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## Writing natural images and reading China's *Classic of Changes*

The 'Preface' to the *Shuo wen jie zi Explaining Pictographs and Analyzing Componential Graphs*, China's oldest extant dictionary (presented at court in AD 120), begins with the following statements about the invention of writing in China:

In antiquity, as for Baoxi's ruling all under heaven, he looked up and observed the images in the heavens, looked down and observed the patterns on the ground, and saw that the markings of the birds and beasts were appropriate to the grounds. Near at hand he took from his person, and afar he took from things, thereupon first making the Eight Trigrams of the *Changes* in order to display the images.<sup>1</sup> Coming to the Divine Farmer (Shennong), he knotted cords to rule, putting affairs in line. As the many occupations came to flourish, ornamentation and artifice budded to life. Cang Jie, the scribal officer of the Yellow Emperor (Huangdi), saw the tracks of the hooves and claws of birds and beasts, and knowing that he could divide them by type and thus differentiate them, he for the first time invented writing and inscribing. [...] Cang Jie's making of writing for the first time was probably based on categorizing images and shapes, which is why he called them "pictographs" (lit. patterns). Later, shapes and sounds increased,

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1 The word here rendered as "trigram" is *gua* 卦, which is a generic term for the iconic symbols of the *Yi jing Classic of Changes*, which can be either of three lines or six lines. In Chinese, there is no necessary distinction between the three-lined trigrams and the six-lined hexagrams, both of which are referred to simply as *gua*. When it is necessary to differentiate between them, the trigrams can be referred to as *dan gua* 單卦 "single *gua*" and the hexagrams as *chong gua* 重卦 "repeated *gua*", or they can be differentiated by their number: the eight trigrams versus the sixty-four hexagrams. The word *gua* seems to be a specialized nominal form of a verb usually written *gua* 掛 that means variously "to draw," "to suspend", or "to separate." Since I discuss both trigrams and hexagrams in this study and argue that they serve the same function as icons or proto-writing, I sometimes refer to them as "grams," which is intended to refer indistinctly to both trigrams and hexagrams. Gram in this sense, though usually used only as a suffix in English, derives from the ancient Greek γράμμα/*grámma*, "written character, letter, that which is drawn", and thus would seem to be an appropriate translation of the Chinese *gua* 卦.

and then he called these “componential graphs” (lit. offspring). Patterns are the basis of images of things. Characters are the parturition and proliferation of words. Made visible on bamboo and silk, it is called “script”. Script is to resemble.<sup>2</sup>

This genealogy portrays the invention of writing as a multi-stage process. Writing proper begins with pictographs and then, when pictographs are no longer adequate to portray the complexity of phenomena and words, is further developed with componential graphs, combinations of different components that allow finer distinctions to be made than is possible with pictographs alone. This origin and early development of writing is well known, even if it is still much debated just how to understand the relationship between pictographs and componential graphs, and especially how to understand componential graphs in their own right.<sup>3</sup> In this study, I do not propose to discuss this process further. Instead, I propose to consider a still earlier stage of what the *Shuo wen jie zi* presents as proto-writing or perhaps natural writing. This is the Eight Trigrams of the *Yi jing Classic of Changes*, long considered in China to be the fountainhead of cultural and intellectual expression.

The first sentence in this ‘Preface’ of the *Shuo wen jie zi*, concerning “Baoxi’s ruling all under heaven”, not only concerns the invention of the Eight Trigrams, but is in fact taken directly from the *Xici zhuan Commentary on the Appended Statements*, one of the canonical commentaries now included within the *Classic of Changes*. The relevant passage from this commentary is far more extensive than the single example provided by the *Shuo wen jie zi*; for the sake of completeness I translate it in its entirety, though I will analyze only two or three of the twelve examples that it gives.

In antiquity, as for Baoxi’s ruling all under heaven, he looked up and observed the images in the heavens, looked down and observed the patterns on the ground, and saw that the markings of the birds and beasts were appropriate to the grounds. Near at hand he took from his person, and afar he took from things, thereupon first making the eight trigrams in order to connect with the virtue of spiritual brightness and to categorize the characteristics of the ten-thousand things. He made knotted cords into nets in order to hunt and fish, probably taking it from *Li* ☲ “Netted”. When Baoxi died, Shennong arose, chopping wood into hoes and bending wood into plows; he used the benefit of hoes and plow to teach all under heaven, probably taking it from *Yi* ☳ “Increasing”. At mid-day he made markets to bring together the people under heaven and to gather the wares under heaven, trading back and forth, each getting what he needed; he probably took it from *Shi Ke* ☱ “Biting and Chewing”. When Shennong died, Huangdi, Yao and Shun arose; by connecting their alternations, they caused the people not to be tired, and by extending and transforming them, caused the people to

<sup>2</sup> *Shuo wen jie zi Duan zhu*, 15a.1a–2b.

<sup>3</sup> For the standard introduction to Chinese writing, see Qiu 2000. For a different view, see Boltz 1994.

be appropriate to them. When changes wore out then they alternated, alternating then they connected, and connecting then they were long-lasting. This is why “From heaven blessing it. Auspicious. Nothing not beneficial”. Huangdi, Yao and Shun let down their clothing and all under heaven was ruled; they probably took this from *Qian* ☰ “Vigorous” and *Kun* ☷ “Compliant”. Chopping wood into boats and planing wood into oars, the benefit of boats and oars was used to make the disconnected get across, to bring the distant to benefit all under heaven, probably taking it from *Huan* ☱ “Dispersal”. They tamed cattle and harnessed horses to pull heavy loads and to bring distant things in order to benefit all under heaven, probably taking it from *Sui* ☵ “Following”. They doubled doors and struck rattles in order to anticipate unruly guests, probably taking it from *Yü* ☱ “Excess”. They cut wood into pestles and excavated the ground into mortars, the benefit of pestle and mortar being used to help the ten-thousand people, probably taking it from *Xiao Guo* ☱ “Lesser Surpassing”. They arced wood into bows and planed wood into arrows, the benefit of bows and arrows used to frighten all under heaven, probably taking it from *Kui* ☱ “Cross-Eyed”. In high antiquity they lived in pits and resided in the wilds. The sages of later generations changed this with palaces and chambers, with eaves above and joists below to anticipate the wind and rain; they probably took it from *Da Zhuang* ☱ “Great Strength”. The burials of the ancients thickly clothed the corpse with kindling and buried them out in the wilds, with neither a mound nor a tree and without counting any mourning period. The sages of later generations changed this with coffins, probably taking it from *Da Guo* ☱ “Greater Surpassing”. In high antiquity they ruled by knotting cords; the sages of later generations changed this with writing and inscribing, with the hundred officers ruling and overseeing the ten-thousand people; they probably took it from *Guai* ☱ “Resolute”.<sup>4</sup>

This is presented as a history of the invention of culture. The progenitor of all culture, Baoxi (also known as Fuxi), is said to have ‘first made’ the ‘Eight Trigrams’. As is well known, these eight configurations combine three lines that are either solid or broken:



Tab. 1: The Eight Trigrams.

These Eight Trigrams are correlated with the material world, being understood to represent the fundamental aspects or matter composing that world: Heaven, Earth, Thunder, Wind, Water, Fire, Mountain, and Lake (associated from left to right with

<sup>4</sup> *Zhou Yi Wang Bi zhu* 8.2a–3a (B2).

the figures of the trigrams above). Other classifications of the Eight Trigrams associate them with the eight directions, with different family and social distinctions, with parts of the human body, and with different animals, as seen in the following table.

Trigram Picture	Name	Primary Image	Direction	Family Member	Body Part	Animal
☰	<i>Qian</i>	Heaven	North-west	Father	Head	Horse
☷	<i>Kun</i>	Earth	Southwest	Mother	Abdomen	Cow
☳	<i>Zhen</i>	Thunder	East	Eldest Son	Feet	Dragon
☴	<i>Xun</i>	Wind	Southeast	Eldest Daughter	Thighs	Chicken
☵	<i>Kan</i>	Water	North	Middle Son	Ears	Pig
☲	<i>Li</i>	Fire	South	Middle Daughter	Eyes	Pheasant
☶	<i>Gen</i>	Mountain	Northeast	Youngest Son	Hands	Dog
☱	<i>Dui</i>	Lake	West	Youngest Daughter	Mouth	Sheep

Tab. 2: Some correspondences of the Eight Trigrams.





This table could be expanded to include numerous other attributes as well.

In the historical sketch provided by the *Xici zhuan*, Baoxi is credited with the invention of nets to use for hunting and fishing, the idea for which he is supposed to have taken from the trigram *Li* ☲ “Netted”. According to this history, the form of this trigram is supposed to have been immanent in nature, identified by Baoxi when he “looked up and observed the images in the heavens, looked down and observed the patterns on the ground, and saw that the markings of the birds and beasts were appropriate to the grounds”; the solid exterior and broken interior suggested to Baoxi the concept of a “net”, and presumably also the idea of using the net to catch animals and fish. Thus, rather than invention de novo, Baoxi’s making of nets should be understood as a kind of revelation. Elsewhere, the *Xici zhuan* describes this process as one of “imaging” or “figuring” (*xiang* 象).

Heaven gave birth to the spiritual beings and the sage(s) measured them. Heaven and earth alternate and transform and the sage(s) imitated them. Heaven suspended images showing the auspicious and ominous and the sages imaged them. The River gave forth


the design and the Luo gave forth the writing and the sages took them as measure. (*Xici zhuan* A11)

Thus, Baoxi's making of the trigram *Li* ☲ "Netted" was merely the standardization of a pre-existing form; rather than the invention of writing, it was the discovery of a natural script.

As did Xu Shen's 'Preface' in his *Shuo wen jie zi*, traditional theories of writing in China have also highlighted the role of the Eight Trigrams as intermediaries between natural signs and proper writing. Some modern scholars have sought to build on these theories to show relationships between some of the trigram pictures and archaic characters seen in the Shang-dynasty (c. 1200–1045 BC) oracle-bone inscriptions, China's earliest attested writing. For instance, Guo Moruo (1892–1978), one of the most famous early scholars of oracle-bone inscriptions, claimed that the trigram *Kan* ☵, the primary association of which is "water", derives from the character  for *shui* 水 "water".<sup>5</sup> This association is easy enough to see, especially if the oracle-bone character were to be rotated ninety degrees: . However, somewhat confusingly, he also identified *Kun* ☷, usually associated with "earth", with the archaic form of the character *chuan* 川 "river", though in this case he associated the character with a secondary characteristic of *Kun*: its docile nature, "to be in the flow", associated with the word *shun* 順; the Han-dynasty form of this character, , does somewhat resemble the trigram picture for *Kun*, again especially if it is turned on its side: . Guo also suggested, less convincingly, that *Qian* ☰, associated primarily with "heaven", derives from the character *tian* 天 "heaven", the top two strokes of which are indeed solid horizontal strokes. However, it is necessary to suppose that the remaining 人 would somehow transform into a single horizontal stroke.<sup>6</sup> Finally, he noted that *Qian* ☰ also has associations within the *Yi jing* tradition with "metal" (jin 金) and "jade" (yu 玉), both of which words are written with characters having three horizontal strokes. While most of these relationships would seem to be rather impressionistic,<sup>7</sup> this is not to say that there is no archaeological evidence supporting the interpretation of the trigram pictures as images.

Recent decades have brought the publication of hundreds of divination records from the subsequent Zhou dynasty (1045–256 BC). The earliest of these are, like the Shang oracle-bone inscriptions, incised into turtle shell, while the later examples

5 Guo 1940, 4-5.

6 What is more, the archaic form of *tian* 天 features a round head, , which was only subsequently simplified into a horizontal line. Thus, Guo's analysis of this character is entirely unconvincing.

7 It is worth noting that in an 'Afterword' appended to Guo's book, Chen Mengjia (1911–1966), another prominent paleographer, criticized Guo's identifications as both incomplete and tenuous; see Chen 1940, 62.

are brush-written on bamboo strips. The Zhou turtle-shell inscriptions, first discovered in 1977, are, also like the Shang oracle-bone inscriptions, for the most part records of turtle-shell divination, the act of causing cracks to appear in the shell of the turtle (or in the bone of an ox) and then prognosticating on the basis of the shape of the crack. However, these Zhou inscriptions also include quite a few records that include groupings of six numbers. Soon after these turtle-shell inscriptions were first excavated, Zhang Zhenglang (1912–2005), a notable paleographer of the second half of the twentieth century, suggested that these were records of sortilege divination, in ancient China usually done with stalks of milfoil. Zhang identified the groupings of numbers as precursors to the hexagrams of the *Classic of Changes*.<sup>8</sup>

At the time Zhang made this suggestion, it was no more than a surmise based on the fact that almost all of these groupings of numbers included six numbers. A few years later, evidence was found decisively tying similar groupings of numbers, albeit considerably later in time, to sortilege divination. In 1987, archaeologists excavated the mid to late Warring States (dated 316 BC or shortly thereafter) Tomb 2 at Baoshan, Hubei, finding in it numerous bamboo strips on which were written records of divination, as well as such other important records as proceedings of court cases and inventory of the grave offerings found in the tomb.<sup>9</sup> While most of the divination records reported the use of turtles to perform the divination, others noted the use of plants, presumably similar to milfoil, and – like the much earlier Zhou turtle-shell inscriptions, presented the results as groupings of six numerals. In the decades since 1987, many more such numerical hexagrams have been found, and they all show clearly that these were indeed the results of sortilege divinations. Although there is no suggestion that these divinations made use of the *Classic of Changes*, it seems clear that the numerical hexagrams correspond in some way to the hexagrams of that tradition.

Nevertheless, these numerical symbols are also clearly distinct from the *Classic of Changes* tradition. Most obviously, whereas the hexagrams of the received Yi jing tradition are composed of only two types of lines, solid and broken, these divination records are made up of numerals. Far and away the most common numbers – especially in the Baoshan and other Warring States records – are 一 and 人, usually understood as 1 (*yi* 一) and 6 (*liu* 六),<sup>10</sup> and routinely correlated with *yang* or solid lines (i.e., 一) and *yin* or broken lines (i.e., --) respectively. However, the numbers 4 (*si* 四, but written as 𠄎), 5 (*wu* 五, written as 𠄎), 7 (*qi* 七, written as 十),

8 Zhang 1980. For illustrations of these ‘hexagram numerical symbols’, see Cao 2002, or Shaughnessy 2014, 12.

9 For these records, see Hubei sheng Jing-Sha tielu kaogudui 1991.

10 There is actually good evidence that 一 should instead be understood as 7; for this evidence, see Ma 2014.

8 (ba 八, written as / \), and 9 (jiu 九, written as ㄣ) also all occur in these records (though not necessarily all of them in all of the records). Just as 一 understood as 1 is routinely correlated with *yang* or solid lines and 六 understood as 6 is correlated with *yin* or broken lines (i.e., --), so too all of the other odd numbers are also routinely correlated with yang or solid lines and all of the other even numbers are correlated with yin or broken lines. The most recently appearing evidence, a Warring States manuscript entitled by its editors *\*Shi fa Method of Milfoil Divination*, shows that these correlations are justified.<sup>11</sup>

Although these divination records, and especially the later ones from the Warring States period, are almost invariably of six numbers, the *\*Shi fa* displays these groupings of six numbers as two groupings of three, suggesting that they should be understood, at least in some respect, as groupings of trigrams. The *\*Shi fa* text also includes one visually compelling image in which the Eight Trigrams, written with numerals, are arranged around a human figure (Fig. 1). The trigrams correspond for the most part to the body parts indicated in Table 2 above.

Reading this image from top to bottom, 三, easily seen as the trigram *Qian* 三, is written just above the “head”, with which it is obviously associated; 兌, the trigram *Dui* 兌 actually forms the “mouth”; 艮, the trigram *Kan* 艮, is written twice, beside the two “ears”; 坤, *Kun* 坤 is written at the top of the chest in the place of the “heart”; 離, *Li* 離, is written just below that, suggesting the “abdomen”; 震, *Gen* 震, is also written twice, just below the two “hands”; 巽, *Xun* 巽, which it is important to note is written only once, between the two thighs, might suggest the “genitals”, and 坤, *Zhen* 坤, is written twice, below the two “feet”. Five of these associations are exactly the same as found in the *Shuo gua 說卦 Discussing the Trigrams* commentary of the *Yi jing*, and two of the others are at least similarly positioned:

*Qian* is the head, *Kun* is the abdomen, *Zhen* is the feet, *Xun* is the thighs, *Kan* is the ears, *Li* is the eyes, *Gen* is the hands, and *Dui* is the mouth.

Only *Li* has a completely different association. In the *Diagram of the Human Body*, it is associated with the “abdomen”, while in the *Shuo gua* it is associated with the “eyes”.<sup>12</sup>

11 Li 2014.

12 However, while in the *Shuo gua* commentary the main association of *Li* 離 trigram is with the “eyes”, elsewhere the same commentary does provide a secondary association for this trigram with the “abdomen”. Schwartz, 2018b, 58, points to a possible iconic basis for the association between *Li* and the “eyes”: in the *\*Shifa* manuscript, this trigram is depicted as 𠄎; in other Warring States divination records it is written as 𠄎. In Warring States script, the character for “eye” is written as 𠄎, similar enough that anyone motivated to do so could associate it with 𠄎 or 𠄎.

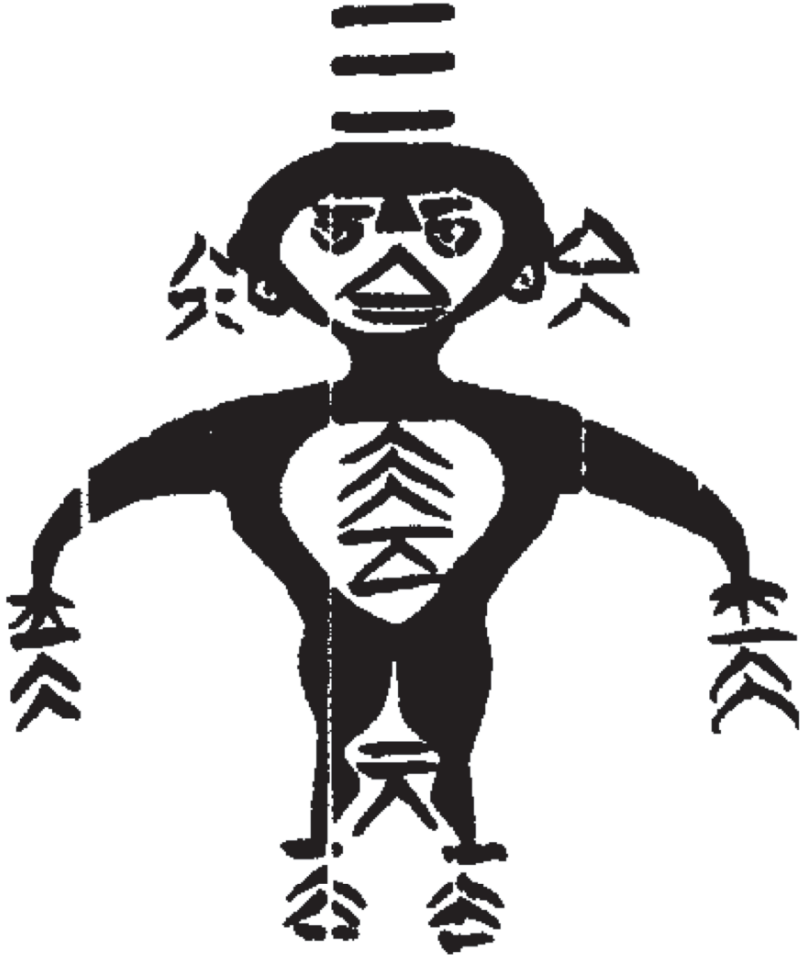


Fig. 1: \**Shi fa* figurine with Eight Trigrams corresponding to body parts (Li 2014, 113).

Several of the trigram pictures seen in the \**Shi fa* image seem to be pictographic, or at least to have pictographic connotations. *Dui* ☱: ☱, which is associated with the “mouth”, is the clearest case, with the bottom two solid lines seemingly representing the two lips, and the top line, rendered as usual in this manuscript as  $\wedge$ , representing the nose. Other apparent iconic representations are *Gen* ☶, written just below the two hands, in which the trigram image mimics the drawing of the hands and especially the fingers, with the bottom two lines representing the fingers. As Adam Schwartz notes, there is also an obvious connection between the way in which the trigram is drawn here, ☶, and the word for “hand” (*shou* 手) in Western Zhou,



𠂔, and Warring States, 夬, script.<sup>13</sup> *Zhen* 震, represents the two “feet”, in which the bottom solid line mimics the solid line used to depict the feet at the bottom of the legs. Finally, *Xun* 巽 the “genitals” would also seem to be pictographic. Whereas the *Shuo gua* commentary associates *Xun* with the two “thighs”, in the manuscript the trigram is drawn only once, between the thighs. All of the Eight Trigrams have distinct genders. Both traditionally and in this manuscript *Xun* has been regarded as female, the eldest daughter. In this connection, the broken line at the bottom of the trigram, once again written as  $\wedge$ , would seem to depict the opening of the vagina.<sup>14</sup>

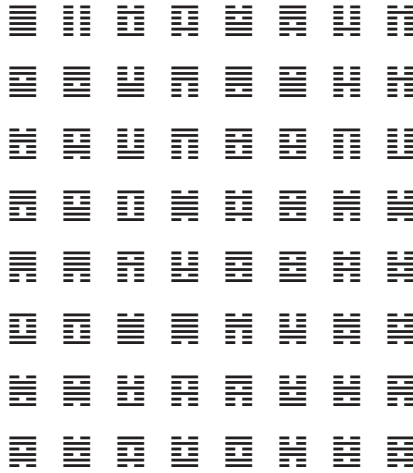
Having broached the topic of sex, let me return to the *Shuo wen jie zi* ‘Preface’ with which I began this study; that ‘Preface’ explained the mature Chinese script as a process of increasingly prolific generation, moving from pictographs to componential graphs that combined either different ideas to represent yet a third idea, or a classifier and a sound to represent some word that would be difficult if not impossible to depict graphically.

Cang Jie’s making writing for the first time was probably based on categorizing images and shapes, which is why he called them “pictographs” (lit. patterns). Later, shapes and sounds increased, and then he called these “componential graphs” (lit. offspring). Patterns are the basis of images of things. Characters are the parturition and proliferation of words.

In the same way that pictographs are adequate to depict only a small number of words, such that it was necessary to invent ‘componential graphs’ to encompass the proliferation of words, so too the Eight Trigrams, adequate though they were to describe the fundamental building blocks of nature, soon proved to be inadequate to stimulate or to describe the florescence of culture. For this reason, each of the Eight Trigrams was then doubled to make ‘hexagrams’ (i.e., six-line *gua* 卦 or grams), combining first with itself and then with each of the other seven trigrams. This gives sixty-four such hexagrams (=2<sup>6</sup>). In the received tradition of the *Classic of Changes*, these sixty-four hexagrams are organized in the following sequence (from left to right, top to bottom).

13 Schwartz, 2018a, 1151–1152.

14 For a published statement to this effect, see Xia 2020.



Tab. 3: The Sixty-Four Hexagrams.

Like the trigrams, the hexagrams have also been seen as images of natural or human creations or as iconic representations of actions or emotions. After describing Baoxi’s invention (or perhaps better ‘discovery’) of nets and netting – and thus the development of hunting and fishing – from the shape of the trigram *Li* ☲ “Netted”, the passage from the *Tradition of the Appended Statements* quoted at the beginning of this study then goes on to state that eleven other inventions or cultural developments were similarly drawn from hexagrams of the *Classic of Changes*. The first of these inventions were agricultural tools, the hoe and plow, credited to the Divine Farmer, the mythological inventor of agriculture, just as his name would suggest

[w]hen Baoxi died, Shennong arose, chopping wood into hoes and bending wood into plows; he used the benefit of plow and plowshares to teach all under heaven, probably taking it from *Yi* ☱ “Increasing.”

This invention is said to have been inspired by the hexagram *Yi* ☱ “Increasing,” the explanation for which may not be as visually apparent as in the cases of the trigrams examined above. It depends on understanding the three lines ☷ in the middle of the hexagram (the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> lines counting from the bottom) as the trigram *Kun* ☷, the primary natural association of which is “earth” or “ground.” The solid line at the bottom of the hexagram picture is then understood to represent the blade of the hoe biting under the ground to turn it up, while the two solid lines at the top of the picture are explained as the solid superstructure of the plow. The name of the

hexagram, “Increasing”, is said to reflect the increased agricultural yields brought about by the invention of these tools.

The third of the inventions explains social and commercial interactions, presumably because they were often accompanied by eating:

At mid-day he made markets to bring the people under heaven and to gather the wares under heaven, trading back and forth, each getting what he needed; he probably took it from *Shi Ke* ䷗ “Biting and Chewing.”

The text of *Shi Ke* ䷗ “Biting and Chewing” hexagram is, as the name suggests, about eating. The association between the hexagram picture and this notion of eating is indirect, but with some knowledge of early Chinese paleography and (it has to be admitted) a considerable amount of imagination, it may be possible to see it. However, it requires first looking at yet another hexagram: *Yi* 頤 ䷚ “Jaws”. Wen Yiduo (1899–1946), one of the most imaginative scholars ever to address the *Classic of Changes*, proposed that this hexagram picture, ䷚, when rotated ninety degrees, resembles a jack-o-lantern-like mouth with top and bottom teeth: 𠄎. <sup>15</sup> If one can see “Jaws” in 𠄎 or ䷚, then it might not be too hard to see something inside the mouth – presumably food, the image of biting and chewing – in the hexagram picture ䷚, especially when rotated: 𠄎.

The other hexagrams cited by the *Tradition of the Appended Statements* as inspirations for inventions or cultural developments are harder to see, and would not add materially to the point I hope to make in this study. However, before closing we should consider further one other hexagram, the most iconic of the hexagrams in the *Classic of Changes*: *Ding* ䷱, “Caldron”. At first sight, it may be difficult to discern the shape of a caldron in this hexagram picture, even if the *Tuan zhuan Tradition of the Judgments* commentary, another of the canonical commentaries included within the *Classic of Changes*, calls it explicitly “the image of a caldron”. <sup>16</sup> Nevertheless, it is clear from the text of the line statements appended to the hexagram that the author or authors of the Zhou Changes could see it.

First Six: A caldron with upturned feet: Beneficial to expel the bad, Getting a consort with her child. Nothing troubling.

Nine in the Second: A caldron having substance: Our enemy has an illness, It will not be able to reach us. Auspicious.

<sup>15</sup> Wen 1956, vol. 2 60. Conrady 1931, 417 had previously made a similar suggestion.

<sup>16</sup> *Zhou Yi Wang Bi zhu*, 5.10b.

Nine in the Third: A caldron's ears stripped: Its motion is blocked. Pheasant fat uneaten, Border rains diminish. Regret, in the end auspicious.

Nine in the Fourth: A caldron's broken leg: Upsets the dukes stew, Its shape glossy. Ominous.

Six in the Fifth: A caldron's yellow ears and metal bar. Beneficial to affirm.

Top Nine: A caldron's jade bar. Greatly auspicious. Nothing not beneficial.

The lines of the hexagram are read from the bottom of the hexagram picture to the top. Thus, the bottom line, a broken line in the received *Yi jing* tradition, refers to the legs of the caldron, of which two are prominently visible when viewing a caldron from the front. The next three lines, all solid lines, are thought to depict the solid belly of the caldron; indeed, the second line, “The caldron has substance”, seems to refer to this solidity. The fifth line is again broken, and the line statement refers to the two handles or “ears” of the caldron. Finally, caldrons were suspended over a fire by inserting a metal bar through the two ears; the solid top line is said to depict this metal bar, though here it is termed, doubtless euphemistically, a “jade bar”. Isolating just the images of these line statements (i.e., without the oracle describing the implications for the human condition or any of the technical divination terminology), and putting them side-by-side with an image of an ancient Chinese bronze caldron will make these associations more visually compelling (**Fig. 2**).

To be sure, two of the images seem to be out of place: the reference to the “ears” (i.e., the handles) in the Nine in the Third line and that to the leg or legs in the Nine in the Fourth line. However, this may derive from the way that the structure of hexagrams is understood in the *Classic of Changes*. As noted above, tradition holds that the first grams were trigrams (i.e., three-line pictures), which were subsequently expanded into hexagrams (i.e., six-line pictures) by combining two trigrams. Understood in this way, the third line of a hexagram is the top line of the bottom trigram, and thus perhaps an appropriate place for the ears of the caldron. Similarly, the fourth line of the hexagram is also considered to be the bottom line of the top trigram, and thus an appropriate place for the legs of the caldron. At least, this is the explanation usually given within the tradition of the *Classic of Changes* for these two images.

New evidence for the iconicity of the hexagram picture of *Ding* “Caldron” has recently surfaced. In 2011, Dong Shan, a professor of Chinese at Peking University, published photographs of an unprovenanced *ge*-dagger-axe with an inscription that seems to include two separate numerical hexagrams, both of which can be converted into *Ding* hexagram, as well as two different phrases that seem to relate to two sepa-



- A caldron's jade bar
- A caldron's yellow ears and metal bar
- A caldron's broken leg
- A caldron's ears stripped
- A caldron having substance
- A caldron with upturned feet

Fig. 2: Correlation of Image statements of *Ding* hexagram with an ancient Chinese bronze *ding*-caldron; the vessel pictured is the *Da Ke ding* 大克鼎 (after Chen 2005, 240).

rate line statements of *Ding* hexagram.<sup>17</sup> Although this dagger-axe was not archaeologically excavated, Professor Dong provides a detailed description of the corrosion on it, arguing it is natural and could not have been fabricated recently. The shape of the dagger-axe is consistent with dagger-axes made just before and just after the transition from Western Zhou (1045–771 BC) to Eastern Zhou (770–256 BC); thus, roughly the eighth century BC.

The inscription, which runs around the exterior of the blade of the dagger-axe in a U-shaped fashion, can be transcribed and translated as follows:

一六一一一六曰  
 鼎止（趾）真（顛）  
 鼎黃耳奠止（趾）  
 五六一一五八  
 拇（吝）


17 Dong 2011. For illustrations of both the dagger-axe itself and also its inscription, see Dong 2011, 87. For discussion of this artifact in English, including the same illustrations, see Schwartz 2018b, 68–70.

1-6-1-1-1-6 says:

The cauldron's legs upturned.

The cauldron's yellow ears; setting down its legs.

5-6-1-1-5-8 Distress

Based on the principle that odd numbers be associated with yang or solid lines and even numbers with yin or broken lines, both sets of numerals can be converted into *Ding* 鼎 hexagram of the *Yi jing* tradition. It is interesting to note that the two sets of numbers differ not only in the numbers they use, but also in the iconicity of their picture. What I present above as the first hexagram is made up of only the numbers “1” (—)<sup>18</sup> and “6” (⚋, usually written in the script of this time more or less as ^, but here drawn rather more ornamentally as ). By contrast, not only does the second hexagram include also the numbers “8” and “5” in addition to “1” and “6”, but the entire effect produces an almost pictographic rendering of a cauldron, with the legs, “ears” (i.e., handles), and the suspension bar all particularly apparent. What is more, the characters following after the first numerical hexagram picture, introduced with the word *yue* 曰 “to say,” not only refer to two parts of a hexagram, but also correspond reasonably closely with line statements of the First Six and Six in the Fifth line statements of *Ding* hexagram in the *Zhou Changes*:

<i>Ge-Dagger-Axe</i> Inscription	<i>Classic of Changes Ding</i> Hexagram
鼎黃耳奠止（趾） The cauldron's yellow ears; setting down its legs	鼎黃耳金鉉 Six in the Fifth: A cauldron's yellow ears and metal bar
鼎止（趾）真（顛） The cauldron's legs upturned	鼎顛趾 First Six: A cauldron with upturned feet

18 As noted above (n. 8), there is later evidence that this number should be interpreted instead as “7” (*qi* 七). There would seem to be no evidence to determine whether this reading should be applied to this earlier instance of the graph. However, based on the principle that odd numbers correspond to solid lines of a hexagram, it would not seem to matter whether this were to be read as 1 or as 7.

## Conclusion

Not all of the sixty-four hexagrams of China's *Classic of Changes* are so visually compelling by any means. Nevertheless, that some of them – just as some of the Eight Trigrams – have been read both within the tradition of that classic, and also by classical Chinese paleographers, as images of objects or actions, whether natural or artificial, gives them a privileged place in the history of Chinese grammatology. Whereas Cang Jie is said to have invented “writing and inscribing” after having seen “tracks of the hooves and claws of birds and beasts”, Baoxi did not so much invent the Eight Trigrams as he discovered them. Thus, the Eight Trigrams, and by extension also the sixty-four hexagrams, are said to serve as natural images or icons. According to the understanding of the *Classic of Changes*, because the forms exist in nature, simply by making the corresponding artifact or action conform with nature, it has been possible to write nature into the book. Conversely, once the book was written, it became possible to expand the book – the *Classic of Changes* – to encompass all of nature.

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