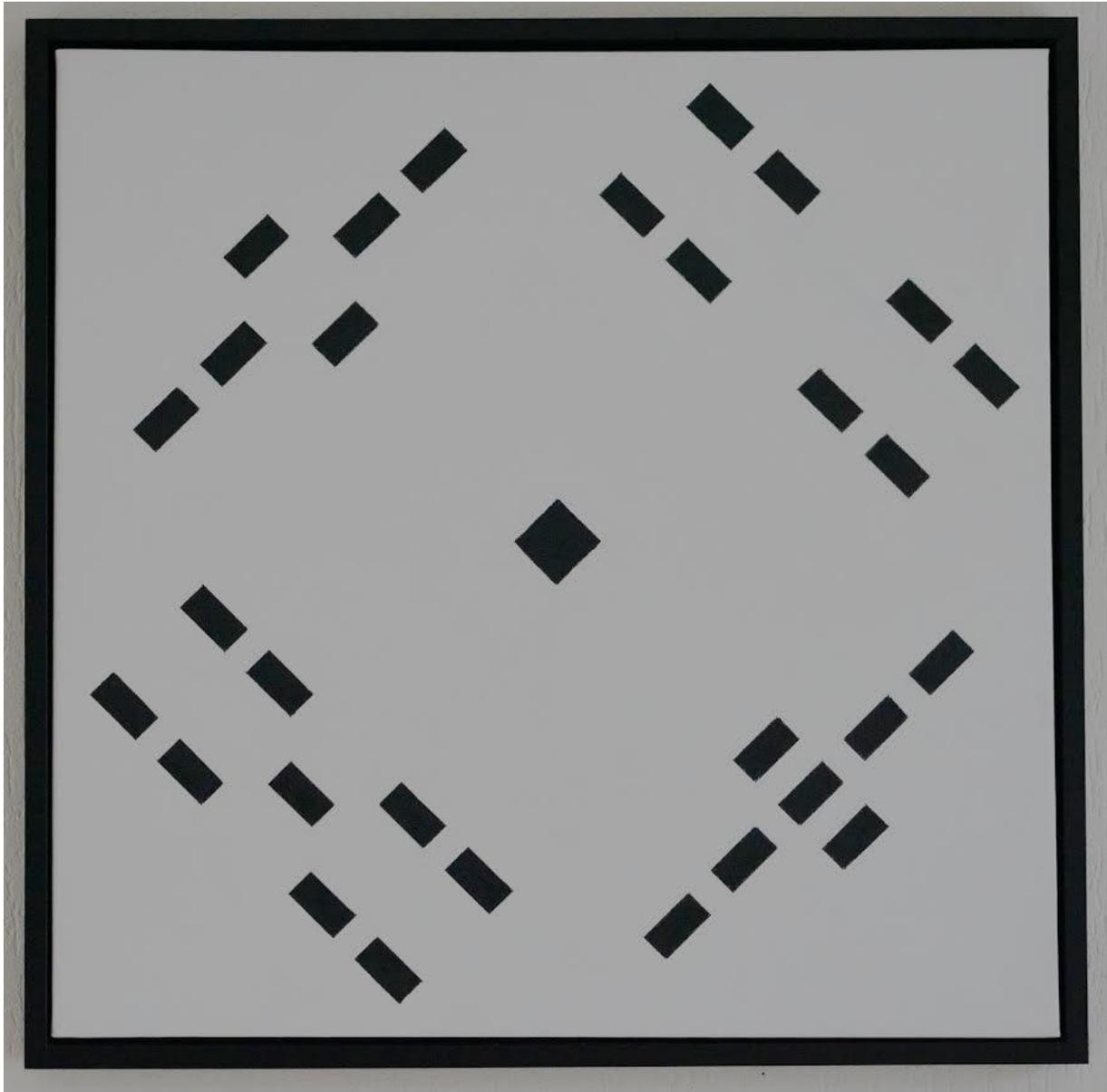


THE HIDDEN PATTERN

In the classical sequence of the I Ching



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Introduction

This article is about the discovery of a pattern that can be formed by the 64 hexagrams of the I Ching in their classical order. This hidden pattern appears when the hexagrams are displayed in a logical way, although different from what is customary.

The first time the new pattern appeared before my eyes, I was stunned. It was not unlike a photograph being developed in a dark room and unexpectedly displaying a mysterious image. Maybe an archaeologist will experience something similar when he brushes away sand at a particular site and imagines he is discerning the foundations of an ancient temple.

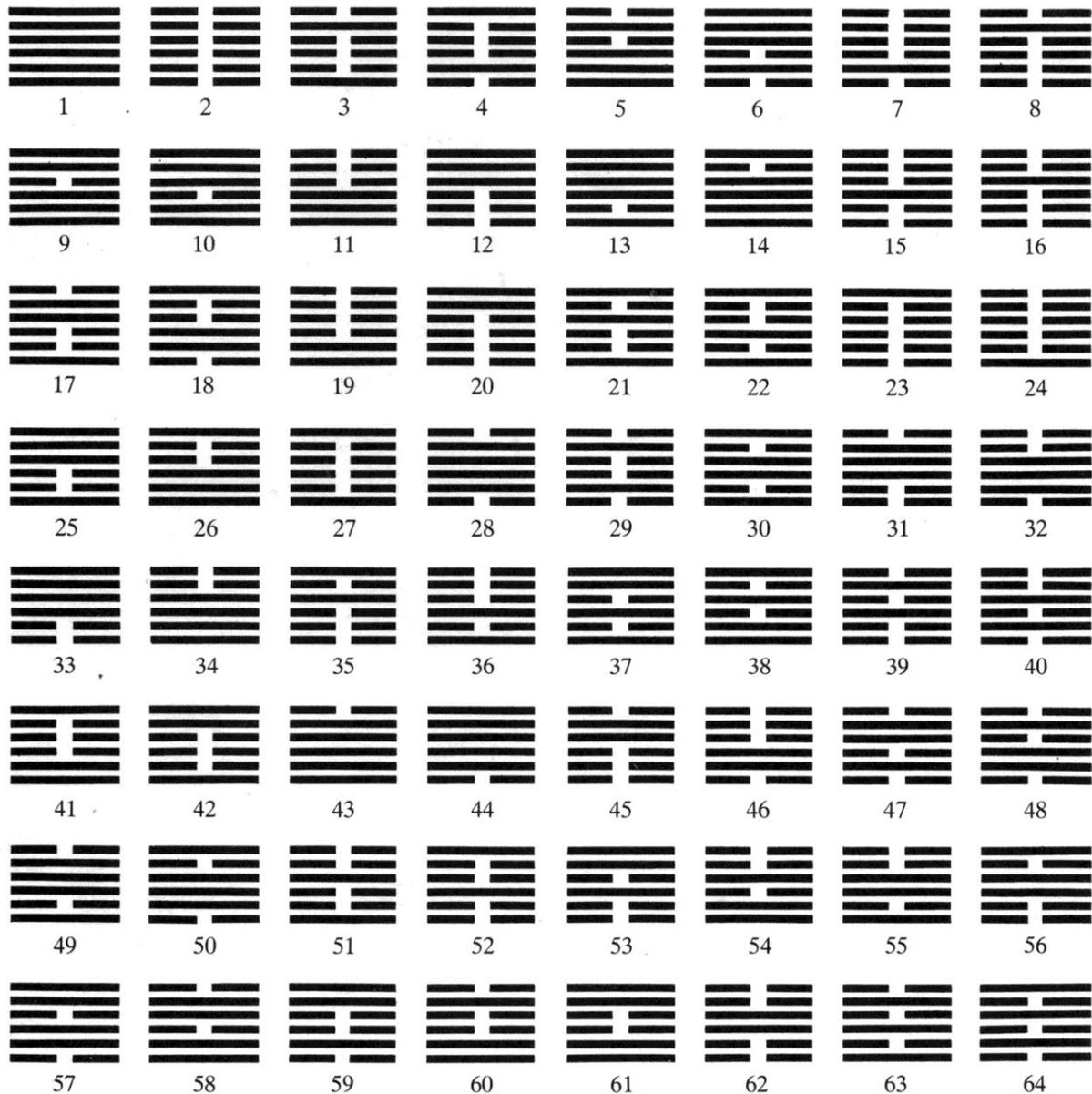
However, my initial enthusiasm was immediately followed by doubt. The whole procedure leading to my discovery - if such it was - was in itself simple. Could it be that no one had seen this image before, which was to be found in such an easy manner?

This I wanted to find out, so I studied all the literature on the I Ching I could find, including the Internet. I prepared myself for two major disappointments. Firstly, that the pattern had long and widely been known. Secondly, that it was just a construction based on coincidence or explainable patterns (the way snowflakes are formed along natural patterns or the way fractals develop). Neither scenario occurred, though it should be noted that I was only able to look into Western sources or information that is written in a European language such as Dutch, English, German or French.

Finally, I wondered a lot about the probability of a layman discovering something in the I Ching that apparently escaped the attention of thousands of experts in the field, both in the West and (especially) in the East. An explanation may be that a fresh researcher is so small that he is able, at least for a short while, to peek under the gateway leading to the formidable and imposing structure that the I Ching is...

1. The chessboard pattern

The 64 hexagrams of the I Ching are usually presented in a classical order: the so-called King Wen Sequence (KWS). Each hexagram has a number that corresponds to its position in the KWS. In this way they are usually represented in a 8x8 matrix or 'chessboard' pattern: eight rows horizontally and eight rows vertically.

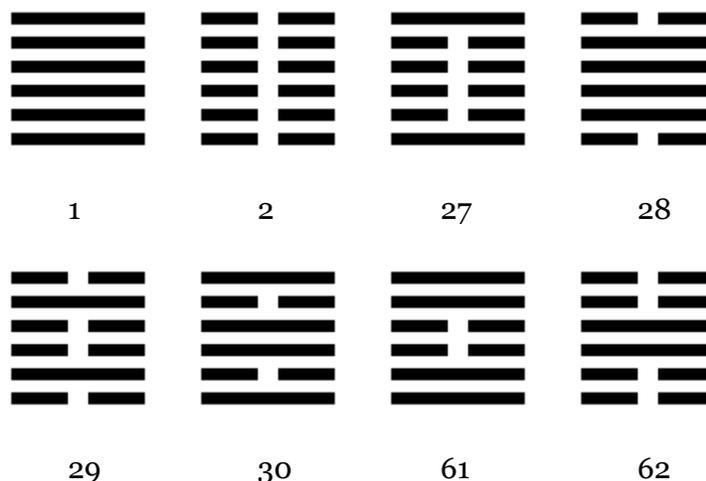


Pairs

What stands out is one of main features of the KWS: the hexagrams are linked in pairs. These pairs are formed according to two principles: inversion and opposition¹. In 56 out of 64 cases, the second hexagram of the pair is the reverse of the first (cf. HX3-4, HX5-6 and HX7-8 on the first row).

¹ The Chinese terms are *p'ang-tung* (opposition) en *ch'ien-kua* (inversion).

However, in eight cases the principle of inversion cannot be applied. HX1-2, HX27-28, HX29-30 and HX61-62 are symmetrical. If they are reversed, they remain the same and consequently there is no inversion partner. In these cases the other principle, that of opposition, is used: they are paired to their 'opposite'. On the position of each yang (unbroken) line in the one hexagram, a yin (broken) line can be found in the other hexagram, and vice versa. These special eight hexagrams, each one next to its opposition partner, are shown below:

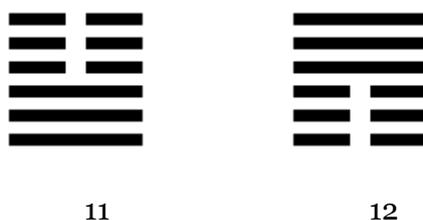


Two canons

Another feature of the KWS is that the hexagrams are traditionally divided in two sections. The first 30 hexagrams form the 'Upper Canon', the remaining 34 hexagrams the 'Lower Canon'.

Although the hexagrams are often shown in the chessboard pattern, this display is far from perfect. It does not acknowledge the existence of the two canons, to name one thing. The pair HX1-2, beginning the Upper Canon, and the pair HX63-64, closing the Lower Canon, are in important positions: respectively the upper left and the lower right corner of the chessboard pattern. But HX29-30 and HX31-32, the last pair of the Upper Canon and the first of the Lower Canon respectively, are 'lost' on the fourth row from the top (the squares e5, f5, g5 and h5 of a chessboard).

Based on their shape or meaning, one would expect other hexagram pairs to have a special position in the chessboard pattern, but they don't. One example is the position of the special pair 11 (T'ai / Peace) and 12 (P'i / Standstill). They are squares c7 and d7 on a chess board, i.e., on the second row from the top, left of center.



2. An alternative pattern

This inspired me to ask the following question: isn't there a pattern imaginable better suited to present the hexagrams in the KWS? A pattern that takes into consideration the existence of the two canons and gives important hexagrams a 'strategic' position?

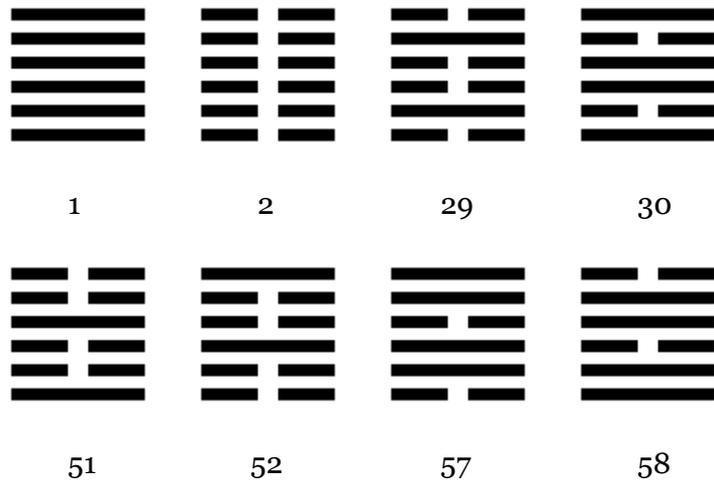
The (simple) key seemed to first identify special hexagrams. This is to be done by looking at the two trigrams that form each hexagram.

The trigrams are:



Identical trigrams

Eight hexagrams are special because they are composed of two identical trigrams:

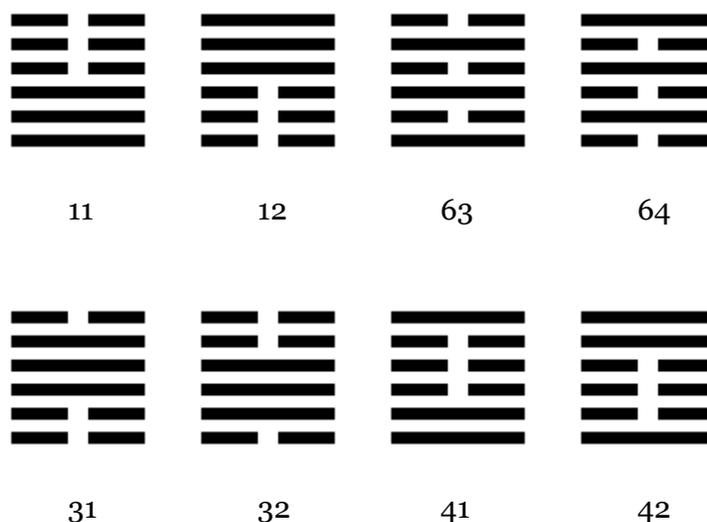


It is important to mention that the Upper Canon actually begins and ends with four of these: HX1-2 and HX29-30.

Opposing trigrams

Eight other hexagrams are special because they are made up of two opposing trigrams. That is to say that each yin line of the lower trigram corresponds to a yang line in the upper trigram (and vice versa).

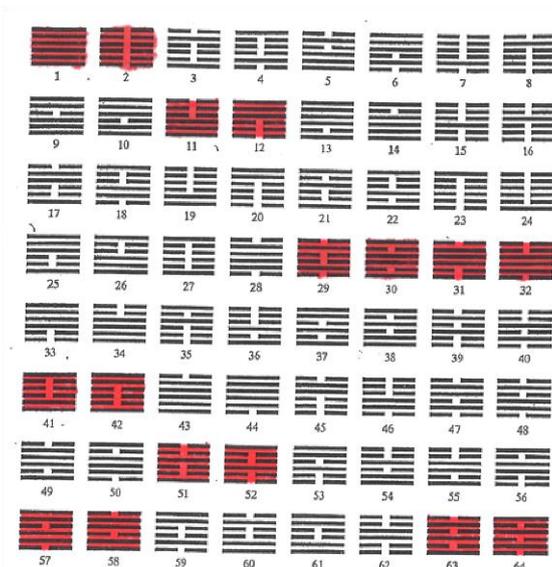
This particular feature of opposing trigrams can be found in eight hexagrams:



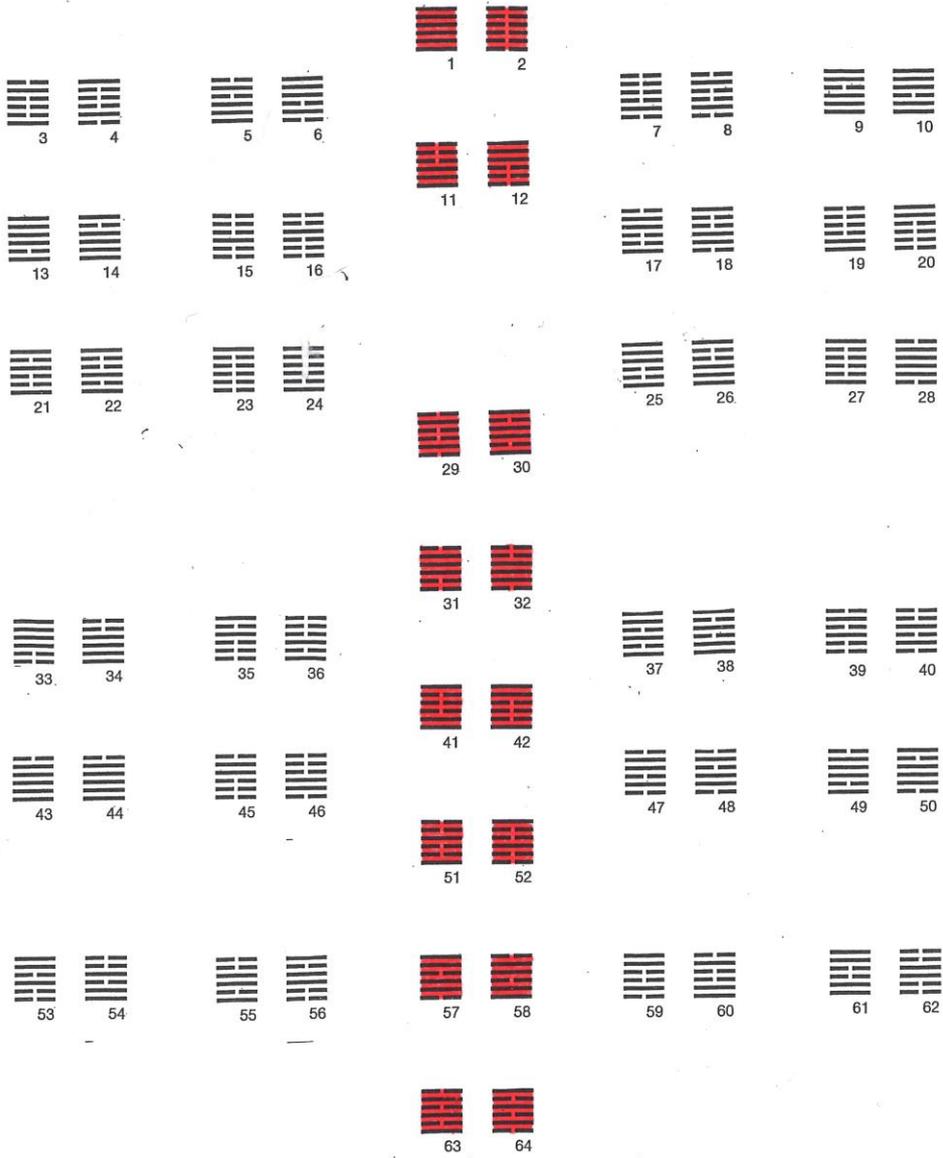
It is important to mention that the Lower Canon of the KWS actually begins and ends with four of these: Lake over Mountain (HX31), Thunder over Wind (HX32), Fire over Water (HX63) and Water over Fire (HX64).

The discovery

In the figure below, the sixteen hexagram pairs with identical or opposing trigrams are marked red. The chessboard pattern does not show any apparent 'logical' overview.

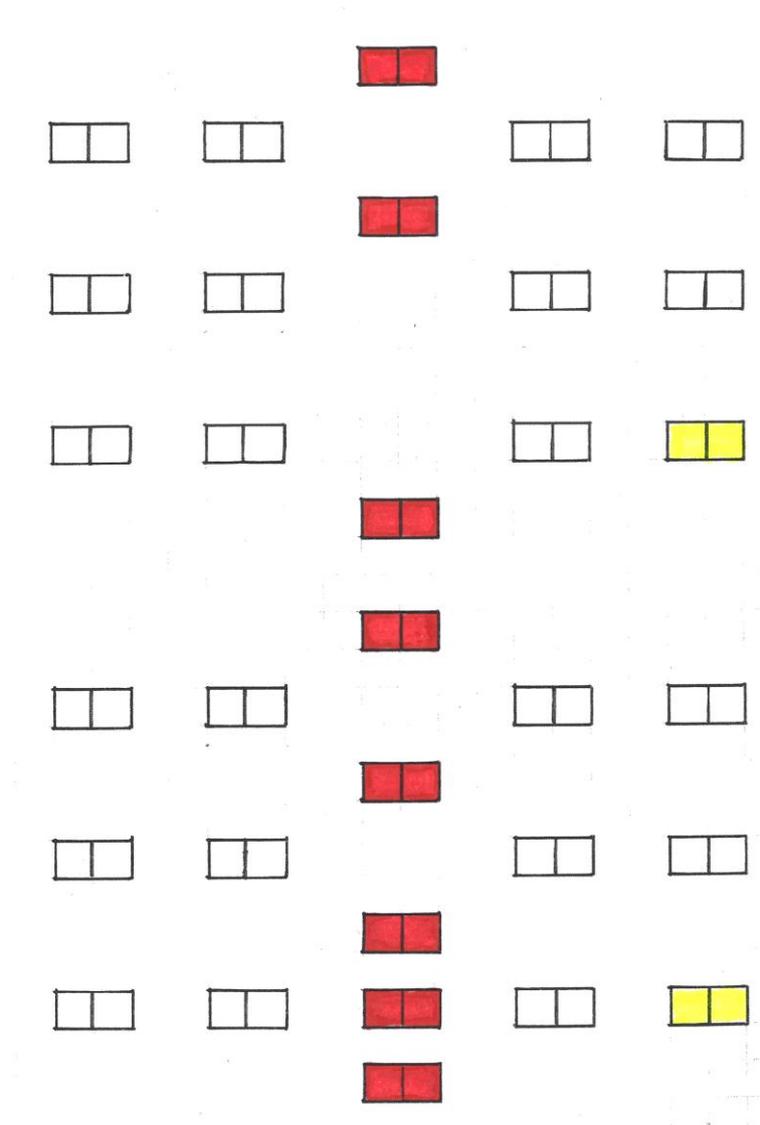


However, this changes when the 16 special hexagram pairs are centrally placed in a vertical column, one above the other! This results in a pattern of 64 blocks or 32 double blocks.



3. Features of the table pattern

The new pattern shows a kind of table (not unlike the periodic table of chemical elements). This organization of 64 units (or 32 pairs) has many interesting features. For the sake of clarity, the pattern will from now on be shown in its 'empty' form (i.e., without hexagrams).



The sixteen special hexagrams are marked red and form the middle column. In addition, there are four hexagrams that have no inversion partner, as a result of their symmetry. They are linked to their opposition partner (see also chapter 1):



27

28

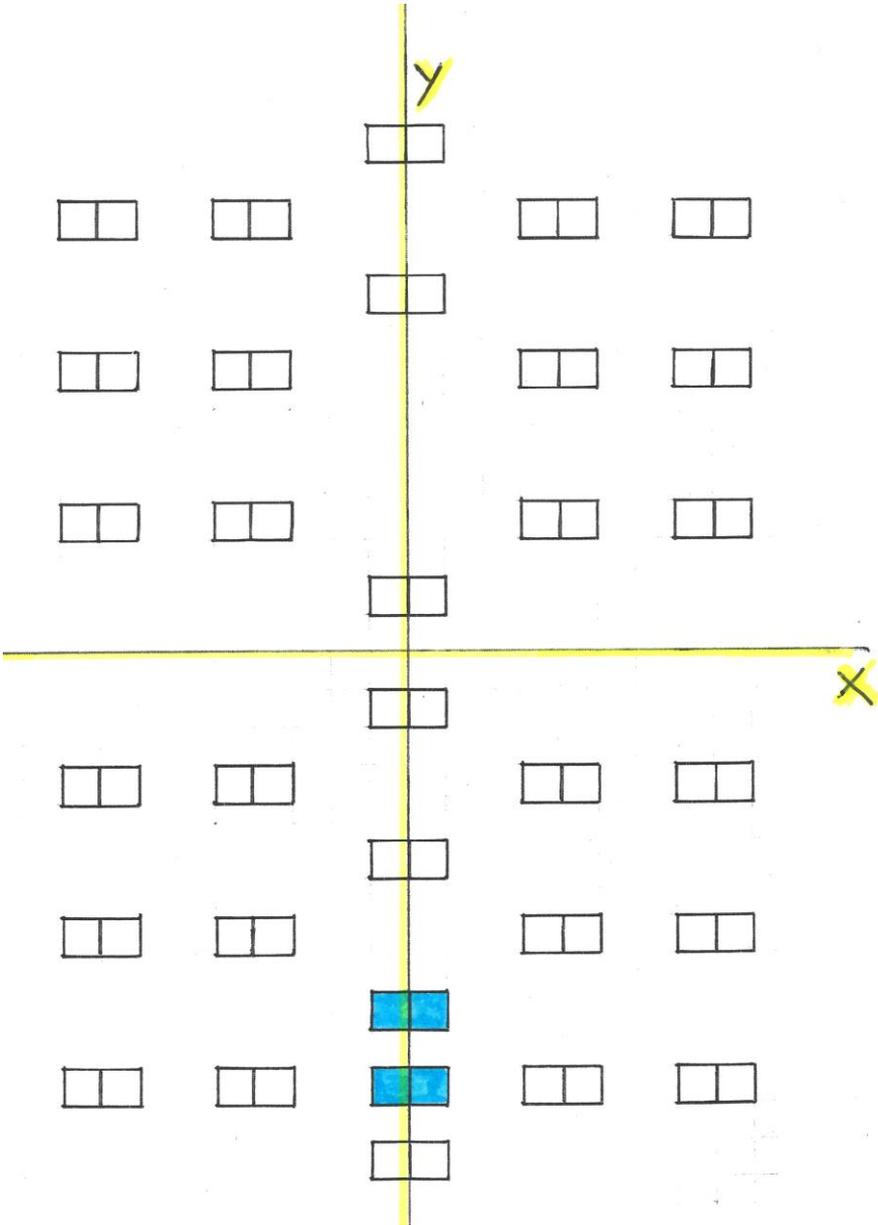
61

62

Both pairs (marked yellow in the image on page 9) have a 'strategic', penultimate position both in the Upper and the Lower Canon.

Symmetry

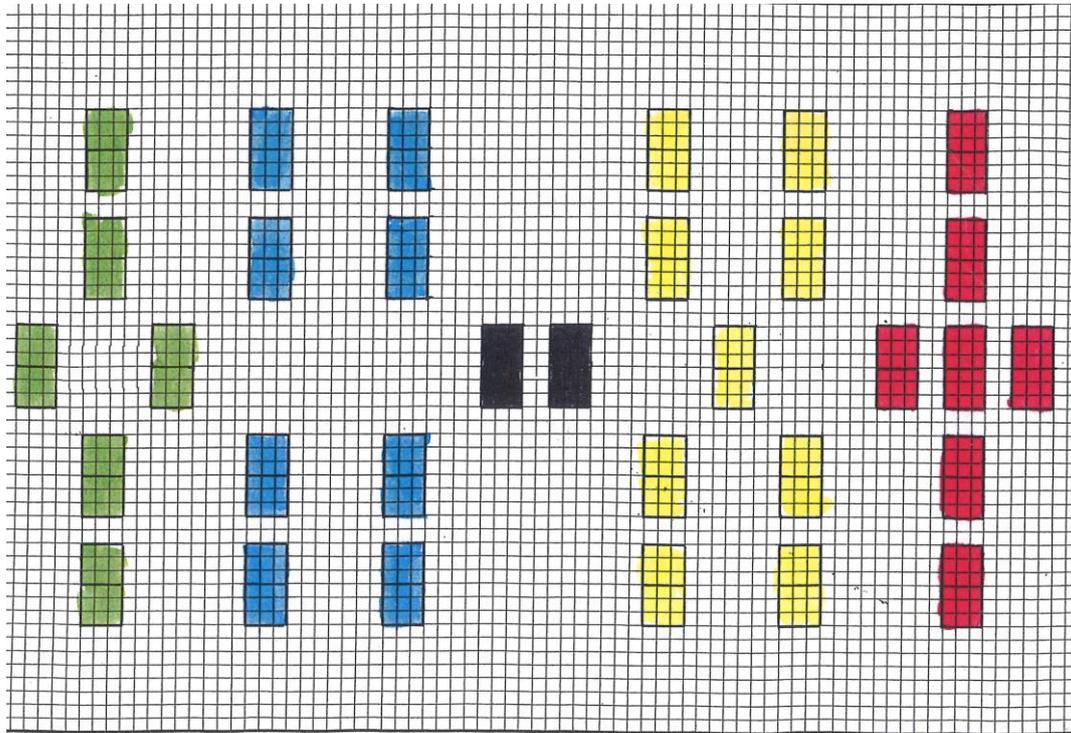
What is striking about the pattern is its symmetry. The left side (the Y-axis being the central line) is the mirror image of the right side.



The upper half (the X-axis being the center line) is the mirror image of the lower half, except for the two blue colored blocks (HX51-52 and HX57-58). The upper half has 30 blocks, and the lower half 34. These numbers correspond with the groups of hexagrams out of which the Upper and of the Lower Canon are composed.

Figure groups

The table pattern shows four large groups and one small remaining group consisting of 6 hexagram pairs (green), 8 (blue), 2 (black), 9 (yellow) and 7 (red). This fact is significant because odd numbers are yang and even numbers are yin. Old yang has the numerical value of 9, new yang 7, new yin 6 and old yin 8. When the image is turned 90 degrees, it is even better illustrated.



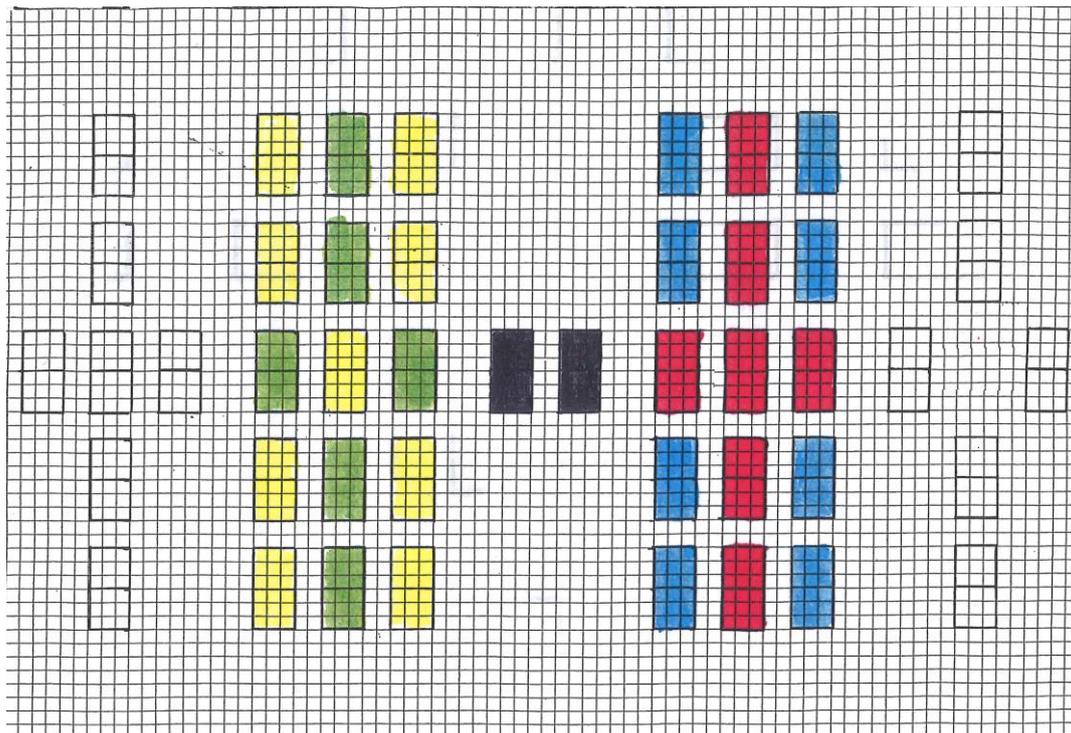
6 8 2 9 7

The two yang groups (consisting of 9 and 7 hexagram pairs) are almost identical to the two yin groups (6 and 8), except that yang groups have an extra pair in the center, being the previously identified HX41-42 and HX 57-58: the difference between yin (even) and yang (odd).

Complementarity

The philosophy of yin and yang is prominent in the I Ching. Yin and yang are complementary and form a unity. That is an important fact, since the four major figure groups have another interesting feature.

The figure groups of old yin and old yang (6 and 9 hexagram pairs) make a perfect fit, when one is put upon the other. The same applies to the other two figure groups (new yang and new yin, 7 and 8 respectively). The illustration shows the green and yellow figures merging together, just as the red and blue.



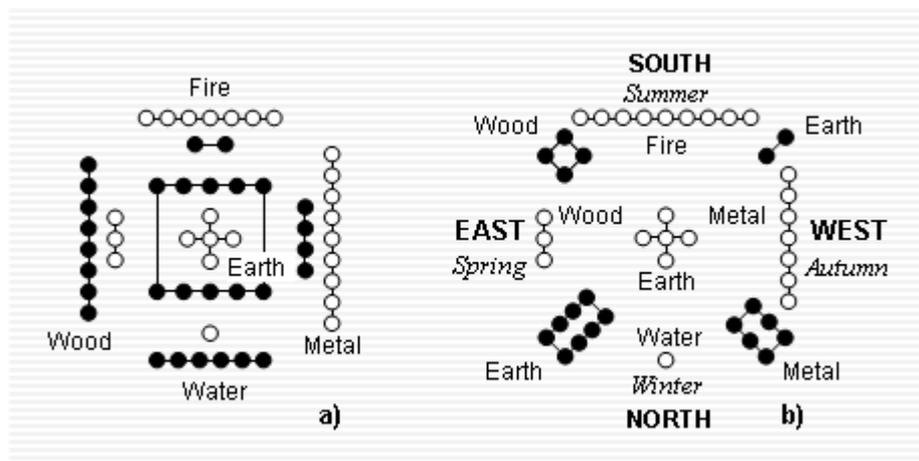
The identical blocks of 15 hexagram pairs both contain thirty hexagrams. The two pairs in the middle (HX29-30 and HX31-32) are excluded. Together they form a smaller block of four hexagrams.

4. The ring pattern

The table pattern turns out to be congruent with the Chinese philosophy of the five elements as well. In the previous chapter, the prominence of the numbers 6, 8, 2, 9 and 7 has been discussed. This relates to two great Chinese cultural icons: the Hetu and Luoshu.²

Hetu means ‘River Map’, being the Yellow River or Huang He. Luoshu can be translated as ‘Book of the Luo’ (the Luo is a tributary of the Yellow River). Both entities can be identified by the diagrams shown below:

- a) Hetu diagram
- b) Luoshu diagram



The number of white dots indicate an odd number (yang) and the number of black dots an even number (yin). Both diagrams are related to the philosophy of the five elements Water, Fire, Wood, Metal and Earth.

Number Symbolism

Hetu and Luoshu use different number symbolism for the elements:

| | | <i>Hetu</i> | | <i>Luoshu</i> |
|-------|---|-------------|---|-----------------|
| Water | → | 6 | | 1 |
| Fire | → | 7 | | 9 |
| Wood | → | 8 | | 3, 4 |
| Metal | → | 9 | | 6, 7 |
| Earth | | 10 | → | 2 , 5, 8 |

It is important to consider the Hetu values of the five elements, visible in the outer edge of the diagram. The figures 6, 7, 8 and 9 relate to the number of hexagram pairs of the upper and lower groups of the table pattern: 6 and 8 (yin) in the upper part, 7 and 9 (yang) in the lower part.

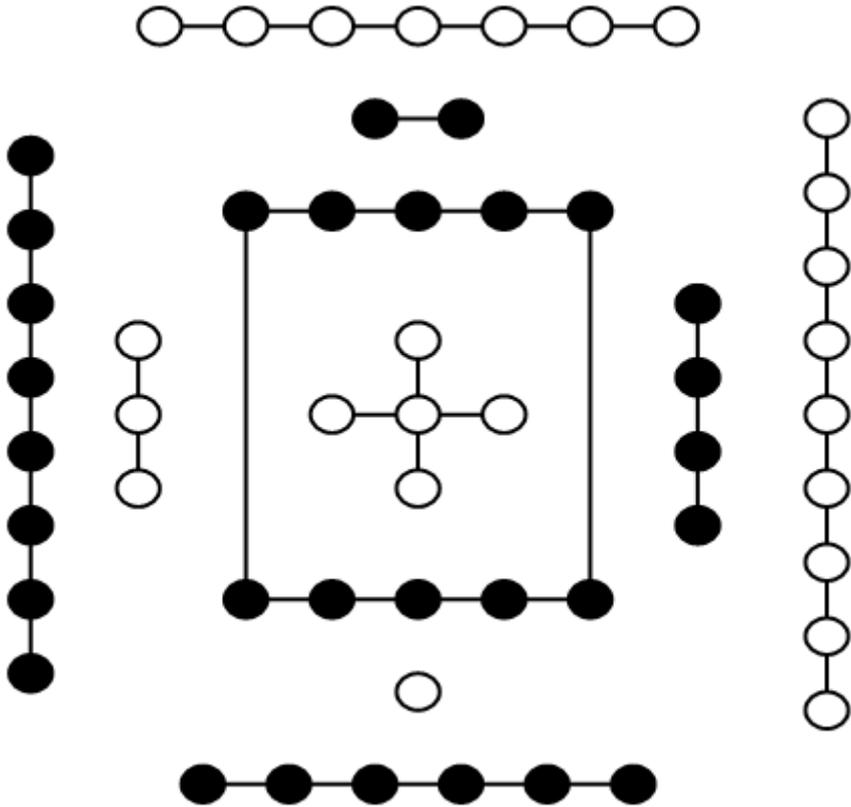
² With many thanks to Emile Weesie, who suggested this relation.

The remaining group figure, in the center of the pattern, would be expected to refer to the remaining element of Earth. But the number of both hexagram pairs (2) does not match the numerical value of Earth in the Hetu, which is 10. However, it does fit well into the systematics of the Luoshu, where Earth has indeed the value 2 (together with 5 and 8). Thus the position of the Earth in the center of the pattern corresponds to both the Luoshu and the Hetu.

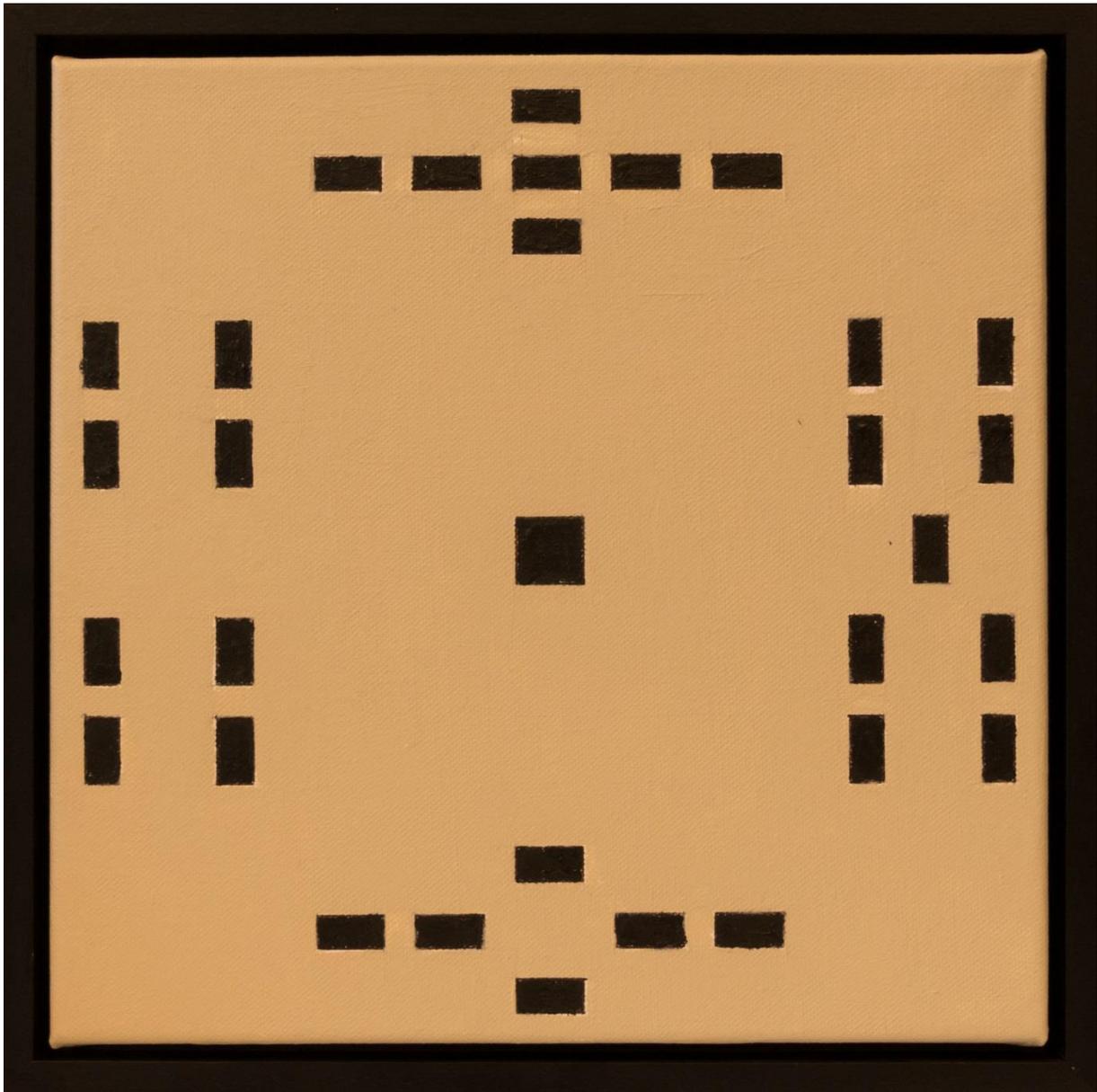
Combining with Hetu

The relation of the newly discovered pattern to the Hetu diagram and, to a lesser extent, the Luoshu diagram can be shown even more clearly. We place the figure groups of 6, 7, 8 and 9, blocks according to the outer edge of the Hetu:

- on the position of Water at the bottom (6 dots in the Hetu): the figure group of 6 blocks
- on the position of Wood to the left (8 dots in the Hetu): the figure group of 8 blocks
- on the position of Fire at the top (7 dots in the Hetu): the group of figure 7 blocks
- on the position of Metal to the right (9 dots in the Hetu): the figure group of 9 blocks



The remaining figure group of 2 blocks is put in the centre, on the position of Earth, which has 2 dots in the Luoshu. This results in a 'ring pattern' as shown below.



Mathematical possibilities

The ring pattern seems to be a 'mandala' (a mystical geometric symbol). It can be interpreted as an object with a 'core' of two blocks and a 'shell' of 30 blocks. It has interesting mathematical properties.

As each block represents two hexagrams, it has two times six hexagram lines. This means that the shell of the figure groups 6, 7, 8 and 9 blocks consists of 360 hexagram lines (30×12). The centre (the figure group with 2 blocks combined) represents four hexagrams (or 24 hexagram lines).

Possibly the pattern has been used as a tool for marking time: 360 (the number of hexagram lines in the shell) approaches of course the number of days in a year, while 30 (the number of hexagram pairs in the shell) corresponds to the average number of days in a month. One has

to take into account a certain key for marking extra days to arrive at the correct annual numbers.

Moreover, each block has 12 hexagram lines, which may refer to one day, especially when it is considered that a Chinese day used to have 12 'hours' (each with the duration of 120 'modern' minutes). Could this mean that the table pattern or the ring pattern once has been used as a solar calendar?³

³ It is interesting to mention the known fact that the total number of hexagram lines is 384 (64x6), which is only slightly more than the number of days made up by 13 lunar months (13 x 29.5 = 383.5).

Conclusion

This article discusses a remarkable discovery in the King Wen Sequence (KWS) of the I Ching. Its 64 hexagrams form a clearly recognizable table pattern, when eight special hexagram pairs are placed in a vertical line, one above the other. These are the hexagrams that consist of a combination of identical or opposite trigrams.

The pattern thus created has interesting features:

- The pattern is symmetrical along a vertical axis through the middle and almost symmetrical along a horizontal axis; the slight asymmetry in the last case can readily be explained by the difference between yin and yang, in terms of even and odd numbers.
- The pattern has five figure groups of 6, 8, 2, 9 and 7 hexagram pairs; these numbers correspond to the four qualities of yin and yang (young yin, old yin, young yang and old yang) and the five elements (water, fire, earth, metal and wood);
- The figure groups of 6 and 9, as well as 7 and 8, complement each other; they fit together completely, so that they form a rectangle.

Furthermore, there is a strong correlation between the table pattern and the diagrams of Hetu and Luoshu. The new pattern can almost completely be aligned to the Hetu and to a lesser extent to the Luoshu diagram. If the table pattern is embedded in the outer ring of the Hetu diagram, a ring pattern can be formed.

What may be the significance of the discovery of the hidden pattern? Could it have been used as a calendar, a 'periodic table of the ancient Chinese elements', or something else? It should be noted that this can only be a 're-discovery'. Once – though perhaps many centuries ago – the table and the ring pattern will have been known, perhaps as a means to connect the Hetu diagram to the I Ching. Therefore, a further study of both the table and the ring pattern may contribute to a better understanding of the I Ching and add to the knowledge of its history.

The two patterns may be useful for today's users in other ways as well, if only as a 'mnemonic' device. They are after all a practical way to visualize the position and number of the individual hexagrams. Finally, they present a quick overview of some main features of the I Ching, such as the pairing structure and the division into two canons.

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