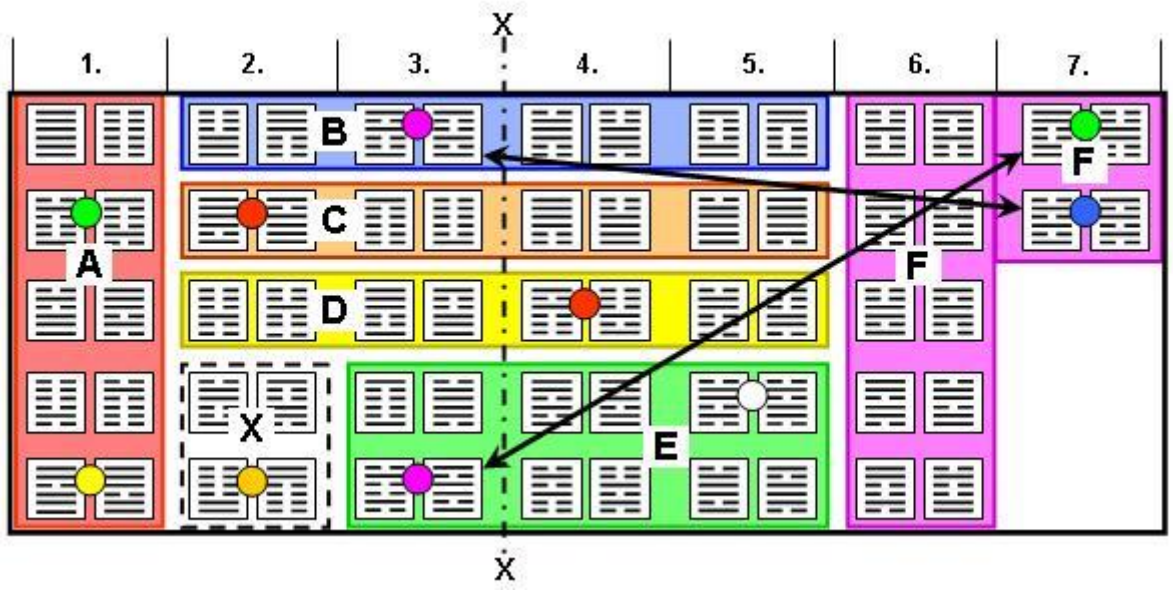
A-3. The origin of the King Wen sequence from a two-dimensional array.

(This article is a preliminary draft of a longer, better elaborated article about this subject.)

The regular King Wen table

According to my observations, to find an order in the traditional sequence, the sixty-four hexagrams have to be arranged in a table of five rows and seven columns and not in the usual one of eight by eight. Thirty two cells in this table will contain two consecutive hexagrams (an odd-even pair), and three cells remain empty. (See the next table.)



To fill the table is simple. One has to insert the hexagram pairs, according to their succession in the sequence:

- start in the top cell of the first column,
- the first five pairs go to the first column, from the top down (No 1-2, 3-4, ..., 9-10),
- the next five pairs go to the second column, from the top down (No 11-12, ..., 19-20),
- and so on.
- The last two pairs go to the seventh column (No 61-62, 63-64).

This table contains only the images, and does not show the ordinal numbers. In fact, this is the two-dimensional variant of the KW sequence, and it it can be called the *King Wen table*.

It can be found that six groups of the hexagrams in the neighboring cells have certain common properties (with a few exceptions), i.e. they are connected to each other by special rules. In the diagram, these groups are marked with different colors and with letters from A to F. The groups and the rules are as follows. (Where the trigram pairs are given, also the hexagrams with the exchanged trigrams are implied.):

- **Group A**: the two sovereign hexagrams, Qian and Kun, and the combinations of the trigrams Qian and Kun with Li and Kan (Qian-Li, Qian-Kan, Kun-Li, Kun-Kan). - There are two deviations.

- **Group B**: the combinations of the complementary trigrams, i.e., the trigram pairs of the *Earlier Heaven* (Qian-Kun, Li-Kan, Zhen-Xun, Gen-Dui). - One deviation.
- **Group C**: the sovereign (calendar) hexagrams (except those in group A and B). - One deviation.
- **Group D**: the hexagrams of group C, with exchanged trigrams. - One deviation.
- **Group E**: the combinations of the three daughter trigrams with each other (Li-Xun, Li-Dui, Xun-Dui), and the same of the three sons (Kan-Zhen, Kan-Gen, Zhen-Gen). - Two deviations.
- **Group F**: the double trigrams (except Qian and Kun in group A), and the balanced hexagrams (that have three firm and three yielding lines), except those in group B. According to the trigram components: Li-Zhen, Li-Gen, Kan-Dui, Kan-Xun, Zhen-Dui, Gen-Xun. - Two deviations.
- **Group X**: two pairs left out of the six groups above. (Later on, they will be connected to some of them.)

It is visible that the significant majority of the hexagrams belongs to one or the other of the six groups and corresponds to the specific rules. This majority is great enough to consider the KW table a regular arrangement of the hexagram pairs, in contrast to the irregular KW sequence. Based on this regularity, it can be stated that

the KW table had to be known before the relatively irregular KW sequence.

That is, the KW sequence originated in this table when, still sometime in the past, the matrix was extended in a single row, following the rules of Chinese reading (reading the columns from the top down). This kind of transformation of the KW table might happen when the demand occurred to make long files of the hexagrams together with the associated judgments and line texts (e.g., bundles of bamboo slips or silk rolls). That is to say, the linear sequence of the hexagrams was only a formal necessity, determined by the way of writing. In such a way, the adjacent hexagrams in the horizontal rows departed from each other, and their connections became unrecognizable. (A similar case would occur if somebody read an English poem in Chinese way, beginning with the first word of each line, then the second words, and so on. In the end, the sense of the verse would completely disappear.)

The irregularities in the KW table

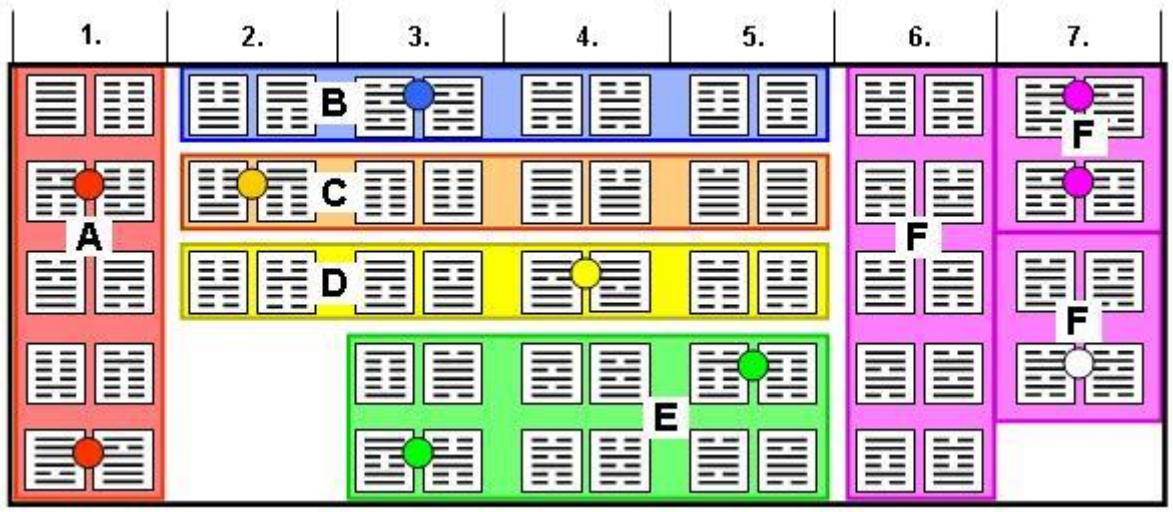
In the King Wen table, the deviant pairs are marked with small circlets. According to their ordinal numbers in the KW sequence, these pairs were placed into the given positions in the table but, by function, they belong to other groups. In these cases, the color of the circlet shows the proper group of the deviant pair. For example, the hexagrams *Difficulty at the Beginning* and *Youthful Folly* are in the cell [3,1] (third row, first place), in room A, corresponding to their ordinals in the KW sequence. According to the function, however, their proper place would be in room E (shown by the green circle).

The presence of the deviant pairs in the groups, though in a small percent only, still makes difficult to accept the regularity of the KW table as completely valid. If we could find explanation for these inconsistencies or, in other words, if we could show that there happened intentional or random misplacements in the arrangement, the regularity could be validated in a higher degree. In the present case, the KW table has to be considered corrupted in comparison to a previous correct status.

The displacements of the hexagrams can be summarized as follows:

1) The hexagrams in cell 61-62 were exchanged with those in 29-30. It can be supposed with reason that the removal of these two pairs was the consequence of the partition of the hexagrams in two parts and it happened intentionally The purpose of this change was to close the first part of the hexagrams with the two cardinal hexagrams, Fire and Water.
2) The hexagrams in cell 21-22 were exchanged with those in 63-64. This movement might happen together with that above. The purpose was to close the KW sequence with the symbols of the Beginning and the End.
3) Still, a chain of changes of six hexagrams occurred. Random change was unlikely, and there was no apparent reason for an intentional change. (For the detailed explanation, see Chapter 4 in the .pdf book.)
4) The two pairs of group X originally belonged to group F, in the last column. Because there is not any information about such a situation in the past, this question is not discussed here.

These findings fairly well explain the deviances in the KW table, and it is highly probable that, in a former state, it was without exceptional hexagrams. The next diagram shows this "ideal" KW table where every hexagram is at its proper place, in the corresponding group.



Resolution of an objection

In this article, several forms and actions have been dealt with, the existence or the truth of which could not be verified with facts. There are no extant manuscripts, findings from excavations, or other remains from the past regarding the KW table or the transformations mentioned here.

Previously, I said the KW table was known in the ancient times but I did not think it was a permanent object. I can imagine the six groups as six bundles or bags, and bamboo slips or shells with the pictures of the hexagrams in them. On due occasions, e.g., at a ceremony before the sovereign, the oracle laid out the contents on the floor, in a form that hold the coherent hexagrams together, e.g., in the form of the KW table. At the end of the ceremony

the slips or shells were packed up again. According to this conception, also the changes in the KW table might occur accidentally or intentionally without any consequences.

Conclusion

Based on the new observations of the hexagrams in the KW sequence, the existence of the two-dimensional King Wen table has to be considered certain.

In the KW table accidental or intentional changes might occur. Two intentional changes were made at the time of the separation of the hexagrams in two parts.

The KW sequence originated in a two-dimensional arrangement, namely in the King Wen table. Thus, the original two-dimensional structure has been degenerated to a one-dimensional sequence in which the connections among the hexagrams remained only in traces and in a hardly recognizable form.

If the above statements are correct, it makes further guessing needless with respect to the possible connotations implied in the sequence of the hexagrams. It seems that the meaning of the hexagrams as a whole lies not in their sequence but in a two-dimensional arrangement, not excluding other three- or high-dimensional structures.