first month of spring, *Zhaoyao* points to *Yin*, at dusk *Shen* culminates, at dawn *Wei* culminates.”

- 23 The verb *cang* in this line is either translated as “to hide,” for example by Allan 2003 and Brindley 2019, or “to be stored,” for example by Meyer 2012, Z. Wang 2016, and Cook 2012. Here, it has been rendered as “to hide,” recalling the use of the same verb in a *Chuci Tianwen* 楚辭天問 verse (examined later in this article) that addresses the spirit of the sun, because this meaning fits better in the overall reading of the manuscript that is provided in this article.
- 24 The twentieth character on bamboo slip 6 is missing, yet the scholarship is unanimous in reading it *shi* 始.
- 25 The character *xing* (both as a verb and as a noun) rarely appears as defining the revolution or apparent revolution of celestial bodies other than the sun in preimperial and early imperial texts, unless it is employed to generally refer to the whole category of celestial bodies, the sun included. Such examples can be found in both the *Liji*, *Yueling* section, and in the *Lüshi Chunqiu* (sections *Meng Chun*, *Xian shi* 先識, and *Dang shang* 當賞), in which the line 日月星辰之行, “the movements of the sun, the moon, the stars and constellations,” refers to the revolution of all the heavenly bodies. Conversely, except in highly rare cases and generally not prior to the Han era, when the moon and the stars' movements are defined separately from or in contrast with that of the sun, verbs other than *xing* are employed. For

zhou) to the sun is evident from the many references to other classical sources reported in this paper. And in particular, a short paragraph from the *Huainanzi*, *Lan ming* 覽冥 chapter, uses distinct verbs for the motion of the sun and the moon,

日行月動，星耀而玄運。

The sun proceeds and the moon moves, the stars sparkle and obscurity advances.

while another passage, taken from the *Lüshi Chunqiu*, *Lan* 覽 section, *You shi* 有始 chapter, describes the sun as proceeding (*xing*) and making a cycle (*zhou*) (13.1/51–53), and the Pole Star as slightly moving together with the sky, resorting to the verb *you* 遊 (to move) (13.1/50). While *xing* and *zhou* strongly recall the annual path of the sun across the sky (i.e., along the ecliptic, not its daily course from east to west), the hiding in water of Taiyi in the *Taiyi sheng shui* seems to be more plausibly related to its daily motion. The sun in fact seems to hide in water when it sets, especially considering the traditional conception of the geography of the *tianxia* 天下, reported in texts such as the *Shanhai jing* 山海經 (The Classic of the Mountains and the Seas), according to which the central land was surrounded by the four seas, one for each point of the compass.²⁶ Moreover, the *Huainanzi*, *Tianwen* chapter, offers a detailed account of the daily path of the sun in the sky in which its night journey is clearly related to water:

日出於暘谷，浴于咸池，拂於扶桑，是謂晨明 [...] 至於虞淵，是謂黃昏。

The sun rises from the Bright Gorge, it bathes in the Broad Pool, and swings from the Fusang [tree]. This is called the light of the early morning [...] It reaches the Abyss of Worry: this is called the Yellow Dusk.

example, the verb *you* 遊 in the *Lan* section, *You shi* 有始 chapter, of the *Lüshi Chunqiu* is referred to the Pole Star, the verb *dong* 動 describes the revolution of the moon in the *Huainanzi*, *Lan ming* chapter, and the verbs *sui* 隨 and *xuan* 旋 are employed together in reference to the arrayed stars in the *Tianlun* 天倫 chapter of the *Xunzi* 荀子.

26 From the opening lines of the *Haiwai nanjing* 海外南經: 地之所載, 六合之間, 四海之內 (6.1), “what which belongs to the earth lies between the six directions and within the four seas.”

This passage recalls an almost identical account from Qu Yuan's 屈原 poem *Tianwen* 天問 (Heavenly Questions) collected in the *Chuci* 楚辭 (Songs of Chu), from roughly the same period and geographic area of the Guodian material, which predates the *Huainanzi* by more than a century and a half, and differs only slightly from it. In particular, it has *tang* 湯 (boiling water) instead of *yang* 暘 (bright),²⁷ displaying an even more evident association of the nightly disappearance of the sun with its concealing in water at dusk (and, consequently, with its emerging from water at dawn):

出自湯谷次於蒙汜，自明及晦所行幾裡。

It rises from the Gorge of Boiling Water and it rests in the River of Obscurity.
From light to dark, how many *li* is its path long?

According to the commentary on the *Tianwen*, the Gorge of Boiling Water and the River of Obscurity are the two mythological places from which the sun rises and in which it sets.²⁸ Furthermore, the question regarding the length of the apparent route of the sun through the sky draws attention to the understanding of its trajectory as a path, a *dao*. Again, this verse associates the character *xing*

27 The Gorge of Boiling Water appears in different passages from the *Shanhai jing*, and in particular in the *Haiwai dongjing* 海外東經 section (9.11) it is described as follows: 下有湯穀。湯穀上有扶桑，十日所浴，在黑齒北。居水中，有大木，九日居下枝，一日居上枝，“below there is the Gorge of Boiling Water. Above the Gorge of Boiling Water, there is the Fusang tree, which bathes the ten suns; it is in the north of Heichi. It sits in the middle of water, and there is a big tree. Nine suns sit in its lower branches, while one sun sits in its upper branch.” The occurrence of either *tang* or *yang* in the same context in different sources poses the question of whether the one might simply be a phonetic loan for the other or whether the place from which the sun emerges at dawn according to these accounts actually changed its name over time. The main edition of reference of the *Chuci* used for this research (Tang et al. 1996) reads *tangu* 湯谷, as well as Field's translation (Field 1986). The same character also occurs in the main edition of reference of the *Shanhai jing* used for this research (*Shanhai jing* 2011). This account of the sun daily emerging from the Gorge of Boiling Water would fit well with the reading of the opening line of the *Taiyi sheng shui* (1.1–1.4) as a description of the sun rising from water in the morning, which I proposed to be a plausible understanding for this verse in footnote 2 of this article.

28 Jin 1996.

with the course of the sun through the sky. The *Tianwen* poem, referring again to the sunset, further reads:

角宿未旦，曜靈安藏？

Before the Horn lodge rises, where does the spirit of sunlight hide?

Here, the text has the sun hiding at sunset, and the verb employed is *cang* 藏, the same that appears in the *Taiyi sheng shui* (6.12).²⁹ This reading of Taiyi “hiding in water” might be taken either as the regular daily movement of the sun disappearing beyond the horizon at sunset, or, perhaps, being covered by clouds in a stormy day or, seasonally, in winter.³⁰ In contrast, Taiyi cannot “hide in water” if it is meant to be the Pole Star with *shui* as the Milky Way; that is, the bright band of white light visible in the night sky corresponding to the center of our galaxy. As a matter of plain fact, the relative position of the Pole Star to the Milky Way is essentially constant during the year, and the former is never obscured by the latter.³¹

29 The motif of the sun hiding and sinking in water at sunset appears in other poems from the *Chuci*, for example in the *Xi xian* 惜賢 (The Regret of the Virtuous): 日掩掩而下頹, “the sun hides and sets,” and in the *Shou zhi* 守志 (Protecting the Will): 日瞽瞽兮西沒, 道遐迴兮阻歎, “the sun quickly sinks, the path curves afar, its sight gets concealed.”

30 The *Huainanzi* offers different passages in which the sun (and also the moon) is said to be possibly obscured and hidden by clouds. From the chapter *Jing shen* 精神: 大風晦日而不能傷也, “great storms darken the sun but cannot harm it”; and in the chapter *Qi su* 齊俗 and the chapter *Shui lin* 說林: 日月欲明, 浮雲蓋之, “the sun and the moon long for brilliance, yet floating clouds hide them.”

31 Seen from the earth, stars move through the sky approximately staying in the same patterns, the apparent distance between two stars being almost constant. On a human scale, a given pattern of stars moves across the sky without varying their shape or the distance between its stars. The permanence of these patterns is the reason why many ancient societies connected the stars into constellations. For a deeper understanding of the motion of the stars in the sky see Plaskett 1928.

4 The Mother, the Warp, and the Hydrological Cycle

Beyond the verbs of motion used of it, Taiyi in the *Taiyi sheng shui* is also described as the mother of the ten thousand things (萬物母) and as their warp (萬物經) in slip 7. These two features support our identification of Taiyi with the sun. The sun is the “mother of the ten thousand things” since it provides the conditions for the things to be born, live, and flourish. It has a central role in the life cycle of things on earth. The opening verse of the text reads 太一生水，水反輔太一，是以成天 (1.1–1.12), “Taiyi makes water alive, water circulates³² to assist Taiyi, thereby completing the sky.” To make water alive is the first step of the cosmological process that brings about the completion of the year. *Sheng* 生 here is translated as a causative verb, in the sense of causing something to be alive, in particular causing water to be alive by enhancing its circular movement between the sky and the earth, rather than producing or giving birth to it.³³ As Scott Cook underlines, in understanding the role of water in the *Taiyi sheng shui*, it is fundamental not to neglect the most obvious association with it: “water as the water of the oceans, rivers, and lakes of the earth that team with life and from which we drink, and as the rain and the dew that descend from Heaven to cleanse and nurture us and the soil from which we feed.”³⁴ More to the point, in a text not only concerned with humans, *all* living things require water. Along the lines of the above-mentioned passages from the *Shui di* chap-

32 I gratefully adopt the suggestion made by Dennis Schilling, during a seminar that we held at the University of Bern (fall 2020), on the possible translation of the verb *fan* 反 as “to circulate.” Literally meaning “to return,” “to reverse,” here, it has been translated as “to circulate,” in order to underline the circularity implied by a movement of reversion, all the more so since the subject of the sentence is water: the natural return of water toward the sky is a phase of a larger circular process that brings about clouds and rain.

33 In the *Huainanzi*, *Tianwen* chapter, there is a passage in which the verb *sheng* is clearly employed not in the sense of giving birth to someone, but in the sense of making someone live, making his life possible, granting his survival: 子生母曰義，母生子曰保，“having a son granting that the mother lives is called righteousness; having a mother granting that the son lives is said care.”

34 S. Cook 2012, 328.

ter of the *Guanzi*, water is the source of all life (39/1.3) and is stored in all living things (39/1.13).

One fundamental relationship between the sun and water is the cycle of water, also known as the hydrological cycle:

it is the normal water recycling system on earth. Due to solar radiation, water evaporates, generally from the sea, lakes, etc. Water also evaporates from plant leaves through the mechanism of transpiration. As the steam rises in the atmosphere, it is being cooled, condensed, and returned to the land and the sea as precipitation. Precipitation falls on the earth as surface water and shapes the surface, creating thus streams of water that result in lakes and rivers. A part of the water precipitating penetrates the ground and moves downward through the incisions, forming aquifers. Finally, a part of the surface and underground water leads to the sea. During this trip, water is converted into all phases: gas, liquid, and solid.³⁵

In the third volume of *Science and Civilization in China*, in the section of the book concerned with meteorology and precipitations, Joseph Needham asserts that in Warring States China, and possibly even earlier, the cycle of water was already well known, referring to a passage in the *Ji* section, *Yuan Dao* 園道 chapter, of the *Lüshi Chunqiu* (3.5/10–14):³⁶

雲氣西行，云云然冬夏不輟；水泉東流，日夜不休；上不竭，下不滿；小為大，重為輕；園道也。

The vapor of clouds proceeds westward, circulating from winter to summer with no halt. From the source water flows eastward, day and night with no rest; up it does not exhaust, and down it is never full; the small becomes large, the heavy becomes light; it is the circularity of the way.

In “The Ancient Chinese Notes on Hydrogeology,” Yu Zhou, François Zwahlen, and Yanxin Wang claim that ancient China had explicit concepts about water circulation and knowledge about the water cycle, which was necessary in order to explain the origin of groundwater. They refer to a passage from the *Wenzi* 文子, *Dao Yuan* 道原 chapter, among others, about the circulation of *shui* between the sky and the earth:³⁷

35 Pouloupoulos and Inglezakis 2016, 146–147.

36 Needham and L. Wang 1959, 467–473.

37 Zhou, Zwahlen, and Y. Wang 2011.

上天為雨露，下地為潤澤，萬物不得生，百事不得成。

In the sky above it becomes rain and dew, on the earth below it becomes moisture and wetlands. If the ten thousand things do not get it, they cannot live, if the one hundred services do not get it, they cannot be brought to completion.

The *Huangdi Neijing* 黃帝內經 (Inner Classics of the Yellow Emperor), *Su wen* 素問 book, *Yinyangyingxiang dalun* 陰陽應象大論 section (5.2), is even more accurate in the description of the water cycle:

故清陽為天，濁陰為地；地氣上為雲，天氣下為雨；雨出地氣，雲出天氣。

Therefore, the clear Yang becomes the sky, the turbid Yin becomes the earth; the vapor of the earth rises becoming clouds, the vapor of the sky descends becoming rain; rain comes from the vapor of the earth, clouds come from the vapor of the sky.

Let us now try to fit this in with the *Taiyi sheng shui*. In the *Taiyi sheng shui*, *shui* is said to complete the sky together with Taiyi. Water completes the sky in the form of vapor: this is one of the principal early meanings of the word written with the character *qi*.³⁸ Furthermore, *qi* is used in the *Taiyi sheng shui* as an alternative name for the sky. Water completes the sky also in the form of clouds and rain that, pouring down, grant the life and growth of plants, animals, and all living things, the *wanwu*, here on earth.³⁹

38 Sarah Allan explains *qi* in the Warring States as the ultimate force that nourishes life, connected to the hydrological cycle. She refers in particular to an early form of the character, found on a inscribed jade dating to the Warring States period, the *Xing qi* 行氣 jade, in which the character *qi* has a fire signfic added. According to Allan, “this suggests a prototypical image of clouds produced by sun on water or else of steam, that is, water vaporized by fire” (1997: 88–89).

39 The *wanwu* in the *Taiyi sheng shui* appear to be strictly related to the agricultural domain, and their life cycle is therefore connected to the succession of the seasons. The employment of the character *sui*, which conveys the double meaning of year and harvest, the concern with the seasonal and climatic alternation of cold and warmth and wetness and dryness, as well as the succession of light and darkness, and the necessity for the *junzi* and the sage to guarantee the survival of people, all

Beyond its role in enhancing the cycle of water, literary sources explicitly relate the sun to the life cycle of things through the solstice. In the *Huainanzi*, *Tianwen* section, it is said:

天圓地方，道在中央，日為德，月為刑，月歸而萬物死，日至而萬物生。

The sky is round, while the earth is square, and the way is precisely in the middle. The sun makes accretion, the moon makes recision: when the moon returns, the ten thousand things die; when the sun reaches the solstice, the ten thousand things live.⁴⁰

Also the *Lüshi Chunqiu*, *Ji* section, *Zhong dong* 仲冬 chapter (11.1/23–24), relates the winter solstice in the second month of winter to the life cycle of things. At the winter solstice, which represents the end, and therefore the beginning, of the solar yearly cycle, every form of life is destroyed, and life begins anew:

是月也，日短至。陰陽爭，諸生蕩。

In this month, the day gets the shortest. Yin and Yang struggle, and all life is cleared away.

tend to express an interest in the annual development of agriculture in the state. This would enhance an understanding of the word *wu* 物 in its narrowest sense of plants and crops, therefore not including humans among things, as it appears in the *Lüshi Chunqiu*, *Ji* section, *Yi yong* 異用 chapter (11.5/2–3), in which the things are contrasted with and opposed to humans, as being parts of different categories: 萬物不同，而用之於人異也，此治亂存亡死生之原，“the ten thousand things are different, and therefore their use for humans are different: this is the source for order and disorder, preservation and destruction, death and life.” Nevertheless, even if only including plants and crops into the category of things, their life cycle is in any case fundamental for humans, since things are not only useful, but the products of agriculture are the basis for human survival. This is the reason why the *junzi* and the sage have the crucial responsibility of entrusting the way of the sky in order to ensure people a long life; that is, to act and order subject people to act in accordance with the solar cycle.

40 Here and in the following passages from the *Huainanzi*, the translation of *de* 德 as “accretion” and *xing* 刑 as “recision” is taken from Major et al. 2010.

Here, the use of the character *dang* 蕩, with the water radical, connected to the winter solstice in the sentence, implicitly relates the cooperative action, both creative and destructive, of the sun and water. A connection between the creative power of the sun and that of water can also be found in the *Yijing* 易經 (Classic of Changes). The most remarkable hexagram in relation to the content of the *Taiyi sheng shui* is the first hexagram, *qian* 乾, “the creative,” traditionally associated with the sky. The word *qian* 乾 has different meanings, all of which seem to be related to the sun and the Yang principle: dry, warming principle of the sun, penetrating and fertilizing, sky generative principle, and the sun itself. The *qian* hexagram in the *Yijing* reads 乾: 元, 亨, 利, 貞, “*Qian* (warming principle of the sun): originating, progressing, advantageous, virtuous.” From the *Tuan Zhuan* 象傳 commentary:

大哉乾元，萬物資始，乃統天。雲行雨施，品物流形。大明始終，六位時成，時乘六龍以御天。乾道變化，各正性命，保合大和，乃利貞。首出庶物，萬國鹹寧。

Qian is great and originating. The ten thousand things owe it their beginning, since it governs the sky. The clouds move and the rain is granted, things flow into form. The great brilliance begins and ends, and the six positions are completed according to the seasons, the seasons mount the six dragons to drive across the sky. The path of *qian* changes and transforms, and everything gets its nature and decree, there is safeness, union, and great harmony, and therefore advantage and virtue. The head allows the emergence of the multitude of things, and the ten thousand states are together in peace.

The *qian* hexagram not only underlines a link between the warming principle of the sun, which governs the sky, and the life of the ten thousand things, but also connects it to rain. According to S. J. Marshall, the primary meaning of the dragon in the explanation of each of the single lines of the hexagram is not connected to the seasonal movement of the constellation of the Azure Dragon in the sky but rather to rain magic and to the shamanic quest for rain, with the aim of guaranteeing a good harvest. As explained in the reading of the fifth line of the first hexagram in the *Wenyan* 文言 treatise of the *Yijing* (section *jiuwu* 九五), the dragon symbolizes rain: 雲從龍, “clouds follow the dragon.” Furthermore, Marshall also notes the fact that *qian* in any other context means “dry,” as in the dry season and drought, and that the character itself appears as a pictograph of

the sun bearing down intensely and of vapor rising from the ground.⁴¹ Therefore, *qian* stands as a key character which includes in itself the creativity of the warmth of the sun in enhancing the cycle of water thereby providing the conditions for the life of the ten thousand things. Rain is also directly connected to the sun by means of ritual: the rain-making ceremony, known as *chi* 赤 from Shang (c. 1600–1046 BCE) oracle bones inscriptions, and as *puwu* 暴巫 (exposing the shaman to the sun) from Warring States and later written records, consisted in having a shaman, usually female, or a deformed human exposed to the burning sun during periods of drought, to move the gods' pity and bring rain.⁴²

The concept of Taiyi as the *jing* 經 (warp) of the ten thousand things also supports the understanding of Taiyi as the sun. The recurrence in Warring States literature of the sun as the fundamental reference point to define the sky's structure and apparent rotation shows the great relevance it used to have as both a spatial and temporal marker, serving as a warp by pointing with its daily and annual course to the four directions of the compass,⁴³ as a seasonal indicator, and as a daily timekeeper.⁴⁴ The whole verse from the *Taiyi sheng shui* in which Taiyi is defined as *jing* reads: 一缺一盈，以紀為萬物經 (7.4–7.13), “now absent, now full, it weaves serving as the warp of the ten thousand things,” referring to the full rising sun (appearing from the east) and the absent setting sun (disappearing in the west). In the *Benjing* 本經 section of the *Huainanzi*, there is a passage in which Taiyi, as in the *Taiyi sheng shui*, is connected not only to the suc-

41 Marshall 2001, 105–112.

42 Schafer 1951.

43 During the year, the sun goes through a cycle, according to which, in the northern hemisphere, in the proximity of the winter solstice, it rises rather late in the southeast, is still relatively low at noon, and sets in the southwest. In contrast, in the proximity of the summer solstice, it rises in the northeast, is at its highest position at noon, and sets in the northwest, and the daylight is the longest. From winter solstice to summer solstice the points in which it rises and sets gradually move northward, and the daylight gets longer, with the sun higher at noon. After the summer solstice, its movement reverts, and its cycle begins again at the next winter solstice.

44 On the invention and use of the sundial and the gnomon in ancient China see Deng 2015.

cession of the four seasons but also to the points of the compass, in a metaphor of weaving and threads that recalls the concept of *jing*:

[太一] 含吐陰陽，伸曳四時，紀綱八極，經緯六合 [...]

[Taiyi] retains and emits Yin and Yang, stretches out, dragging the four seasons along, arranges the threads of the eight directional extremes, weaves the warp and the weft of the six coordinates [...]

Taiyi is the *jing* of the *wanwu* in the sense that, with its constant and regular motion, it offers the ten thousand things directional references, acting as a warp.⁴⁵ In the *Tian zifang* 田子方 chapter of the *Zhuangzi* 莊子 (21/8–11), Confucius himself is said to be speaking about the sun as the main indicator for the directions of the compass. With its route across the sky, it points east and west, and it guarantees the accomplishment of affairs and the life and the death of things on earth.

日出東方而入於西極，萬物莫不比方。有目有趾者，待是而後成功，待晝而作。是出則存，是入則亡。萬物亦然，有待也而死，有待也而生。

The sun rises in the east and sets in the extreme west; all of the ten thousand things have their position determined by this. Everything with eyes and everything with feet needs it, and then completes accomplishments, needs the daylight and acts. When it rises, it appears; when it sets, it disappears. The ten thousand things are also like this. They get what they need, and they die; they get what they need, and they live.

Furthermore, once more in the *Huainanzi*, section *Dixing* 墜形, the cardinal directions (to which one can orientate oneself based on the motion of the sun) are explicitly defined as the weft and the warp; that is, the two imaginary cords that connect the east with the west, and the north with the south:

45 Archaeological evidence shows that, at least from the fifth millennium BCE, burials along the middle and lower course of the Yellow River and the lower course of the Yangtze were already carefully oriented in accordance with the apparent motion of the sun. A comprehensive discussion on this topic can be found in Pankenier 1995.

凡地形，東西為緯，南北為經。

Regarding the earth's form in general, from east to west it makes the weft, while from south to north it makes the warp.

In the *Tai hong* 泰鴻 section of the *He Guan zi* 鶡冠子 (Master Pheasant Cap) (10/14/1), the cyclical rising and setting of the sun are taken as a mean for measurement, and the extremes of its path are identified with the north and the south, a trajectory that, according to the above-mentioned passage from the *Dixing* chapter, makes the warp:

日信出信入，南北有極，度之稽也。

The sun reliably rises and reliably sets, it has [its] extremes in the north and in the south, it is a mean for measurement.

The idea of the sun as marking the warp of sky and earth also emerges in the *Huainanzi*, section *Tianwen*, from the explicit reference to the concept of the two cords, *er sheng* 二繩, which are, according to Donald Harper,⁴⁶ comparable to the modern concept of solstitial and equinoctial colures:⁴⁷

子午、卯酉為二繩 [...] 日冬至則斗北中繩，陰氣極，陽氣萌，故曰冬至為德。日夏至則斗南中繩陽氣極，陰氣萌，故曰夏至為刑。

The two cords are from *zi* to *wu* and from *mao* to *yu* [...]. If the sun is at the winter solstice, the Dipper centers the northern [section of the] cord, the Yin vapor reaches its culmen, the Yang vapor sprouts; therefore, it is said that the winter solstice provides accretion. If the sun is at the summer solstice, the Dipper centers the southern [section of the] cord, the Yang vapor reaches its culmen, the Yin vapor sprouts; therefore, it is said that the summer solstice provides recision.

46 Harper 1979.

47 In astronomy, the word colure indicates one of the two principal meridians of the celestial sphere: the equinoctial colure is the great circle which passes through the celestial poles and intersects the two equinoxes (the two points in which the sun appears at the spring equinox and autumn equinox); the solstitial colure is the great circle which passes through the poles and intersects the two solstices (the two points in which the sun appears at the summer solstice and winter solstice).

John S. Major translates *de* 德 and *xing* 刑 as “accretion” and “recision” (even though in political texts often stand for reward and punishment), underlining that in this and other passages they refer to the accumulation and paring away of the Yang *qi* throughout the year. The Yang vapor accretes from the winter solstice until the summer solstice, while it recedes from the summer solstice to the winter solstice. Its accretion has to be meant as a reward for the living beings, in terms of light and warmth, while its recision is a punishment that comes in the form of darkness and coldness. He further underlines how this cycle of recision and accretion is easily chartable by observing the movements of the sun.⁴⁸ In the *Huainanzi*, one of the most revealing passages on this topic is found in the *Shi ze* section:

孟夏始緩，孟冬始急；仲夏至修，仲冬至短；季夏德畢，季冬刑畢。

With the first month of summer begins the slowing down, with the first month of winter begins the hastening. With the middle month of summer [the day] reaches the longest duration, with the middle month of winter [the day] reaches the shortest duration. With the last month of summer, accretion is at its fullest, with the last month of winter, recision is at its fullest.

In the *Dao ying* 道應 section of the *Huainanzi*, a dialogue between Zigong and Confucius clarifies the meaning of fullness, relating it to the life cycle of the ten thousand things and to the cyclical patterns of celestial bodies such as the sun and the moon:

子貢在側曰：「請問持盈。」曰：「益而損之。」曰：「何謂益而損之？」曰：「夫物盛而衰，樂極則悲，日中而移，月盈而虧。」

Zigong asked, bending: “May I ask how to grasp fullness?” [Kongzi] said: “Having benefit and then having harm.” [Zigong] asked: “Having benefit and then having harm?” [Kongzi] said: “All things flourish and then weaken, when happiness reaches its height begins sorrow, the sun gets halfway and then shifts, the moon becomes full and then wanes.”

In the *Taiyi sheng shui*, these concepts are related to both the sentence 一缺一盈，以己為萬物經 (7.4–7.13) in bamboo slip 7, and the sentence 天道貴弱，削成者以益生者，伐於強，積於[弱] (9.1–9.16 [9.17]), “the way of the sky

48 Major et al. 2010, 904.

values weakness, it cuts down what which is complete thereby benefiting what which is alive, it causes damage in the strong and accumulates in [the weak],” in bamboo slip 9. In fact, things that reach completion decay to the advantage of other living things.

Again, in his paper “The Han Cosmic Board,” Donald Harper connects the above-mentioned passage taken from the *Huainanzi*, *Tianwen*, regarding the two cords and the passage of the sun across the solstices, to a passage from a later divination text, the *Dun Jia Jing* 遁甲經, partially preserved in the form of quotations in the sixth-century compendium on cosmological matters entitled *Wuxing Dayi* 五行大義 (The Grand Meaning of the Five Phases), volume 4, compiled by Xiao Ji 蕭吉, which reports: 子午為天地之經,⁴⁹ “[The cord] from *zi* to *wu* makes the warp of the sky and the earth.”⁵⁰ The identification of the warp, *jing*, with the *ziwu* cord, or solstitial colure as he interprets it, clearly connects it with the sun, rather than, as claimed by Harper, with the Dipper: the solstitial colure is in fact the meridian which passes through the two solstices.

Besides providing an indication for the cardinal points, in the *Lan* section, *You shi* chapter, of the *Lüshi Chunqiu* (13.1/50–53), the sun is said to cover the very center of the sky and the earth at the summer solstice. The text, underlining the absence of shadows, recalls the role of the sun in the measurement of distances, which required the measurement of the shadow cast by the sun using the gnomon:⁵¹

極星與天俱遊，而天極不移。冬至日行遠道，周行四極，命曰玄明。
夏至日行近道，乃參於上。當樞之下無晝夜。白民之南，建木之下，
日中無影，呼而無響，蓋天地之中也。

The Pole Star moves together with the sky, while the celestial pole does not shift. At the winter solstice, the sun proceeds along the farthest path [from the earth], the cycle it makes around the four extremities is called “Dark and Bright.” At the summer solstice, the sun proceeds along the closest path, being only then directly above. Beneath the pole, there is no day and night. South to

49 The same line also appears in volumes 1 and 5 of the *Wuxing Dayi*.

50 Harper 1979.

51 For a deeper understanding of the mechanism of measurement of distances with the gnomon in ancient China and textual references to its use see Cullen 1976.

the White People, under the Established Tree, at noon the sun casts no shadow, shouts make no sound: it covers the center of the sky and earth.

This passage, besides showing the sun as an indicator of the center of the earth, points out two other details which may be relevant for the analysis of the *Taiyi sheng shui*: the characteristics of the Pole Star given in the text, and the reference to *xuan ming* 玄明 as alternative names for the path, *dao*, traveled by the sun across the sky, causing both the alternation between day and night and the alternation of the length of night and day through the seasons. Here, the differences between the slight motion of the Pole Star and the motion of the sun are highlighted: in fact, the Pole Star is said to move, to float along with the movement of the sky. It will be remembered that the Pole Star is often claimed to be the celestial body corresponding to Taiyi in the *Taiyi sheng shui*. During the Warring States it was already known that the Pole Star did not perfectly correspond to the celestial pole, and so moves, albeit slightly, unlike the latter. Nevertheless, the Pole Star was considered as an unmoved reference point,⁵² and therefore not useful as a seasonal indicator. It is interesting to note that while the verb employed in reference to the slight movement of the Pole Star is *you* 遊, the verb used to define the movement of the sun is again *xing*. Here, as in the *Taiyi sheng shui*, the verb *xing* is paired with *zhou*, to indicate the cyclical motion along its celestial path.

5 Taiyi's Path and its Names

Bamboo slip 10 of the *Taiyi sheng shui* suggests an approach to naming (*ming* 名) that differs from the apophatic or negative views of naming so prominent in the *Daodejing* tradition. It in fact provides alternative appellations for Taiyi⁵³

52 In the *Lunyu* 論語 (Analects), in the opening line of the *Wei Zheng* 為政 section (2.1), in order to define the proper way of government, Confucius refers to the stillness of the Pole Star in the center of the sky: 為政以德，譬如北辰，居其所而眾星共之, “in order to govern by means of potency, one should emulate the Pole Star, which dwells in its place while the multitude of stars revolves around it.”

53 The verse in bamboo slip 10 does not explicitly refer to Taiyi. This link is inferred by the use of the possessive *qi* 其, referring to something preceding it in the text.

and the path it traces: 道亦其字也, 清昏⁵⁴ 其名 (10.15–10.23), “‘Way’ is also its style name, ‘Clear and Dark’ are its names.” As opposed to the *Daodejing*, the *Taiyi sheng shui* appears to provide Taiyi with both names and style names: more precisely, these names are given to Taiyi as it moves, tracing a path. In the above-mentioned passage from the *Lan* section of the *Lüshi Chunqiu*, the sentence 命曰玄明 appears to refer to the path of the sun in the sky, meaning that “Dark and Bright” are alternative names for it. In both the sentences from the *Taiyi sheng shui* and from the *Lüshi Chunqiu*, there is a reference to a *dao* whose other name is related to darkness and brightness. “Dusk” is the main meaning for *hun* 昏 in the *Huainanzi*, *Tianwen* section, when the text provides the details of the daily journey of the sun across the sky. On this basis, *qing* 清 should indicate dawn, and both words seem to convey the same idea of alternation of day and night expressed by the *Lüshi Chunqiu* passage. Furthermore, the characters *qing* and *hun* also appear in the Mawangdui 馬王堆 medical text entitled *Quegu Shiqi* 卻鼓食氣 (Eliminating Grain and Eating Vapor), in the clear sense of dawn and dusk.⁵⁵

Taiyi is also given the honorific *dao*.⁵⁶ However, the *dao* or *tiandao* 天道 of this second half of the text does not give any hint of the necessity of understanding it as a *Daodejing*-like *dao*, since it is not defined by any of the characteristics

One other possible interpretation is that it refers to the earth and the sky in the previous sentence, but in this study we follow Meyer’s (2012) reading: earth and sky have already been provided with both style names (*di* 地 and *tian* 天) and names (and *tu* 土 and *qi* 氣), and *dao* should be intended as a style name for Taiyi, the main subject of the whole first half of the manuscript. The filling of the lacuna in slip 8 with *dao* or *tiandao* is coherent with this reading.

54 The manuscript reads *qing hun* 青昏. While Cook 2012, following Chen 1998, reads *qingwen* 請問, “may I ask,” basing this reading on the appearance of the same characters in some Shanghai Museum manuscripts and on the recurrence of the locution in other pre-Qin texts, in this study we follow Harper 2001 in reading *qing hun* 清昏, based on some Mawangdui manuscripts occurrences.

55 Harper 2001.

56 The *dao* is explicitly associated with the sun in the *Guanzi*, in the opening line of the *Shu yan* 樞言 section (12/1.1): 管子曰:「道之在天者日也, 其在人者心也, “Guanzi said: ‘the way’s manifestation in the sky is the sun, its manifestation among humans is the heart.’”

that are usually attached to it in the Laozian tradition: it is not motionless, nor ineffable, much less unnamable. Since the text lacks a self-evident connection with the Laozian *dao*, the locution *tiandao* can be read in its most literal sense of a path in the sky; that is, the sun's ecliptic, the plane of the apparent path of the sun in the sky, completed in one year, which in early Chinese is usually called *huangdao* 黃道 (yellow path).⁵⁷

- 57 A precise description of the *huangdao* appears in the book *Tianwen* 天文 (volume 26) of the treatise of the *Han Shu* 漢書 (Book of Han):

日有中道，月有九行。中道者，黃道，一曰光道。光道北至東井，去北極近；南至牽牛，去北極遠；東至角，西至婁，去極中。夏至至於東井，北近極，故晷短；[...] 冬至至於牽牛，遠極，故晷長；[...] 春秋分日至婁、角，去極中，而晷中。

The sun has the middle path, the moon has the nine tracks. The middle path is the *huangdao*. One calls it “Brilliant Path.” The Brilliant Path, in the north, reaches the Eastern Well [lodge], and gets the closest to the North Pole. In the south, it reaches the Dragging Ox [lodge], and gets the farthest from the North Pole. In the east it reaches the Horn [lodge], in the west it reaches the Harvester [lodge], and it gets midway from the North Pole. At the summer solstice, it reaches the Eastern Well, in the north, it approaches the pole. Therefore, the shadow is short. [...] At the winter solstice, it reaches the Dragging Ox, it distances from the pole. Therefore, the shadow is long. [...] At the spring and autumn equinoxes, the sun reaches the Harvester and the Horn, it gets midway from the pole. Therefore, the shadow is medium.

The above-mentioned passage from the *Lan* section, *You shi* chapter, of the *Lüshi Chunqiu* (13.1/51–53) also refers to the apparent path of the sun across the sky resorting to the word *dao*:

冬至日行遠道，周行四極，命曰玄明。夏至日行近道，乃參於上。

At the winter solstice, the sun proceeds along the farthest path [from the earth], the cycle it makes around the four extremities is called “Dark and Bright.” At the summer solstice, the sun proceeds along the closest path, being only then directly above.

According to the *Huainanzi*, *Tianwen* chapter:

欲知天道，以日為主，六月當心，左周而行，分而為十二月。

If you desire to know the way of the sky, use the sun and make it the main indicator. In the sixth month, it is positioned in the Heart [lodge]. [The sun] rotates leftwards and proceeds, and it makes a division to get the twelve months.

The second book of the treaties of the *Hou Han Shu* 後漢書 (Book of the Later Han), the *Lü li zhong* 律曆中 (volume 92), reports a fragment from the astronomer and astrologer Shi Shen's 石申 *Shishi Xing Jing* 石氏星經 (Master Shi's Star Manual), approximately dated around the fourth century BCE, which refers to the *huangdao*:

石氏星經曰：『黃道規牽牛初直斗二十度，去極二十五度。』於赤道，斗二十一度也。

The *Shishi Xing Jing* says: "The yellow path turns at the beginning of the Dragging Ox and straightens at the twentieth *du* of the Dipper, getting twenty-five *du* further from the pole." On the Red Path (Equator), the twenty-first *du* of the Dipper.

To have the sage use the *dao* in carrying out his duties, as stated in the second half of the *Taiyi sheng shui*, means that the sage person is conscious that the knowledge of the path of the sun in the sky is essential in order to guide the people in the achievement of their tasks, in particular those which are related to the agricultural and ritual domains,⁵⁸ in which both timekeeping and the understanding of the phenomena of the sky are essential for obtaining a good harvest and so avoiding scarcity of resources: this ensures long life. The relevant passage from the *Taiyi sheng shui* reads:

58 Honoring the spirits through rites, and therefore pleasing rather than angering spirits, was considered an essential means to achieve good harvests and longevity. And timely action, achievable through an attentive observation of the celestial phenomena (above all, the solar cycle), was fundamental in order to accurately perform the rituals. For a deeper understanding of the connection between time and rituality see Höllmann and X. Wang 2009.

君子知此之謂[天道]⁵⁹。[...] ⁶⁰(8.10–8.15 [8.16–8.17]) 下，土也，而謂之地；上，氣也，而謂之天。道亦其字也，清昏其名。以道從事者必托其名，故事成而身長；聖人之從事也，亦托其名，故功成而身不傷(10.1–12.8)

The *junzi* knows it is called [the way of the sky]. [...] Below is the soil, and it is called “earth.” Above is the vapor, and it is called “sky.” “Way” is also its style name, “Clear and Dark” are its names. Those who use the way to carry out their services should rely on its names [“Clear and Dark”]; thus, services would be brought to completion and life would be long. A sage person that carries out the services, also relies on its names, thus accomplishments are brought to completion, and life is not harmed.

Therefore, the sage knows the constant and cyclical motion of the sun.

The conception of the *tiandao* valuing weakness in the second half of the *Taiyi sheng shui* is closely related to the process illustrated in the first six slips: all the different steps listed (sky and earth, *shen* and *ming*, Yin and Yang, the four seasons, cold and warmth, wetness and dryness), with the only exception of *shui*, are said to be both made alive (*sheng* 生), and brought to completion (*cheng* 成), implying an underlying distinction in the meaning between the two verbs. *Cheng* is one phase of the life process (which is instead simply referred to as *sheng*) which implies that a thing has fully developed, and is therefore ready to wane, since once something reaches completion, it declines: life ends inevitably in death, in the same way as Yang, once at its utmost, declines, leaving space for Yin’s accretion. This idea is clearly expressed in the *Tianwen* section of the *Huainanzi*:

59 Bamboo slip 8 is damaged, and the last characters are not preserved. *Tiandao* is one possible reconstruction, proposed by Brindley 2019. Alternative readings for this lacuna are: *sheng* 聖, “sagacity” (Cook 2012); *ming* 明, “enlightened” (Wang 2016); and *shengren* 聖人, “sagacious person” (Meyer 2012).

60 The reconstruction *tiandao* for the lacuna in slip 8 connects it to slip 9, also badly damaged at one end, which reads 天道貴弱 (9.1–9.4). The placement of slip 9 between slips 8 and 10 is not certain. Other possible slip sequences have slip 9 placed between 12 and 13, or after 14.

或死或生，萬物乃成。

Something dies and something lives; that is how the ten thousand things are brought to completion.

Water is the only exception: it has no opposite and complementary counterpart in the text and does not seem to reach completion, which means that it does not reach its end. As far as the *wanwu* and the other dyadic steps of the cosmological process are concerned, once something reaches completion (thus being at its strongest point) it reverts, in order to leave space for the emergence of weakness, in accord with the workings of the *tiandao*.

6 Taiyi and the Sun in Chu Sources

Now that we have seen that what is said of Taiyi in the *Taiyi sheng shui* is such that it is coherent and plausible to understand it as an alternative name for the sun, it is of interest to show how the narrative related to the sun in other Chu texts recalls the content of the *Taiyi sheng shui* and how, again in some of these texts, Taiyi appears plausibly to be an alternative appellation for the sun. As well as in the *Taiyi sheng shui*, the compound Taiyi also appears both among the *Chuci* and among other Chu manuscripts, such as the *Baoshan Chu jian* 包山楚簡, discovered in the 1980s in Hubei Province. Also in these sources, it seems to be strictly related to the sun.⁶¹ The *Jiuge* 九歌 (Nine songs), and the whole *Chuci* collection in general, often directly refer to the sun and recall it in many songs:⁶² primarily the *Tianwen*, but also the *Lisao* 離騷 (Leaving Troubles), the *Yuanyou* 遠遊 (Wandering Far Away), and the *Ai shiming* 哀時命 (Grieve Over Destiny), describe the mythological places along the daily journey of the sun across the sky. These include the *Xianchi* 咸池 (Broad Pool) and the *Tanggu* 湯穀 (Gorge of Boiling Water), which, as we have already seen, draw a link between the night journey of the sun and the act of Taiyi hiding in water. Most of the places touched by the sun during its course are constellations: the *Xianchi*, for example, corresponds to the Auriga. Nevertheless, these collections establish

61 Xiao 1979 argues for the correspondence of *Donghuang Taiyi* 東皇太一 and the sun in the *Chuci*.

62 For a complete study and translation of the *Chuci* see Hawkes 2011; Sukhu 2017.

a strong link with water, since these mythological places, corresponding to asterisms, were often described, both by poets and shamans, as the actual locations or things to which their names were inspired.⁶³ This is evident from the *Lisao*, in which the shaman refers to washing his hair in the water of the *Xianchi*.

The sun is pervasive in the *Chuci* collection, but one song in particular, from the *Jiuge*, is dedicated to the sun as an object of worship: *Dongjun* 東君 (Lord of the East). In this song, the sun speaks of itself in the first person and starts its daily journey in the eastern quadrant of the sky

暾將出兮東方，照吾檻兮扶桑

Rising Sun emerging from the east side, I shine at the fence of the Fusang [tree].

and ends it with its setting, ready to head back to the east for a new journey (the movement of the sun is here described as usual with *xing*):

撰余轡兮高駢翔，杳冥冥兮以東行。

Holding the reins, I soar riding high, obscure, dark, gloomy, the course to the east.

Furthermore, the first song of the collection is directly addressed to Taiyi. This song describes a celebration in its honor, on an auspicious day, made in order to please it. The title of the song, *Donghuang Taiyi* 東皇太一 (Taiyi Ruler of the East), explicitly relates Taiyi, seen as a god, to the east direction.⁶⁴ In this song, Taiyi is called the ruler of the East (東皇), while in the *Dongjun* song, the sun is called the Lord of the East (東君). The explicit connection to the same direction allows an association between the *donghuang* and the *dongjun*, and, additionally, the *Donghuang Taiyi* song's ending reads

63 Hawkes 2011.

64 In the above-mentioned article on Taiyi's worship (Li and Harper 1995), Li Ling disputes Qian Baocong's 錢寶琮 thesis that the *Jiuge's* Taiyi cannot be the same divinity as the one worshipped as the supreme leader of the pantheon, since he is strictly connected to the East. As noted by Li Ling, the altar erected in Taiyi's honor by the Han emperor Wu 武 (*Bo ji Taiyi tan* 亳忌太一壇) was located in the southeast suburb of the Han capital Chang'an, in the direction of the sunrise, and also for the later sacrifices to Taiyi advocated by Kuang Heng, Wang Mang, and others, the location was the southeast suburb of the city, in order to respect the old tradition, supporting a possible connection between Taiyi and the East.

五音紛兮繁會，君欣欣兮樂康

The five notes combine forming a complex harmony, so that the Lord is joyful, glad, and pleased

referring to Taiyi with the same honorific, *jun* 君, employed to refer to the sun, making an identification of the two thus possible. It is not negligible that both Han and Warring States texts, despite being inconsistent in reporting their names, associate different high gods of Chu with the sun, heat, or fire, thus conferring to the sun a central place both in ritual and in poetry. In particular in the *Chuci*, the sun is referred to with many different epithets: Shining Spirit (*Yao Ling* 耀靈) in the *Yuanyou*, *Dong Jun*, and possibly also *Gao Yang* 高陽 in the *Lisao*,⁶⁵ and, as we have just seen, also Taiyi in the *Donghuang Taiyi* might refer to the sun and its god.

In the *Ji yi* 祭義 section of the *Liji*, there is another reference to the sun being the main object of reverence in the sky, and it further supports the claim for a tradition of sacrificing to it in the East:

郊之祭，大報天而主日，配以月。[...] 祭日於東，祭月於西 [...] 日出於東，月生於西 [...]

The sacrifice of the suburb was a great thanksgiving to the sky and the sun was regarded as the chief object, accompanied by the moon. [...] The sacrifice to the sun was made in the east, the sacrifice for the moon was made in the west [...] the sun rises from the east, the moon comes forth from the west [...].

The sun appears as the main object of the sacrifice in honor of the sky also in the *Jiao te sheng* 郊特牲 section of the *Liji*:

郊之祭也，迎長日之至也，大報天而主日也。

The sacrifice of the suburb welcomed the arrival of the longest day. It was a great thanksgiving to the sky and the sun was regarded as the chief object.

65 For the identification of *Gao Yang* with a sun god see Cook 2004; Sukhu 2017.

Taiyi appears as a deity to which offer sacrifices also in the Baoshan manuscripts. In particular, in these strips, besides Taiyi, also Shi Tai 蝕太 makes its appearance. Cook translates Shi Tai as “Occluded Taiyi,” intending it as Taiyi’s “Yin or cloud-covered version.”⁶⁶ One of the primary meanings of the verb *shi* 蝕 is “to eclipse,” mostly found in Warring States texts in association with the character *ri* 日 (sun), and often replaced by its homophone *shi* 食, also meaning “to eclipse” (as well as “to eat”).⁶⁷ The only bodies which can undergo an eclipse visible

66 C. A. Cook 2006, 97.

67 The *Zuo zhuan* 左傳 (Chronicles of Zuo) reports many solar eclipses, both partial and total, in some cases accompanied by the description of the ritual associated with this celestial event, as for example in the *Zhao Gong* 昭公 section, twenty-seventh year (17.2 [2]):

夏，六月，甲戌朔，日有食之。祝史請所用幣，昭子曰，日有食之，天子不舉，伐鼓於社，諸侯用幣於社，伐鼓於朝，禮也。平子禦之，曰，止也，唯正月朔，慝未作，日有食之，於是乎有伐鼓用幣，禮也，其餘則否。大史曰，在此月也，日過分而未至，三辰有災，於是乎百官降物，君不舉辟移時樂奏鼓，祝用幣，史用辭 [...].

Summer, sixth month, *jiaxu* day, the first day of the month, the sun has been eclipsed. The priest and the historiographer inquired which offerings to employ, and Zhaozi said: “the sun has been eclipsed, the Son of the sky should not have full banquets and should have the drums beaten at the altar of the soil, the lords of the states should make offerings to the altar of the soil and have the drums beaten in the courts. This is the ritual.” Pingzi answered in disagreement: “stop it, it is solely when it is the first day of the first month, when the evil has not manifested yet, and the sun has been eclipsed, that the drums should be beaten and the offerings made. Otherwise not, this is the ritual.” The Grand Historiographer said: “It is in this month, the sun has passed the equinox but not yet the solstice, if a calamity happens to the three celestial bodies [sun, moon, stars] then the hundred officials should reduce things, the *junzi* should not have full banquets and should leave the chamber for a while, the musicians should beat the drums, the priest should make offerings, and the historiographer should use a speech [...].”

to the naked eye are the sun and the moon, and the conspicuous records of solar eclipses handed down from ancient China confirm the importance attached to this astral phenomenon.⁶⁸ Therefore, it seems plausible to hypothesize that, rather than being a celestial body or deity covered by clouds, Shi Tai could indicate the sun during an eclipse and could therefore be more precisely translated as “eclipsed Taiyi.”

7 Conclusions

Taiyi in the *Taiyi sheng shui* manuscript is described as moving: proceeding with the seasons, completing a cycle and beginning anew, and hiding in water; it is said to be taken as the mother and the warp of the ten thousand things; it revolves in the sky tracing a path, a *dao*.

The relevance given to its movements excludes the possibility of identifying it with the Pole Star, which during Warring States China was perceived as an almost motionless star approximately corresponding to the North Pole. Instead, the use of the verbs *xing* and *zhou*, recurrently employed to describe the apparent annual motion of the sun in Warring States and Han literature, strongly supports the identification of *Taiyi sheng shui*'s Taiyi with the sun. Furthermore,

The *Lüshi Chunqiu*, *Ji* section, *Ming li* 明理 chapter (6.5/31–34), also narrates a solar eclipse, employing that precise character, *shi* 蝕: 其日有斗蝕, 有倍僞, 有暈珥, 有不光, 有不及景, 有眾日並出, 有晝盲, 有霄光, “it happens to have struggles in which the sun is eclipsed, times in which it is surrounded by clouds, it happens to have haze adorning it, or that it lacks brilliance, or that it casts no shadow, that there is the multitude of suns that rise together, or that it is invisible in the daytime, or luminous at night.”

68 The first record of a solar eclipse dates back to the fourteenth century BCE, and it is found on a Shang oracle bone inscription. The earliest eclipse to which we have a reference appears to have happened in the twenty-second century BCE and it is reported in the *Shujing* 書經 (Classic of Documents), even though this record is often regarded as a later invention. The *Chunqiu* 春秋 (Spring and Autumn) reports at least thirty-seven records of solar eclipses from the Spring and Autumn period (771–476 BCE). During the Warring States period, records of astronomical phenomena became rarer, becoming regular from the beginning of the empire. For further readings see Hong 2018; Xu, Pankenier, and Jiang 2000.

the phrase “hiding in water” plausibly indicates the sun setting at dusk, recalling the Chu tradition of the sun sinking in water at night. The understanding of Taiyi as the mother of the ten thousand things refers to the essential role of the sun in ensuring the conditions for the existence of things on earth, both providing light and heat, and driving the water cycle. Its understanding as the warp of the ten thousand things refers to its usefulness in laying out the spatial and temporal references for the things on earth, based both on the directions of its rising and setting and on the regularity of its yearly cycle. Moreover, the course it runs through the sky during the year is the most fundamental path observed in the sky, the *tiandao* referred to in the text. While Allan claims that the *dao* is metaphorically rooted in a waterway rather than in a road,⁶⁹ the *Taiyi sheng shui* opens up a new perspective for the understanding of the word *dao*, also in the Laozian frame, as related to the sun in its being constant in its apparent motion. The sun in fact offers a visible and seemingly immutable pattern in the sky, is constant in its cyclical motion, and provides the fundamentals for the existence of both humans and other living things. The constancy of the sun in its own path in the sky, on the one hand, could possibly have had a role in the evolution of the word *dao* in the constant and ineffable Laozian *dao* and, on the other hand, it had been chosen as a model for the sage to follow in governing the state: as the sun allows the ten thousand things to live, providing them the essentials, the sage should ensure the people’s survival, and the only way to do so is to trust the sun and make people’s services in the fields harmonize with its journey across the sky.

Furthermore, a reading of other Chu sources has proved how Taiyi is plausibly related to the sun not only in the *Taiyi sheng shui* but also in further con-

69 According to Allan 1997, 67: “*dao* does not have the specific sense of ‘road’: it is a general category in Chinese that encompasses waterways, roads, and various channels, all of those paths or ‘ways,’ which one may go along, moving by water as well as on land. If we take the metaphoric root of *dao* as a roadway, it is a peculiar road that moves in a single direction and has no junctions; but there is no longer any peculiarity if we take the natural course of a stream or waterway as the prototype for the concept rather than a road. Although a waterway may be joined by tributaries, it has a source and flows in one direction, moving ever downward until it eventually reaches the sea.”

temporary literature, such as the *Chuci* and the Baoshan bamboo texts, while the consistent substitution of the sun with *Zhaoyao* in written sources together with the substitution of Taiyi with *Zhaoyao* in divination devices, further corroborates the hypothesis of the existence of a tradition in which the sun was alternatively named Taiyi.

References

- Allan, Sarah (1997). *The way of water and sprouts of virtue*. Albany, NY: State Univ. of New York Press.
- (2003). “The Great One, Water, and the Laozi: New Light from Guodian.” In: *T’oung Pao* 89.4/5, pp. 237–285.
- Brindley, Erica (2019). “The Taiyi shengshui 太一生水 Cosmogony and Its Role in Early Chinese Thought.” In: *Dao Companion to the Excavated Guodian Bamboo Manuscripts*. Springer, pp. 153–162.
- Chen Qiyou 陳奇猷, ed. (1988). *Lüshi Chunqiu jiaoshi* 呂氏春秋校釋. Taipei: Huazheng shuju.
- Chen Wei 陳偉 (1998). “Guodian Chujuan bieshi” 郭店楚簡別釋. In: *Jiang-Han Kaogu* 69.4, pp. 67–72.
- Cook, Constance A. (2006). *Death in ancient China the tale of one man’s journey*. Leiden; Boston: Brill.
- Cook, Constance A. and John S. Major, eds. (2004). *Defining Chu: Image and Reality in Ancient China*. Honolulu: University of Hawai’i Press.
- Cook, Scott, ed. (2012). *Bamboo Texts of Guodian: A Study and Complete Translation*. Cornell East Asia Series 164-165. New York, NY: East Asia Program, Cornell University.
- Cullen, Christopher (1976). “A Chinese Eratosthenes of the Flat Earth: A Study of a Fragment of Cosmology in Huai Nan Tzu.” In: *Bulletin of the School of Oriental and African Studies* 39.1, pp. 106–127.
- (1996). *Astronomy and mathematics in ancient China: the Zhou bi suan jing*. Cambridge, England; New York, N.Y.: Cambridge University Press.
- (2017). *Heavenly Numbers: Astronomy and Authority in Early Imperial China*. Oxford: Oxford University Press.

- Deng, Kehui (2015). "Ancient Chinese Sundials." In: *Handbook of Archaeoastronomy and Ethnoastronomy*. Ed. by Clive L.N. Ruggles. New York, NY: Springer New York, pp. 2117–2125.
- Durrant, Stephen W., Wai-ye Li, and David Schaberg, eds. (2016). *Zuo Tradition Zuo Zhuan 左傳: Commentary on the "Spring and Autumn Annals"*. Seattle; London: University of Washington Press.
- Fang Yong 方勇 and Li Bo 李波, eds. (2011). *Xunzi 荀子*. Beijing: Zhonghua shuju.
- Field, Stephen Lee (1986). *Tian Wen: A Chinese Book of Origins*. New York, NY: New Directions.
- Han shu 漢書* (ed. Yan Shigu 顏師古) (1962). Beijing: Zhonghua shuju.
- Harper, Donald (1979). "The Han Cosmic Board (shih 式)." In: *Early China* 4, pp. 1–10.
- (2001). "The Nature of Taiyi in the Guodian Manuscript Taiyi sheng shui: Abstract Cosmic Principle or Supreme Cosmic Deity?" In: *Chugoku shutsudo shigyo kenkyu 中國出土資料研究* 5, pp. 1–23.
- Hawkes, David (2011). *The Songs of the South: An Anthology of Ancient Chinese Poems by Qu Yuan and Other Poets*. London: Penguin Books.
- Höllmann, Thomas and Xiaobing Wang, eds. (2009). *Time and ritual in early China*. Wiesbaden: Harrassowitz.
- Hong Yuan 洪源 (2018). *The Sinitic Civilization Book I: A Factual History Through the Lens of Archaeology, Bronzeware, Astronomy, Divination, Calendar and the Annals*. Abridged Edition. Bloomington, IN: iUniverse.
- Hou Han shu* by Fan Ye 範曄 (2006). 後漢書. Beijing: Zhonghua shuju.
- Huangdi neijing* ed. Hao Yi 郝易 (2011). 黃帝內經. Beijing: Zhonghua shuju.
- Jin Kaicheng 金開誠, ed. (1996). *Qu Yuan ji jiaozhu 屈原集校注*. Beijing: Zhonghua shuju.
- Jingmenshi Bowuguan 荊門市博物館, ed. (1998). *Guodian Chu mu zhujian 郭店楚墓竹簡*. Beijing: Wen wu 文物.
- Lau Dim C. 劉殿爵 and Chen Fangzheng 陳方正, eds. (1997). *He guan zi zhu zi suoyin 鶡冠子逐字索引*. ICS Ancient Chinese Texts Concordance Series. Xianggang: Shangwu yinshu guan.
- Li Dingsheng 李定生 and Xu Huijun 徐慧君, eds. (1988). *Wenzi yao quan 文子要詮*. Shanghai: Fudan daxue chubanshe.

- Li Ling 李零 and Donald Harper (1995). "An Archaeological Study of Taiyi (Grand One) Worship." In: *Early Medieval China* 1, pp. 1–39.
- Li Xiangfeng 黎翔凤 and Liang Yunhua 梁运华, eds. (2004). *Guanzi jiaozhu* 管子校注. Beijing: Zhonghua shuju.
- Liji zhengyi* (1980). 禮記正義. Taipei: Taiwan zhonghua.
- Liu Wendian 劉文典 (1992). *Huainan honglie jijie* 淮南鴻烈集解. Taipei: Wen shi zhe.
- Major, John S. et al., eds. (2010). *The Huainanzi: a guide to the theory and practice of government in early Han China*. New York, NY: Columbia University Press.
- Marshall, S. J. (2001). *The mandate of heaven: hidden history in the I Ching*. New York, NY: Columbia University Press.
- Meyer, Dirk (2012). *Philosophy on bamboo: text and the production of meaning in Early China*. Leiden: Brill.
- Needham, Joseph and Ling Wang (1959). *Science and civilisation in China. Volume 3*. Cambridge: Cambridge University Press.
- Pankenier, David W. (1995). "The Cosmo-political Background of Heaven's Mandate." In: *Early China* 20.2, pp. 121–176.
- Plaskett, John S. (1928). "The Motion of the Stars." In: *Journal of the Royal Astronomical Society of Canada* 22.4, pp. 111–134.
- Poulopoulos, Stavros G. and Vassilis J. Inglezakis, eds. (2016). *Environment and Development: Basic Principles, Human Activities, and Environmental Implications*. Elsevier.
- Schafer, Edward H. (1951). "Ritual Exposure in Ancient China." In: *Harvard Journal of Asiatic Studies* 14.1/2, pp. 130–184.
- Shanhai jing* (2011). 山海经. Beijing: Zhonghua shuju.
- Shiji* 史記 by Sima Qian 司馬遷 (2014). Beijing: Zhonghua shuju.
- Small, Sharon (2018). "A Daoist Exploration of Shenming." In: *Journal of Daoist Studies* 11, pp. 1–20.
- Smith, Jonathan (2012). "The Old Astronomical Significance of the Glyph <歲> and the Word Sui *Swats." In: *Journal of the American Oriental Society* 132.1, pp. 41–60.
- Sukhu, Gopal (2017). *The Songs of Chu: An Anthology of Ancient Chinese Poetry by Qu Yuan and Others*. New York, NY: Columbia University Press.

- Szabó, Sándor P. (2003). "The Term Shenming—its Meaning in the Ancient Chinese Thought and in a Recently Discovered Manuscript." In: *Acta Orientalia Academiae Scientiarum Hungaricae* 56.2/4, pp. 251–274.
- Tang Bingzheng 湯炳正 et al., eds. (1996). *Chuci jinzhhu* 楚辭今注. Shanghai: Shanghai guji.
- Wang Bi 王弼 (2011). "Daode zhen jing zhu." 道德真經注. In: *Laozi jicheng: A Collection of Editions and Commentaries for the Laozi* 老子集成. Ed. by Xiong Tiejī 熊鐵基 and Chen Hongxing 陳紅星. Vol. 1. Beijing: Zongjiao wenhua chubanshe, pp. 208–236.
- Wang Bo 王博 (2001). "'Taiyi shengshui' yanjiu." "太一生水"研究. In: *Jianbo sixiang wenxian lunji* 簡帛思想文獻論集. Taipei: Taibei guji chubanshe, pp. 209–229.
- Wang Shumin 王叔岷, ed. (1994). *Zhuangzi jiao quan* 莊子校詮. Taipei: Academia Sinica 中央研究院歷史語言研究所.
- Wang, Zhongjiang (2016). *Order in Early Chinese Excavated Texts: Natural, Supernatural, and Legal Approaches*. New York, NY: Palgrave Macmillan US.
- Xiao Bing 蕭兵 (1979). "Donghuang Taiyi he Taiyangshen—'Chuci—Jiuge—Donghuang Taiyi' xinjie" 東皇太一和太陽神—"楚辭·九歌·東皇太一"新解. In: *Hangzhou Daxue Xuebao* 4, pp. 25–35.
- Xiao Ji 蕭吉 (1980). *Gogyō taigi* 五行大義. Ed. by Nakamura Shōhachi 中村璋八. Tokyo: Meitoku Shuppansha.
- Xu, Zhentao, David W. Pankenier, and Yaotiao Jiang (2000). *East Asian archaeoastronomy: historical records of astronomical observations of China, Japan and Korea*. Amsterdam: Gordon & Breach.
- Zhou, Yu, François Zwahlen, and Yanxin Wang (2011). "The Ancient Chinese Notes on Hydrogeology." In: *Hydrogeology Journal* 19, pp. 1103–1114.