## The Yi-globe:

# The Image of the Cosmos in the Yijing 

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## Part 1

## Cosmology

## I. Introduction

Even in ancient times, the various peoples of the Earth had some idea about the elements, the structure, and the operation of the surrounding world; that is, they had their own cosmologies. These cosmologies might have differed from each other, but they also had many common qualities. They usually represented the observed or imagined parts of the universesuch as the heaven and earth, the celestial bodies, the lands and oceans-in pictorial or symbolic form.

According to the text and tradition, the sixty-four hexagrams of the Yijing also depict an image of the world. This introduction provides a brief overview of the cosmological contents of the Yijing and the symbolic presentation of the hexagrams.

## THE WORLDVIEW OF THE YIJING

Henri Maspero provided a general picture regarding the cosmological worldview of ancient China. He stated the following in his classic work China in Antiquity:
[The Chinese] pictured the world as a chariot with the rectangular Earth as its basis and the round Heaven covering it as a ceiling. ... The 'Earth beneath' lying under the Heaven is divided into concentric zones. The middle is occupied by the nine regions of China surrounded by barbarians from all around. ... Farther off, there are the Four Seas communicating with one another and-similarly to the Greek 'Okeanos'surrounding the world. (Maspero 1997, 30-32)

Essentially, the same idea was set forth by Mircea Eliade summarizing the Chinese ideas about the structure of the universe

As far as the structure and the rhythms of the cosmos are concerned, the unity and continuity of the different basic ideas were perfectly estimated from the age of the Shangs up to the revolution of 1911. The traditional image of the Cosmos is represented by the Center, with a vertical zenith-nadir axis passing through it, and
framed by the four cardinal points. Heaven is round (egg-form), while the Earth is a square. Heaven covers the Earth as a globe. ... China is at the middle of the world, the Capital is at the middle of the Kingdom, and the Royal Palace is at the middle of the Capital." (Eliade 1995, 15)
There are, however, numerous different theories. For example, based on his extensive research work, John Didier declares the following:

The traditional and currently accepted interpretation of ancient Chinese cosmology, whereby the earth was conceived to be a square set amid a round heaven, is patently incorrect. In fact, as I show, prior to circa the 2nd century AD the square-earth thesis did not exist; rather, it was the heavens that were, for astrological measurement purposes, conceived to be square, while they were encompassed circumferentially by a heavenly dome that was of course horizontally round. (Didier 2009, xxiv)

He states the following further on:
Despite Chinese tradition since circa 200-700 AD and Western sinological scholarship since 1600 AD virtually universally having promoted or acquiesced to the thesis that the Chinese from ancient times and forward have conceived of the world to be a flat square, in fact the textual and iconic traditions dating to before 100/200 AD that have been interpreted to represent this tradition do not in any way identify the earth to be flat or square. (Didier 2009, xxxix)

The Yijing also reveals a complete worldview, since each of the symbols it coversthe sixty-four hexagrams-stand for the image (idea) of one worldly phenomenon, while the complete set of hexagrams represents the whole world. It would be well worth investigating the Yijing to determine the kind of picture of the cosmos the sixty-four hexagrams conceal.

Let us start from the statement that the sixty-four hexagrams together represent the Heaven and the Earth, the whole universe. This is the actual content of the book as it has been accepted by tradition and later by philosophers. A few quotations from The Great Treatise (Da Zhuan) explain the situation:

- "The Book of Changes contains the measure of heaven and earth; therefore it enables us to comprehend the TAO of heaven and earth and its order." (Baynes 1997, 293)
- "In it are included the forms and the scope of everything in the heaven and on earth, so that nothing escapes it." (Baynes 1997, 296)

[^0]- "The Book of Changes is vast and great. ... When one speaks of the space between heaven and earth, it embraces everything." (Baynes 1997, 301)
Strange as it is, the hexagrams-if only their shape is considered-do not express this content in a visible manner. Formally, the hexagrams do not constitute a system that represents their common idea; namely, the unity and the totality of the world and-in some form-its intrinsic structure. In such a way, they differ from the symbols of other peoples and do not agree with the general pictures described above.

The hexagrams have a traditional "received" sequence (see Appendix), which traditionally originated with King Wen but can only be historically verified from the second century $\mathrm{AD}^{1}$ (and indirectly from the third century $\mathrm{BC}^{2}$ ). Since that time, this arrangement was used in each version of the Yijing. However, up to now, it has been impossible to establish whether the hexagrams succeed one another according to a definite system or at random. ${ }^{3}$

This (apparently) structureless nature of the hexagrams is even more surprising, since the trigrams already have two arrangements, which expresses their mutual interrelations. Their written description can be found in the Shuo Gua, in the eighth wing of the Yijing. ${ }^{4}$ There are also two diagrams, known from the Song era but probably originating from the early Han or before, which seem to be pictorial representations of the text. One of them is the "Sequence of Earlier Heaven" (Figure 1.01.a) and the other the "Sequence of Later Heaven" (Figure 1.01.b). Through the indication of all the primal forces and the circular arrangement, these diagrams reveal the unity and completeness of the universe. The eight trigrams divide and set space and time in order, defining the cardinal points and the seasons-as people still do today.


Figure 1.01

As for the hexagrams, only the following simple structural elements can be found in their traditional sequence:
a) The hexagrams are arranged in pairs so that a hexagram of odd ordinal number is always followed by its reversed pair. The eight symmetric hexagrams are paired with their complements.
b) The hexagrams are divided into two groups, from No 1 to 30 and from No 31 to 64, respectively.

There are different tables in use in which the hexagrams are arranged in a matrix of eight-by-eight cells, according to their upper and lower trigrams. Depending on the sequence of the constituent trigrams in the rows and columns, different interpretations can be found for the arrangements. For example, in Figure 1.02, the trigrams follow each other in the family sequence (father, mother, sons, and daughters) in both directions.


Figure 1.02

At the end of the last century, another ancient sequence became known in the world. In 1973, silk rolls were found near the town Mawangdui (China) in a grave that had been closed in 168 BC. Among the many valuable objects, there was a complete Yijing manuscript with slightly different textual parts and with a wholly different ordering of the hexagrams. On
this manuscript，the signs constitute groups of eight，and in each group，the eight upper trigrams are always the same．At first glance，it is apparent that this sequence was derived from an eight－by－eight matrix as well．Figure 1.03 shows the first 24 hexagrams of the Mawangdui－sequence and the matrix serving as its basis．


|  | $\bar{\square}$ | ミ三 | ミニ | ミミ | ミ | 三－ | 三二 | ＝ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 衰 | 三玉 | シモ | $\begin{aligned} & \text { EE } \\ & \equiv \text { In } \end{aligned}$ | 三 $\overline{\text { E }}$ | 三＝ | 三乐 | $\overline{\overline{\overline{\# z}}}$ |
|  |  | 三三 | ミニ | 三三 | 三三 | 三 | 三 |  |
| ミミ | $\overline{\overline{\overline{\equiv छ}}}$ |  | ミ三 | 三ミ |  | 三三 | 三三 | 匈三 |
| 三＝ | $\overline{\overline{\overline{\overline{\# n}}}}$ |  | ミニ | ミミ | ミ三 | 三＝ | 三＝ | 三三 |
| 三－ | 戸 |  |  | 三モ |  |  | ㅍㅡㅡㅡㅡㅡㅡㄹ | 三三立 |
| ミニ | $\overline{\overline{\overline{\overline{\|c\|}}}}$ |  |  | $\begin{aligned} & \text { ミニ } \\ & \equiv \end{aligned}$ | 三信 | 三＝ | 三モ |  |
| 三 |  | 三三 | ミニ | 三ミ | 三三 | 三三 |  | \＃三 |
| ミミ | $\overline{\equiv \overline{\equiv \equiv}}$ | 三巨 | ミモ |  | 三ミ | 立 | $\begin{aligned} & \overline{\overline{\equiv E}} \\ & \end{aligned}$ | 氯三 |
| ＝ | $\overline{\overline{\overline{\overline{E s}}}}$ | 三三 | ミニ | 三＝ | 三ミ | 三＝ | 三 |  |

Figure 1.03

In the matrix，the hexagrams consisting of two identical trigrams were picked out from the usual eight－by－eight table and placed in the separate row at the top of the columns．After this operation，each column，one after the other，was expanded in a continuous sequence．

The eight＂palaces＂（or＂houses＂）of Jing Fang（77－37 BC）have to be mentioned here as yet another well－known eight－by－eight arrangement．The sixty－four hexagrams are divided into eight groups（or palaces），and each group forms a column in a matrix．The uppermost hexagram in each column is a double trigram（in which the upper and lower trigrams are the same），and the other seven follow it according to definite rules（Figure 1．04）．

|  | The Palace of |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Qian | Zhen | Kan | Gen | Kun | Xun | Li | Dui |
| gonggua | $\overline{\overline{\overline{\bar{y}}}}$ | 三ミ | ミニ | $\begin{aligned} & \overline{\equiv \equiv} \\ & \equiv \bar{I} \end{aligned}$ | $\overline{\bar{\equiv}}$ |  | 三＝ | 三－ |
| 1．Gen． | $\overline{\overline{\overline{\overline{\#}}}}$ | 三音 | 氣三 | 三三 | 三音 | $\overline{\overline{\overline{\overline{\underline{E}}}}}$ | $\overline{\overline{\overline{\# E}}}$ | 三＝ |
| 2．Gen． | $\overline{\overline{\overline{\overline{\# E}}}}$ | ミニ | 立三 | 三三 | 三伍 | 三三 | $\overline{\overline{\bar{\prime}}}$ | 三三立 |
| 3．Gen． | $\overline{\overline{\overline{\bar{E}}}}$ | 三三 | ミ三 | ㄹㅡㅡㅡㅡㅡㅡㅡㄹ | 三三 | $\overline{\overline{\bar{E}}}$ | ㅡㅡㅡㅡㅡㅡㄹ | 三三＝ |
| 4．Gen． | $\overline{\overline{\overline{\equiv 一}} \bar{E}}$ | 三 |  |  | 三玉 | ㄹ三丨 |  | ミニ |
| 5．Gen． | $\overline{\overline{\bar{E}} \bar{E}}$ | ミI | 三ミ | 三 $\overline{\overline{\underline{\underline{E}}}}$ | 三三 |  | ㅡㅡㅡㅡㅡㅡㄹ | ミ三 |
| youhun | $\overline{\overline{\overline{E I}}}$ | 三壴 | 三ミ | 三三三 | ミニ | 三巨 | 戸 | 三ミ |
| guihun | 三 | 気 | ミㅡㅡㅡㅡㄹ | $\overline{\overline{\overline{\overline{E I}}}}$ | ミ三 | 三三 | 三 | 三ミ |

Figure 1.04

The Confucian philosopher Shao Yong（1011－1077）created another linear arrangement，which he named the＂natural＂system．Here，the hexagrams，starting from the Creative，follow one another up to the Receptive；in between，their lines gradually change， beginning from the upper line and down to the lowest one．This sequence can be rearranged into an eight－by－eight matrix or a circular form，as shown in Figure 1．05．

In the matrix，the sequence begins at the right lower hexagram，proceeds from the right to the left，then continues into the next line above from the right to the left again，and so on． Shao Yong developed the circle by splitting the total sequence in two equal parts，creating the left side of the half－circle from the first 32 hexagrams，beginning from above，while making the right side of the half－circle from the remaining 32 signs，also from the top down．In such a way，the sequence in the circle is not continuous but is interrupted half way，proceeding in the downwards direction in both half－circles．Thus，the Creative went to the South（at the top） and the Receptive to the North（beneath），while the lower trigrams of the octets followed the order of the Earlier Heaven．


Figure 1.05

It must be noted that Shao Yong's linear arrangement is nothing more than a list of binary numbers made of the hexagrams from 111111 to 000000 . The German philosopher and mathematician Leibniz (1646-1716), who applied the binary system he invented to the hexagrams that he had learned of by chance, already recognized this similarity. Leibniz marked the firm lines with the number 1 and the yielding ones with 0 ; thus, a six-bit binary number stood for each hexagram with the lowest line having the highest place value. This transformation of the hexagrams resulted in 64 six-bit numbers arranged from 000000 to 111111 (decimal 0 to 63) according to their value. This was just the reversal of Shao Yong's sequence.

It is apparent that the different sequential, quadratic, and circular arrangements enumerated above have nothing to do with the textual parts of the Yijing; thus, they do not reflect the philosophy of the book.

During the following centuries (and mainly in the course of the last three or four decades), many people have tried to find some message from the past in the received sequence in the arrangement of the hexagrams. Still others have developed various kinds of new sequences and matrices with the purpose of expressing some idea through the new order of the signs. There is neither place nor competence (on the part of the author) to evaluate only a part of them here. ${ }^{5}$

This study joins the efforts to develop a reasonable structure for the sixty-four hexagrams. The result apparently satisfies all the requirements relating to completeness and universality and is in accordance with the principles of the Yijing.

## II. The Reconstruction of the Yi-globe

The introduction provided a brief overview of the Chinese worldviews and their symbolic representations. The Yijing also includes "the form and the scope of everything in the heaven and on earth," but its symbols are not in accordance with this content. The sequence of the sixty-four hexagrams does not reflect the unity of the world, while the disorder of the hexagrams within the sequence contradicts even the ancient Chinese philosophy, according to which one single heavenly order rules the world.

The next discussion is based on the supposition that this lack of harmony between the content and the form is only superficial. It would be inconsistent with any cultural tradition if a worldview with such an inherent disharmony could have continued to exist for several thousands of years. It is well founded to suppose that some interrelation ought to have existed among the hexagrams in the past, expressing the unity and the order of the world. Perhaps this interrelation or order has been lost or forgotten over the course of time; it is a mission of posterity to find it again.

For that matter, several indications can be found in the Yijing confirming the existence of some sort of systematization among the hexagrams. Here is an example from the commentary Da Zhuan:

Heaven is high, the earth is low; thus the Creative and the Receptive are determined. ... Movement and rest have their definite laws. (Baynes 1997, 280)

Richard Wilhelm added a comment on this idea as follows:
$\ldots$ at the beginning of the world, as at the beginning of thought, there is the decision, the fixing of the point of reference. ... The premise for such a decision is the belief that in the last analysis the world is a system of homogeneous relationships-that it is a cosmos, not a chaos. This belief is the foundation of Chinese philosophy, as of all philosophy. (Baynes 1997, 281)

According to Wilhelm, the two fundamental hexagrams, the Creative and the Receptive, are such points of reference; they determine a system of coordinates "into which everything else can be fitted" (Ibid.).

Based on thorough consideration and literary indications, it is sure that if there is some kind of relationship or order among the hexagrams, it can be discovered. This would not only be a formal result, but would also mean the revelation of the latent content, if any, in the book, thereby enriching the Yijing with additional connotations.

## FUNDAMENTAL PRINCIPLES

The study of the book suggests that the order of the hexagrams has to be sought directly from the source, in the Yijing itself. Actually, the book discloses some important interrelations among the trigrams, and the extension of these relations over the hexagrams seems realizable. Thus, it can be expected to create a structure harmonious with the above ideas, perfectly expressing the spiritual contents of the Yijing.

## The creation of the trigrams - The Arising Heaven

The Yijing clearly describes the creation of the trigrams. The creators are the two major forces, the Creative (Qian, the father) and the Receptive (Kun, the mother), opposing and at the same time co-operating powers. The scene of the creation is the space between them, between the heaven and the earth. It is exactly so, as the Da Zhuan reads, "Heaven is high, the earth is low. ... Events follow definite trends, each according to its nature" (Baynes 1997, 280).

In the Dao De Jing, Laozi agrees with the Da Zhuan and makes the following comments: "Between the earth and sky/The space is like bellows/Empty but unspent/When moved its gift is copious" (Lao Tzu 2001, 5).

The heaven and the earth are opposite powers, and they mutually affect each other. Thus, their interaction can be represented by the symbolic picture of a force field, similar to the field between two equal and opposite electric charges (Figure 2.01).


Figure 2.01

The events of the Yijing had to take place in this field. In primordial times, such an event was the creation of the trigrams. According to the commentary Shuo Gua the Receptive was conceived by the power of the Creative:

The Receptive is the earth; therefore it is called the mother. In the trigram of the Arousing she seeks for the first time the power of the male and receives a son.

Therefore the Arousing is called the eldest son. (Baynes 1997, 274)
This message can be rendered into the language of changes: The first change occurred when the lowest yielding line of the Receptive changed into a firm one. Thus, the trigram Arousing (Zhen) was received. Similarly, the changing of the middle line created the Abysmal (Kan) and that of the upper one, the trigram of Keeping Still (Gen). In the Yijing, these three trigrams were called the eldest, the middle, and the youngest son, respectively, and, as it was shown, they all have come into being from the Receptive, by the changing of its yielding lines.

In Figure 2.02, the lines linking the trigrams show the paths of movement. For example, the three lines coming from the Receptive denote that the changing of its yielding lines produces Zhen, Kan, or Gen one level higher; therefore, these trigrams are beside one another in the diagram.

The other three trigrams-that is, the Gentle (Xun), the Clinging (Li), and the Joyous (Dui), the three daughters-were created in a similar way. Again, the Shuo Gua reads:

In the trigram of the Gentle the male seeks for the first time the power of the female and receives a daughter. Therefore the Gentle is called the eldest daughter [and so on].


Figure 2.02

Here, the firm lines of the Creative transformed into yielding ones. Diagram 2.02.a also illustrates these changes in the force field between the Creative and the Receptive.

After their creation, the six offspring remained under the influence of their parents. As a result, the yielding lines in the female trigrams were able to change to firm, and the firm ones in the male trigrams to yielding (Diagram 2.02.b). The sons and the daughters, however, had their own power too; thus, these changes could have resulted from their interaction as well.

In Diagram 2.02.b, the eight trigrams represent the whole world, with the Creative at the top and the Receptive below to manifest the saying, "Heaven is high, the earth is low." Forces operate between the two, inducing changes in "the world under the heaven." This diagram illustrates the creative forces, the location, the products of the creation, and the laws of movement in this space. Consequently, it is well founded to take this figure as the symbol of the changing world at the moment of the Creation. Thus, actually, the world's genesis is manifested here in symbolic form (Figure 2.03).


Figure 2.03

This diagram can be considered a third worldview in addition to the Earlier Heaven and the Later Heaven (see Fig. 1.01), and it presents the image of the world at the beginning of the time when the major powers arose; thus, calling it Arising Heaven seems appropriate. ${ }^{6}$ Since this image of the changing world fully reflects the essence of the Yijing, it can serve as a means by which a similar system can be found for the hexagrams, whereby the original goal of constructing a cosmological image of the world can be attained.

## The system of the hexagrams - a preliminary overview

The actions in the process of the creation of the hexagrams have to be essentially the same as they were in the case of the trigrams. Naturally, the Creative and the Receptive will be the creators here too, as they were shown in the diagram of the Arising Heaven.

Here, the first "son" of the Receptive is the hexagram Return with one firm line at the lowest place. The first "daughter" of the Creative is the Coming to Meet with one yielding line below and five firm lines above. There are six hexagrams with one firm line in each, and they are directly interconnected with the mother, the Receptive. Likewise, the six daughters join the Creative, the father. This arrangement is illustrated in Figure 2.04, on levels I and V, respectively.


Figure 2.04

After the emergence of the two sets of offspring, the creating process does not end as it did in the Arising Heaven. The Creative manifests himself once again, in the six sons: Their five yielding lines change to firm one after the other, whereby five new hexagrams come forth from each of them. Having two firm lines, they are superior in comparison to the former six signs; they represent a higher level in the world (Fig. 2.04, level II). Opposite changes come
up in the daughters under the influence of the Receptive; their descendants are the fifteen hexagrams with two yielding lines on level IV.

On the signs of the middle level (level III), the two primal powers exercise equal influence.
These hexagrams have three firm and three yielding lines, and there are twenty of them.

In such a way, five levels take shape in the space between the Receptive and the Creative:

- Level I: one firm and five yielding lines, six hexagrams
- Level II: two firm and four yielding lines, fifteen hexagrams
- Level III: three firm and three yielding lines, twenty hexagrams
- Level IV: four firm and two yielding lines, fifteen hexagrams
- Level V: five firm and one yielding line, six hexagrams ${ }^{7}$

This process of changes comprises the derivation of all the hexagrams (i.e., the genesis of the created world). To picture this development, it is enough to put down the hexagrams on paper, in succession of the generations (the levels), applying the principles of construction of the Arising Heaven. The movements, creating the hexagrams one by one, will be set forth in detail later.

Such a mode of development, starting from one point and extending into general manifestation, is fully analogous with the cosmic evolution as represented by some religious symbols (e.g., the well-known mandalas and yantras in the Hindu and Buddhist tradition). In the yantras, the center is the place of the creating power (usually a god or goddess); it is surrounded by simple geometric forms, which are arranged in concentric circles. By this means, it symbolizes the creative (divine) power radiating from the center as well as the whole manifested universe and its inner structure. Therefore, a yantra is always a concentrically extending but closed form that is also symmetric and balanced, according to the inherent features of the created world.

According to the Chinese philosophical systems, particularly the Daoist ideology, balance and harmony are essential features of the universe. Opposite powers in the worldheaven and earth, fire and water, lightness and darkness, firmness and flexibility, etc.-are in constant interaction, not to neutralize each other, but to arrive at perfect balance. Since it is the earthly purpose of man to be in harmony and to be one with the universe, at first, he has to create balance and harmony in himself. The Daoist anthology of the thirteenth century Book of Balance and Harmony reads as follows:

Truly, if one can be balanced and harmonious in oneself, then the being that is fundamentally so is clear and aware, awake in quietude, accurate in action; thus one can respond to the endless changes in the world. (Cleary 2003, 2)
Further on, the following comments regarding balance and harmony are made:
Balance and harmony are the subtle functions of sensitive efficiency, the essential workings of response to change, the totality of the cyclic movement and stillness of the flow of production and growth spoken of in the I Ching. (Ibid.)

If one compares the present task-the reconstruction of the hexagram system-with the compilation of a yantra, it is obvious that in both cases, a universe in which balance and harmony prevail has to be constructed. Consequently, it is well founded and understandable to borrow formal solutions from the yantras that represent this common content, in particular:

- starting the construction from the primal powers,
- concentric expansion of the creative forces,
- balanced and harmonic arrangement.


## THE FIVE LEVELS*

According to the fundamental principles, the Receptive and the Creative should be designated for the basis of the system of the hexagrams.

## Level I

The Receptive is the mother, who is first conceived by the Creative and bears the children-the elements of the existing world-to manifest herself in them. The gradual changing of her yielding lines into firm produces the first elements of creation. Level I in Figure 2.04 shows the resulting six hexagrams succeeding one another as the firm line moves gradually upwards. It should be noted, however, that this linear arrangement does not correspond with the external conditions. The force field between the Creative and the Receptive extends in all directions and surrounds the source points. Consequently, the hexagrams have to be placed not in a straight line but in space, similarly to the situation in an electric field. In the present case, the Receptive is the source of energy that generates the forms under the influence of the Creative. The best way to represent this cosmic process is to take the Receptive as the center and let the paths of change (like the field lines) branch out spoke-like from it and lead to the manifested ideas.

[^1]Demonstrating the Receptive and the six hexagrams in the above manner, a perfectly balanced, symmetric arrangement will be generated, exactly expressing the inner message in the language of traditional symbolism: the fact of creation and the order of manifestation (Figure 2.05).

When looking at Diagram 2.05.a, one should note that the descendants are at a level higher than the creative mother-as it was demonstrated in Figure 2.04. It is possible to picture a more realistic, perspective image (Diagram 2.05.b).


Figure 2.05

On level I, the hexagrams are circularly arranged, succeeding one another clockwise as the position of their firm lines becomes higher and higher. The first hexagram (the Return, No 24) occupies the place of number 4 on the dial-plate. (As far as the content is concerned, the place of the starting hexagram is irrelevant. It might have been appointed anywhere on the circumference. This choice is preferable in terms of drawing technique, which will be important later.)

The lines branching from the Receptive are the paths of change, indicating which hexagram will be produced by the changing of one of the lines of the Receptive. The number on the path is the ordinal number of the changing line. For instance, the binding path 3 means that the changing (from yielding to firm) of the third line of the Receptive ( 000.000 , No 2 ) will bring about the hexagram Modesty (000.100, No 15).

For technical reasons, further on, the hexagrams will be sometimes be referred to using binary notation. Accordingly, each hexagram will be considered a six-digit binary number, where " 1 "
corresponds to the firm lines, " 0 " corresponds to the yielding ones, and the top lines stand for the highest (leftmost) place. (In this respect, the system differs from the Leibniz-marking.)
Generally, the movements between two hexagrams can be accomplished in both directions. When a line changes from yielding to firm, it means a movement upwards, from a lower level to an upper one, and the changes from firm to yielding mean downward movements. Using the above example, in hexagram 000.100 (No 15), the changing of the third line (from firm to yielding) leads back to hexagram 000.000 (No 2).

## Level II

As it was shown, each hexagram on level I has one firm and five yielding lines. The changing of the yielding lines into firm results in five new descendants for each sign. These new hexagrams contain two firm and four yielding lines, and there are fifteen of them altogether.

It is visible that each new sign on this level can be derived from two different hexagrams. For instance, the transformation of the second line of the hexagram 000.001 (No 24) leads to the 000.011 (No 19). The same hexagram will come about if the first line of the 000.010 hexagram (No 7) changes (see the red lines on Figure 2.06). That is to say, hexagram 19 is the common "child" of No 24 and No 7, whereby it should be connected to both of them to be at equal distance from the two components to comply with the rule of balance. Following the above procedure, twelve hexagrams out of the fifteen can be simply and automatically settled along the circumference of circle II, evenly distributed at 30 degrees from one another (Figure 2.06).


Figure 2.06

In the figure, the level II hexagrams are marked with a different color only to facilitate distinction; the application of the colors, here and later on, has no other importance.

The location of three hexagrams-the Abysmal ( 010.010 , No 29), the Arousing (001.001, No 51), and Keeping Still (100.100, No 52), having been left out of the systemrequires particular consideration.

Each of these double trigrams derives from two hexagrams placed on level I at the two end points of the circle diameter. Thus, for instance, the hexagram of the Arousing (001.001) comes from 001.000 (No 16) and the opposite 000.001 (No 24); the situation is identical in the case of the other two double trigrams.

If one examines the position of the hexagrams, it is obvious only one place exists where symmetry is best achieved and perfect balance is accomplished. This place is half-way between the two double trigrams, in the center of the circle. This statement is true for all the three double signs; they have a common position in the center of level II (Figure 2.07).


Figure 2.07

A summary regarding the level I and II hexagrams reveals that the hexagrams having one and two firm lines surround the Receptive as follows:

- The hexagrams having one firm line are on level I, along the circumference of the circle, and evenly distributed at 60 degrees from each other (Figure 2.05).
- The hexagrams having two firm lines (except for the three double trigrams) are on level II, along the circumference of the circle, and evenly distributed at 30 degrees from each other (Figure 2.06).
- The three double trigrams are on level II, in the center of the circle, and overlapping each other (Figure 2.07).

Here, it should again be noted that in reality, the hexagrams take place in threedimensional space and at different heights according to the number of firm lines. Figure 2.08 illustrates the spatial arrangement of the first two levels in perspective. (Between the two levels, only the paths of change that start from the hexagrams No 7 and No 24 are shown.)


Figure 2.08

As it is shown in the above figures, the arrangement of the hexagrams and the paths of change are fully balanced. The hexagrams are placed in concentric circles, while the paths of change, evenly distributed, are arranged spoke-wise outwards. It seems that this structure fully meets the requirements of balance and harmony.

## Level III

Figures 2.09 and 2.10 show the hexagrams of level III, together with the first two levels. Here, only simplified illustrations are given: The hexagrams are represented by their ordinal numbers (instead of their six lines), and the numbers on the connecting lines are omitted.

In Figure 2.09, circle III holds the hexagrams derived from those of level II; they have three firm and three yielding lines. There are twenty such hexagrams altogether, but here, only eighteen are shown. The eighteen hexagrams along the circumference can be split into two groups:

- Six hexagrams-No 11, 12, 31, 32, 41, and 42—originate in three adjacent hexagrams of level II. Their place is evident: They settle symmetrically among the three creating hexagrams (i.e., in the direction of the middle one). In Figure 2.09, these hexagrams
settle in the exact same direction (i.e., on the "main lines") as those on level I; thus, later, they will be referred to as "main line hexagrams."
- The place of twelve hexagrams has been determined only by their two components, in the middle between them. The third component is always a double trigram in the center of level II. With respect to them, all the places on the circumference are equivalent; thus, they do not influence the arrangement. These twelve hexagrams are called "floating signs."


Figure 2.09

The places of these eighteen hexagrams are not final, because during the course of their location, only half of their connections (with the level II hexagrams) were taken into account. Their exact places will be determined later (see Figure 2.13), as soon as the structure of level IV is known.

Apart from the eighteen hexagrams above, there are still two others on level III: the signs of After Completion (010.101, No 63) and Before Completion (101.010, No 64). Hexagram 63 derives from No 39,3 , or 36 , when one of their yielding lines changes to firm; while in the case of hexagram 64 , No 35,40 , and 4 are the three constituents. The hexagrams
of these triple groups are placed at 120 degrees from each other along circle II, on the peaks of an equilateral triangle. According to the rule of symmetry, the derived hexagrams must be arranged at an equal distance from each of their three constituents. There is only one such point in the plane: the center of the circle. This statement is true for both triple groups; thus, the two hexagrams of the Completion-similarly to the double trigrams of level II-will come into the center of level III where they overlap one another: This is represented in the figure by the two concentric circles (Figure 2.10).


Figure 2.10

## The upper levels

The arrangement of the hexagrams on the upper levels (levels V and IV) is performed in the same way as it was done on the lower ones (Figure 2.11).

The offspring of the Creative surround their father in order as their single yielding line descends (level V). The sequence starts at hexagram 43 and goes anticlockwise to hexagram 44. This order of succession is in accordance with the trigrams in the diagram of the Arising Heaven (Fig. 2.03). There, the youngest daughter is on the first (the leftmost) position, with the yielding line on the highest place in the trigram. The others follow her with increasing age and descending yielding line.


Figure 2.11

The hexagrams of the next generation (with two yielding lines) are placed on level IV. There are twelve equally distributed signs at the outer circle. The three double trigrams-No 30, 57, and 58-again go in the center. (The latter signs are not shown in the diagram.)

Following the rules of symmetrical placement, the hexagrams of three yielding lines settle on level III, in the order shown in Figure 2.11. This arrangement, however, cannot be correct, because here, only half of their connections have been taken into account; namely, those with the level IV hexagrams. The same situation was demonstrated in Figure 2.09, where the other half of the connections-those with level II hexagrams-was used. If one compares the two diagrams (Figs. 2.09 and 2.11) with one another, it is visible that the positions of the hexagrams on level III are slightly different. The difference is in the order of the three signs within the triple groups. Figure 2.12 shows one of these six groups in space, in front view. Here, the upper and lower connections and the different positions are clearly visible.


Figure 2.12

It is easy to determine the correct, balanced position for every hexagram (Fig. 2.13).


Figure 2.13

Considering both the upper and lower contacts, hexagram 11 remains on the main line (on the middle line of the group), because it has been there already, fully balanced by both sides (Fig. 2.13, Diagram $a$ ). The other two hexagrams, No 54 and No 18 (the floating signs), however, have to be removed. Their new, balanced position will be on the main line, too (Fig. 2.13, Diagrams $b$ and $c$ ).

As a result, in circle III, each hexagram of the triple groups will be settled on the main lines overlapping one another there (Fig. 2.13, Diagram $d$ ).

The two hexagrams of the Completion (No 63 and No 64) have similar connections with level IV as they had with level II. Figure 2.14 shows these paths. Accordingly, the center of the circle will be their final, common place.


Figure 2.14

Uniting the five levels, a spatial map can be prepared-for the time being, in a rough sketch only (Figure 2.15).


Figure 2.15

## FINAL COMPILATION: THE YI-GLOBE

By summarizing the outcomes presented up to now, the procedure of placing the hexagrams can be considered complete, whereupon:
a) The hexagrams settle on five levels (I to V) in space, according to the number of firm lines.
b) The hexagrams of adjacent levels are interconnected by paths of change.
c) The place of the hexagrams on the individual levels is exactly determined by the rules of balance and symmetry.

In order to receive the final form, Figure 2.15 should be slightly reshaped. Since here, a spatial form is in question, it is not enough to place the hexagrams symmetrically in the horizontal planes (on the individual levels); it is required to follow this symmetry in the vertical planes as well. This means that the vertical envelope of the whole structure has to be a circle as well, where the five levels are uniformly distributed. After these modifications, Figure 2.16 is formed.


Figure 2.16

Now, it is possible to show the final construction, including the hexagrams and the paths of change (Figure 2.17). Based on the spherical form and the contents, this construction has been called Yi-globe (after Yi-jing).

The Yi-globe is a closed net-like structure with a vertical rotation axis represented by the Creative-Receptive line. This sphere includes all the sixty-four hexagrams (represented by small circlets) and the paths of change between them. On this diagram, the overlapping hexagrams are separated from each other, and the inner paths are omitted to avoid overcrowding.

The missing paths between the hexagrams on the axis and the surface are shown separately in Figure 2.18, Diagram $a$ (the double trigrams), and Diagram $b$ (the signs of Completion).


Figure 2.17


Figure 2.18

Figure 2.19 shows a clearer picture, without the paths of change. The missing lines are easily traceable in the other diagrams (e.g., in Figures 2.09 and 2.11 and, later on, in Figures 2.21, 2.22, and 2.23).


Figure 2.19

In the next diagram, the hexagrams are substituted by small circlets (Figure 2.20).


Figure 2.20

## STRUCTURAL PROPERTIES

For the sake of completeness, the passage below lists the characteristic features of the Yi-globe in detail.

## Overall structure

a) The principal hexagrams, the Receptive and the Creative, are the two poles wherefrom the changes originate and the whole creation starts. These hexagrams are the endpoints of the vertical axis of the globe.
b) The circles of the individual levels (from I to V) resemble the parallels of the earth's coordinate system, and they are placed at 30 degrees from each other. To compare the globe to the earth, the position of the circles can be represented by the following coordinates (proceeding downwards from the top):

- circle V: parallel $60^{\circ} \mathrm{N}$
- circle IV: parallel $30^{\circ} \mathrm{N}$
- circle III: Equator
- circle II: parallel $30^{\circ} \mathrm{S}$
- circle I: parallel $60^{\circ} \mathrm{S}$
c) As it follows from the method of the design, and is apparently shown in Figures 2.09 and 2.11, each hexagram - except for those on the axis-falls on the radius of the circles, branching at 30 degrees from one another. The connecting lines of the endpoints of these radii appear as meridians on the globe. There are twelve such meridians altogether.
d) There are fifty-four hexagrams over the globe's surface, at the points of intersection of the parallels and the meridians. These are distributed over the surface as follows:
- circle V: six hexagrams, at 60 degrees from each other,
- circle IV: twelve hexagrams, at 30 degrees from each other,
- circle III: eighteen hexagrams, in six triple groups, at 60 degrees from each other,
- circle II: twelve hexagrams, at 30 degrees from each other,
- circle I: six hexagrams, at 60 degrees from each other.
e) There are eight hexagrams on the axis of the globe, between the Creative and the Receptive:
- level II: three double trigrams (No 29, 51, 52), overlapping each other on the axis,
- level IV: the other three double trigrams (No 30, 57, 58), overlapping each other, too,
- level III: After Completion and Before Completion (No 63 and 64), in the center of the globe.


## Hexagram pairs

It is well known that in Chinese thinking, the concept of opposites plays an important role, and, according to theory, opposites do not contend with each other but strive to arrive at reconciliation.

This idea is present also in the Yijing and clearly expressed by the Shuo Kua:
Heaven and earth determine the direction. The forces of mountain and lake are united. Thunder and wind arouse each other. Water and fire do not combat each other. Thus are the eight trigrams intermingled. (Baynes 1997, 265)

In addition, Helmut Wilhelm deals with this subject as follows:
The system of line complexes lends itself particularly well to a discovery of such pairs of opposites. The mathematical precision of this system gives these established pairs of opposites a force that is almost compelling. The classical establishment Chinese I Ching interpretation has developed several methods for the establishment of such pairs. Three of them are often considered especially helpful to an understanding of the hexagrams. The first is the P'ang-t'ung; it consists of changing all six lines of a hexagram into their opposites. The second is the Ch'ienkua, in which the whole hexagram is on its head. And the third is the Chiao-kua, in which the two trigrams are interchanged (italics added). (Wilhelm, H. 1997, 108109)

The pairs of the first group are usually called "complementary" or "inverse" pairs. A hexagram that has been turned over on its head is the "reversed" pair of the other. In the hexagrams of the third group, the upper and the lower trigrams are mutually "exchanged."

In the Yi-globe, these opposite pairs are in easily recognizable opposite, symmetrical positions.
a) A hexagram and its reverse pair are always on the same level, and they settle symmetrically on the two sides of the globe. In other words, the members of the reversed pairs are the reflections of one another with respect to the vertical plane going
through the meridians of the symmetrical hexagram pairs (No 27-28 and 61-62). In Figures 2.19 and 2.20, the plane of symmetry coincides with the plane of paper. Here, one member of the pairs is exactly behind the other. See, for example, the pairs No 43-$44,14-13,9-10$, etc. Two pairs of the double trigrams and the two hexagrams of Completion, as extreme cases, are just on the plane of symmetry (No 51-52, 57-58, and 63-64).
b) The eight symmetrical hexagrams, which do not have reversed pairs, are alone on the plane of symmetry (No 1, 2, 27, 28, 61, 62, 29, and 30).
c) The complement pairs are settled symmetrically with respect to the center of the globe. In other words, the complementary hexagrams are at the antipodes. The two complementary pairs on the axis are inside the globe but also symmetrical to the center.
d) The pairs where the trigrams are interchanged settle on the same level, at the two ends of the diameter of the circle, also in opposite positions.

## The map of the Yi-globe

Finally, Figures 2.21, 2.22, and 2.23 demonstrate the total structure of the Yi-globe, embracing all the paths of change. In order to facilitate its survey, the surface of the Yi-globe is flattened into a plane.

These three diagrams are the cylindrical projections of the Yi-globe, where the left sides of the diagrams represent the frontal hexagrams, and the right sides illustrate the rear ones. (If the two edges should be interlinked, a cylinder will be formed.) The ordinal numbers of the changing lines are indicated everywhere on the connections; in such a way, the changes are easily traceable. Figure 2.21 shows the hexagrams over the surface of the Yi-globe together with the paths of change, without the routes belonging to the double trigrams or the signs of the Completion.


Figure 2.21

The double trigrams with their connections are illustrated in Figure 2.22. Here, for the sake of visibility, each of them appears at two places (marked as 30 ', 30 ", etc.), and the connections of a particular hexagram are distributed between the two entries.


Figure 2.22

Figure 2.23 shows the connections of the hexagrams Before Completion and After

## Completion.



Figure 2.23

## SUMMARY OF THE RECONSTRUCTION

Based on the spherical form and its characteristics, elaborated in detail, it can be stated that the Yi-globe expresses a fact that was not apparent in the former configurations of the hexagrams: the unity and completeness of the world. That is to say, it has been demonstrated that the signs of the Yijing, the hexagrams, are related with a general world symbol, the sphere.

This outcome can be expressed in a thesis:
(1) If the hexagrams of the Yijing are arranged in the space between the Creative and the Receptive according to the laws of change-and following the principles of symmetry and balance-a sphere will be produced. This sphere represents the whole universe, similarly to other circular and spherical symbols all over the world. This is the Yi-globe.

By this reconstruction of the Yi-globe, the original problem has been successfully solved: The sphere, this traditional form, fully expresses the common content of the sixty-four hexagrams.

The arrangement of the hexagrams (i.e., the process of the development of the Yiglobe) followed accurately the words of the Yijing on the birth of the trigrams. The hexagrams are the images of worldly phenomena, and their presence in the structure (their birth) may be considered as the manifestation of the elements of the universe (i.e., the Creation).

## (2) The Yi-globe may be considered the representation of the origin of the

 universe.In the following chapter, a thorough analysis of the Yi-globe will be set forth. The aim of this investigation is to demonstrate that this sphere conforms with the Yijing-not only in its outward appearance, but also in the inner details. That is, the Yi-globe may be taken as the primary, original structure of the hexagrams. ${ }^{8}$

## III. The Analysis of the Yi-globe

The former operations-removing the hexagrams from their disordered status and arranging them in space-have produced an extraordinary composition. Something was born that perhaps existed in ancient times but had been lost or forgotten. This was the Yi-globe. In this chapter, the properties of this spherical configuration will be explored. The results of these examinations hopefully will shed new light on the Yijing and disclose its qualities that have been unknown until now.

## RELATIONSHIP WITH OTHER ARRANGEMENTS

As described in the previous chapter, the Yi-globe has been reconstructed based on a genuine method. In the course of the development, the structural elements of the former traditional forms, such as the King Wen sequence or the diagrams of the Earlier and the Later Heaven, have not been taken into account at all. Still, it is interesting, though not unexpected, that the Yi-globe has several properties common with these arrangements as if it were some kind of a variant of them.

## Relation with the King Wen sequence

As mentioned in Chapter I, in the traditional King Wen sequence, the hexagrams follow each other in pairs; namely, in reversed and complement pairs. The same rules have become visible in the Yi-globe, in a very expressive manner.

1) The pairs:
a) In the traditional sequence, each odd-numbered hexagram constitutes a pair with the following one of even number.
i) In the majority of the cases, the second hexagram is the reversed pair of the first one (and vice versa), and there are twenty-eight of them.
ii) There are eight hexagrams among the sixty-four in which the firm and yielding lines are symmetrically arranged, and so, such a hexagram and its reversed pair are identical. These hexagrams are in pair with their complements; thus, there are four complement pairs in the sequence: No 1-2, 29-30, 27-28, and 61-62. In a way, these pairs have distinguished positions (i.e., the first place in the sequence; the last in Part I; and the last but one in Part I and Part II, respectively).
b) In the Yi-globe, these pairs and their interrelations are shown in geometric form.
i) The members of the reversed pairs are settled on two sides of the globe, symmetrically to a vertical bisector plane. In Figures 2.19 and 2.20, they are behind each other. (See the previous chapter.)
ii) The eight symmetrical hexagrams are separated from the other ones; each of them is placed on the plane of symmetry but on different levels, at the ends of the diameter of the globe (except for the No 29-30 pair). See these pairs in Figures 2.19 and 2.20, on the outer meridians (No 1-2, 27-28, and 61-62), and on the axis (No 29-30).
iii) Not only the symmetrical hexagrams but also all the other complementary pairs are in positions symmetrical to the center of the globe.
iv) The pairs with exchanged trigrams have distinct places, too, on the same level, symmetrical to the center of the circle.
2) The beginning and the end:
a) The traditional sequence begins with the hexagrams of the Creative and the Receptive and ends with the two hexagrams of Completion. These two pairs frame and unite the whole sequence of the hexagrams.
b) In the Yi-globe, the Creative and the Receptive represent the top and the base, while the hexagrams of Completion are in the center. Thus, these four hexagrams have distinguished positions here as well; they are at the cardinal points, determining the whole structure.
3) The two parts:
a) The hexagrams in the traditional sequence are divided into two groups (No 1-30 and 31-64). This separation does not have any special meaning; it can be explained by the simple reason of reducing the size of the book.
b) The two parts of the hexagrams are not shown separately in the Yi-globe. The globe represents the unity of the universe, and such a partition would be in contradiction with this principle.
Further relations will be discussed in Chapter IV. There, a hypothesis will be set forth, according to which the King Wen's sequence has originated in the Yi-globe or in another similar arrangement.

## Relation with the diagram of Earlier Heaven

Observing the arrangement of the trigrams in the Sequence of Earlier Heaven (Figure 1.01.a), it can be established that most of the rules referring to the Yi-globe are valid for this
diagram as well. Naturally, when a comparison is made, the differences in the numbers and dimensions between the two forms have to be considered: the sixty-four hexagrams, the sphere, and the parallels correspond to the eight trigrams, the circle, and the horizontal lines, respectively.

The passage below describes how the rules concerning the Yi-globe-except for the cases of the trigram interchanges-apply in the diagram of Earlier Heaven as well:

- In the diagram of the Earlier Heaven, the trigrams of Qian and Kun are in the upper and lower positions, at the ends of the vertical axis, thus denoting the Heaven and the Earth. In the Yi-globe, the corresponding hexagrams, the Creative (Qian) and the Receptive (Kun), are at the same places and determine the axis of the world.
- Li and Kan are the other two main powers. In the diagram of Earlier Heaven, the horizontal axis is constituted by the trigrams Li and Kan, laying stress on their importance. Thus, together with the Qian-Kun axis, they stand for the four cardinal points. In the center of the Yi-globe, the two hexagrams of Completion are composed of the same trigrams, Li and Kan . In Chinese philosophy, the Center has fundamental importance; this fact is appropriately emphasized by the central position of these two signs.
- The basic philosophical idea of the Earlier Heaven is the harmony and the cooperation of the opposite powers, which is represented by the diagram. Here, the complement pairs of the trigrams stand for the opposite powers (e.g., the Qian-Kun, Dui-Xun, Li-Kan, and Zhen-Gen pairs). These pairs are at the ends of the diameter of the diagram, simultaneously representing opposition and co-operation. In the Yi-globe, the same principle is emphasized. The members of every complement pair are in positions opposite each other, at the antipodes of the globe. Thus, the same symbolism present in the Early Heaven is valid here.

These correspondences are so expressive, covering each part of the diagram of Earlier Heaven, that the Yi-globe may be considered as an enlarged, extended image of that in regards to its content, and vice versa (i.e., the diagram of Earlier Heaven is a simplified image of the Yi-globe).

## (3) There is an analogy between the Yi-globe and the diagram of Earlier

Heaven in regards to the content and the form as well.

This statement confirms the authenticity of the Yi-globe from another aspect. The Yi-globe-as described in Chapter II-is compiled from the hexagrams according to the principles of the book. The close relation with the diagram of Earlier Heaven strengthens this interrelation.

## SPACE AND TIME

The most striking novelty the Yi-globe offers is the possibility of locating phenomena in space and time. This new method of arrangement is in full harmony with the message of the Yijing, and at the same time, it makes it possible to clarify certain commentaries and to extend the accepted meanings and interpretations.

## Orientation in space and time - The cross

By composing the Yi-globe, a step was made from the very abstract notions of the hexagrams towards concrete ones, since the globe demonstrates several otherwise-invisible things though does not yet divert from the field of symbols. All the new elements that are visible on the Yi-globe-circles and lines, right and left, above and below-bear some symbolic meaning. If one wants to learn something about this symbolism, orientation in this three-dimensional field is first required.

The Yi-globe embraces "the forms and the scope of everything in the heaven and on earth (Baynes 1997, 296)," macrocosm and microcosm, space and time (i.e., the entire universe). The question arises whether there is a means available that would facilitate orientation in this formation, which is formally simple but extremely complex in its content. Fortunately, there is a positive answer to the question. There is such a guideline: one of the simplest forms, the cross.

Cross forms representing space and time are frequently found in nature and in the field of science as well; they appear in everyday life and are still one of the most ancient symbols. The place where the cross, being genuine in the present respect, can be found, was conceived perhaps in the most adequate manner by the great traditional philosopher René Guénon in his work dealing with the symbology of the cross, who stated the following:

The cross form, presenting itself in the astronomic or other phenomena, has just the same symbolic value attributed to the cross form drawn by ourselves, which attests that real symbolism, far from being the outcome of artificial human fiction, can be found in nature itself; in particular, nature as a total is nothing else but the symbol of the transcendent reality. (Guénon 2004, 126)

Starting from this statement the solution is also given for the directions in the space:
What is actually required to be considered is on the one part the equatorial plane and the axis normal to this plane, connecting the poles, on the other part the straight lines connecting the two solstitial points and the two equinoctial points; in the first case the so-called vertical cross, in the second case the so-called horizontal cross will be created. The uniting of these two crosses having a common center will produce the three-dimensional cross with its arms orientated to the six directions of the space. (Ibid, 127)
Comparing Guénon's "compass" with the Yi-globe, each listed element will be found on the globe, and the cross form can be fully identified:

- The plane of level III corresponds to the equatorial plane.
- The hexagrams of the Creative and the Receptive represent the two poles.
- The straight line connecting the Creative and the Receptive is the axis, normal to the equatorial plane.
- The two equinoctial points are represented by the hexagrams of the Peace (No 11) and the Standstill (No 12), since the equal distribution of the firm and yielding lines clearly refers to the balance of light and dark content; namely, the equinox. Meanwhile, in the hexagram of the Peace, the light lines moving upwards from below mean more light for the future, thus representing the spring, while the light lines of the Standstill leaving the hexagram at the top give place to darkness, thus denoting the autumnal equinox.
- The solstitial points are the two points where the starting and its opposite meridian (the right and the left side meridians in Figures 2.19 and 2.20) intersect the Equator. The intersecting point of the starting meridian and the Equator is the projection of the "darkest" hexagram, the Receptive, making it the symbolic place of the winter solstice, while the opposite point stands for the "lightest" hexagram, the Creative, thereby representing the summer solstice (see Figure 3.03 for a more detailed interpretation). The above-specified elements are illustrated in Figure 3.01.


Figure 3.01

Here, the horizontal and the vertical axes show the spatial directions (i.e., zenith and nadir, north and south, east and west). The relevant guide, which also originated with Guénon, refers in this subject to Clement of Alexandria, who, not surprisingly, already thought in the same manner almost two thousand years ago:

Clement of Alexandria says that all the spatial directions of indefinite expansion start from God, 'the heart of the cosmos', one upwards, one downwards, one to the right, one to the left, one ahead and one backwards; God creates the world turning his face simultaneously towards these six directions of equal expansion; He is the beginning and the end (the alpha and the omega). (Ibid, 127)
Based on the above, he says the following:
In the above quoted text of Clement of Alexandria upwards and downwards mean the zenith and the nadir, right and left correspond to South and North, while ahead and backwards are to be considered as East and West; these correspondences are confirmed in each tradition. It can also be said that the vertical axis is nothing else but the polar axis, i.e., the fixed straight line connecting the two poles, around which the universe whirls: so this is the main axis while the two horizontal axes are only secondary and relative ones. From among the two latter axes, the north-south axis can be called the solstitial axis while the east-west one can be determined as the equinoctial axis. (Ibid, 132)

Looking at Figure 3.01 again, it is obvious that the above description can be perfectly adapted to the Yi-globe, if it will be rotated by 180 degrees. It is also apparent that the arrangement demonstrated by the figure is not identical with either of the heavenly or earthly coordinate systems generally used in the world. Though the parallels, the meridians, and the Equator of the earthly coordinate system are comparable to the circles of the Yi-globe (see Chap. II), seeking further conformities would lead to contradictions. If a comparison to the heavenly (equatorial) coordinate system were made, similar inconsistencies would occur.

This figure has another essential feature: By the involvement of the solstitial and equinoctial points, the orientation points in time also appear beside the spatial ones. That is to say, Figure 3.01 represents a universal system embracing space and time, Heaven and Earth, as well as the material and the transcendent world.

Summary:

## (4) It is the three-dimensional cross that serves as the direction indicator of space and time on the Yi-globe.

Further on, these directions will facilitate orientation on the Yi-globe.

## The center and the axis

The idea of "the Center of the World" is frequently mentioned in ancient myths almost all over the world. Traditionally, this is the point wherefrom creation originates, and space streams forth in all directions.

The World Axis (axis mundi) passes across the Center of the World or originates from it. Its role is to hold the Heaven and to connect it with the Earth.

## The Center

The idea of the Center was also given foremost importance in ancient China as was shown by the citations from Maspero and from Eliade, in Chapter I.

The definition of the Center of the World, directly leading to the Yi-globe, was set forth by Guénon after Clement of Alexandria, as already cited: "All the spatial directions of indefinite expansion start from God, 'the heart of the cosmos"" and "He is the beginning and the end (the alpha and the omega)."

A further thesis is associated with the above:

The Center corresponds to the thing denominated by the Muslim esoterism as the «divine station», where «contradictions and conflicts are resolved»; in FarEastern tradition this is called «Unchanged Center», which is the place of the perfect equilibrium represented as the center of the «cosmic wheel», where the «action of the Heaven» directly manifests itself. (Ibid, 142)
Returning to the Yi-globe, its center clearly symbolizes the Center of the World, demonstrating its general connotations:

- The six spatial directions start from there, because the center of the globe splits the three axes into six half-lines, directed to north, south, east, west, the zenith, and the nadir.
- The vertical axis, connecting the Heaven (hexagram of the Creative) and the Earth (hexagram of the Receptive), passes across it.

Here, an example will be given that the Yi-globe represents the universe not only formally, by its general (spherical) form, but also in detail by means of several distinguished positions. In the present case, the two hexagrams at the center-After Completion and Before Completion-clearly show that, in fact, the Center of the World is manifested at this place, since these two hexagrams effectively comply with the determination worded by Clement of Alexandria: They are "the beginning and the end, the alpha and the omega." The common place of these two hexagrams at the center clearly demonstrates the coincidence of the beginning and the end where death is accompanied by simultaneous rebirth.

This condition is well characterized by the explanation of Richard Wilhelm. According to him, the hexagram Before Completion represents the period when the conversion from chaos into order was not yet perfectly complete. "The conditions are difficult. The task is great and full of responsibility. It is nothing less than that of leading the world out of confusion back to order" (Baynes 1997, 249). Then, about After Completion, he says, "The transition from confusion to order is completed ... yet it gives reason for thought. For it is just when perfect equilibrium has been reached that any movement may cause order to revert to disorder" (Ibid, 244). Accordingly, these two hexagrams together represent the cyclic transition of confusion and order into one another (i.e., the "action of the Heaven"). Thus, the center of the Yi-globe corresponds to the Center of the World, not only formally (geometrically), but also with respect to its content.

## The Axis

The World Axis was also a well-known idea in ancient China. Describing Chinese traditions, Eliade sets forth an interesting example:

Based on the tradition, each Capital shall have a Ming tang, a ritual palace, serving as the imago mundi and the Calendar at the same time. ... At the end of the third summer month, the sovereign stands at the middle of the Ming tang as if he would be the axis of the year. The sovereign, similar to the other symbols of the «Center of the World» (the tree, the saint mountain, the nine-storied tower etc.), somehow represents the axis mundi and creates the connection between earth and heaven. $\dagger$ (Eliade 1995, 15)
The other Chinese idea of the World Axis, represented by the zenith-nadir axis, has already been mentioned (see Chap. I). This Axis was also determined by Guénon as a "fixed straight line" connecting the zenith and the nadir, adding to it that this is the thing "around which the universe whirls."

In the case of the Yi-globe, the base of the zenith-nadir axis is represented by the Receptive at the bottom and the Creative at the top. This is the point where the chosen method of the arrangement confirms itself. The Creative is above the world to transmit its force thereto and to bring things into being, while the Receptive is below, enabling the power of the Creative to be asserted and its ideas to be realized. Between these two fundamental powers, in the force field spanned by them, around the axis, the "universe whirls," and myriad things crowd together, resulting from the interaction of these powers. Thus, the axis of the Yi-globe represents the World Axis, since it demonstrates the basic features of the latter.

The other function of the Axis is to hold the universe, which is also accomplished by the axis of the Yi-globe. In this function, the Creative and the Receptive are supported by the other double trigrams positioned on the axis; they do not take part in the revolving motion but keep and strengthen the pillar of the world at the height of levels II and IV. This division of the powers directly complies with the words of the commentary Shuo Gua: "Heaven and earth determine the direction. The forces of mountain and lake are united. Thunder and wind arouse each other. Water and fire do not combat each other" (Baynes 1997, 265). Namely, the direction and the ends of the axis are determined by the Creative and the Receptive (Heaven and Earth). The hexagrams of Keeping Still and Joyous (the mountain and the lake) as well as the Arousing and the Gentle (the thunder and the wind) are united with each other, being

[^2]positioned at the same point on the corresponding levels. The Clinging and the Abysmal (the fire and the water) do not combat each other, having been placed on different levels; namely, the water is placed below (on level II) and the fire higher (on level IV), as it fits their nature.


Figure 3.02

Actually, the axis bears the ten basic hexagrams of the Yijing: the eight double trigrams with the two starting hexagrams (the Creative and the Receptive) among them and the two signs of Completion that close the Book (Figure 3.02). These ten signs hold the axis and the Yi-globe as well; symbolically, these are the forces creating and determining the world and around which the entire universe is revolving and changing.

In summarizing the notices in connection with the Center and the Axis, the following can be established:
(5) The vertical axis of the Yi-globe, connecting the hexagrams of the Creative and the Receptive, complies with the ideas symbolized by the World Axis. Its center, constituted by the two hexagrams of the Completion, corresponds to the Center of the World.

## Cosmology

As the fifty-four hexagrams on the surface of the Yi-globe represent the phenomena of the manifested (outer) world, the ten hexagrams on the axis, in the given arrangement, depict the first (inner) phases of the creation, before the manifestation of beings. The eight double trigrams settle in the same order as the simple trigrams do in the diagram of the Arising Heaven (Figure 2.03), and they give expression to the same content. Here, the two hexagrams of the Completion are also present in the Center, united in one point.

This arrangement is in harmony with the Daoist ideas in the following ways:

- The Creation starts from the Great Ultimate; it is the central point of the Yi-globe here.
- Then, yin and yang differentiate, though they remain together in the center. This is represented by hexagram 64 (Before Completion) and hexagram 63 (After Completion) where the firm and yielding lines are arranged alternately in balance and harmony. These are the Beginning and the End, the Alpha and the Omega.
- Later on, yin and yang separate from each other; the eight trigrams are created and doubled.
- The pure yang and the pure yin hexagrams become the two poles of the universe, with the force field between them. These are hexagram 1 (the Heaven, the Creative) and hexagram 2 (the Earth, the Receptive).
- The other six double trigrams contribute to the variety of the manifested world. (See, for example, Figure 2.18.a.)


## The levels

The passages above determined the directions and the cardinal points facilitating orientation on the Yi-globe. On this basis, interrelations can be sought between the connotations given by the Yijing and the spatial positions of the hexagrams.

High and low, as general concepts, are often mentioned in the book. To begin with, the following is the first sentence of the Da Zhuan: "Heaven is high, the earth is low; thus, the Creative and the Receptive are determined" (Ibid, 280). Even the text itself enables these ideas to be understood and sensed, but in the Yi-globe, they are clearly shown. In this respect, the figure does not interpret more than the text, but-and the essence lies in this-it demonstrates the same meaning by its own pictorial means. It interprets the same, but still somewhat more, because the spatial arrangement expands the meaning of the words "high" and "low" as compared to the text.

The Da Zhuan applies these words only with respect to the position of the lines: "In correspondence with this difference between low and high, inferior and superior places are established" (Ibid, 280). This is still confirmed by the commentary of Richard Wilhelm:
... in the last analysis the world is a system of homogeneous relationships ... The Yijing takes as the foundation for this system of relationship the distinction between heaven and earth. There is heaven, the upper world of light, ... and over against heaven, there is the earth, the lower, dark world. ... This is expressed symbolically in the hexagrams of the Yijing, which are considered to have high and low, superior and inferior places. (Ibid, 281-282)
In the structure of the Yi-globe, the concept of high and low can be extended to the positions of the hexagrams, and some definite, apparent connotation can be assigned to them. On the surface of the globe, between the Heaven and the Earth, the hexagrams are placed in five circles, and the circles are positioned at different levels. When a hexagram is at a higher or lower level, it is a factor to be considered when the positions are analyzed. It can be observed that the names of the hexagrams and the judgments associated with them generally refer to their positions on the globe.

This is shown by the examples below:
a) Characteristic features of the two lower levels (I and II):

- beginning, recommencement: Return, Difficulty at the Beginning, Youthful Folly; - progressing ahead and upward: The Arousing, Progress, Pushing Upward,

Deliverance, Approach;

- the means of progress: Holding Together, Gathering Together, The Army, Providing Nourishment, Enthusiasm, Contemplation;
- modest and non-violent conduct: Keeping Still, Modesty, Preponderance of the Small;
- obstruction to progress: The Abysmal, Obstruction, Splitting Apart, Darkening of the Light, Difficulty at the Beginning;
b) The middle level (III) is characterized first of all by transition and change between the lower and upper levels:
- changes and their inducing conditions: Development, Following, Influence, Biting Through, Work on What Has Been Spoiled, The Marrying Maiden, The Wanderer, The Well;
- two-directional, opposing changes: Increase and Abundance against Decrease; Limitation and Oppression against Dispersion;
- the absence of changes: Peace, Standstill, Duration.
c) Characteristic features of the two upper levels (IV and V):
- the great (attained by means of progressing upward): Preponderance of the Great, The Power of the Great, The Taming Power of the Great, Possession in Great Measure;
- accomplishment of superior principles, fellowship, inner settling: The Clinging, The

Gentle, The Joyous, Innocence, Waiting, Inner Truth, The Taming Power of the
Small, Fellowship with Men, The Family, The Caldron;

- oppositions and dangers (accompanying the great): Opposition, Conflict, Revolution, Break-through, Coming to Meet, Retreat.
Progressing upward among the levels requires change: the conversion of a yielding line into a firm one. The transformation of firm lines into yielding ones leads to a lower level. All that perfectly complies with the words of the Da Zhuan: "Change and transformation are images of progress and retrogression" (Ibid, 289). Progression takes men upwards and at last to the Heaven, while the series of retrogression returns them to the Earth.


#### Abstract

It is evident that the features enumerated above derive in the first place from the number of firm lines in the hexagrams. This is the consequence of the arrangement: The levels have hexagrams with $1,2,3$, 4 , and 5 firm lines. The representation in space, however, makes it possible to find new interpretations and associations, mentioned above.


## The cyclic time

By embracing the whole universe, the Yi-globe gives place to all the phenomena (the sixty-four hexagrams), arranging them in space and time as well. Figure 3.01 demonstrated where the points of orientation appeared on the globe by means of the hexagrams of the equinoxes (No 11 and 12). The next passages describe the process of time (i.e., the appearance of time,) on the Yi-globe.

## The duodecimal cycle—The Sun-line

It is advisable to begin time analysis with the twelve hexagrams associated with the Chinese months, which are the so-called calendar hexagrams (Table 3.1).

The second and third columns of the table indicate the ordinal number of the months as used in ancient China and the periods approximately complying with these months according to our present calendar. The fourth column indicates the events (the two solstices and the two equinoxes) belonging to the four selected hexagrams.

Table 3.1

| Hexagram |  | Month | Period | Event |
| ---: | :--- | :---: | :--- | :--- |
| no. | name |  |  |  |
| 11. | Peace | $\mathbf{1}$ | Feb.-Mar. | Vernal equinox |
| 34. | The Power of the Great | $\mathbf{2}$ | Mar.—Apr. |  |
| 43. | Break-through | $\mathbf{3}$ | Apr.-May |  |
| 1. | The Creative | $\mathbf{4}$ | May-Jun. | Summer solstice |
| 44. | Coming to Meet | $\mathbf{5}$ | Jun.—Jul. |  |
| 33. | Retreat | $\mathbf{6}$ | Jul.—Aug. |  |
| 12. | Standstill | $\mathbf{7}$ | Aug.—Sep. | Autumnal equinox |
| 20. | Grace | $\mathbf{8}$ | Sep.-Oct. |  |
| 23. | Splitting Apart | $\mathbf{9}$ | Oct.-Nov. |  |
| 2. | The Receptive | $\mathbf{1 0}$ | Nov.—Dec. | Winter solstice |
| 24. | Return | $\mathbf{1 1}$ | Dec.—Jan. |  |
| $\mathbf{1 9 .}$ | Approach | $\mathbf{1 2}$ | Jan.—Feb. |  |

The top-view of the Yi-globe covering only these hexagrams serves for further study (Figure 3.03).

In the figure, the signs of the Creative and the Receptive are separately indicated; in reality, they overlap one another in the center. It can be noticed that the hexagrams are arranged regularly; each of them follows the former one at 30 degrees, and their sequence corresponds to the calendar months. (The radii of the two hexagrams in the center have been drawn in the direction of the two vacant positions, whereby the Creative is associated with the fourth month and the Receptive with the tenth one.) Here, it is demonstrated that previously, when the spatial coordinate system was plotted (Figure 3.01), the places of the summer and the winter solstices were correctly positioned: perpendicularly to the axis of the equinoxes (i.e., three months after the vernal and the autumnal equinox, respectively).


Figure 3.03

Figure 3.04 is the perspective view of the Yi-globe, on which the calendar hexagrams are connected by red, dotted lines.


Figure 3.04

It is clearly visible that on the surface of the globe, the hexagrams of the months gradually ascend from the month of the winter solstice (the Receptive) up to the summer solstice (the Creative), from the nadir up to the zenith, and then return to the nadir again. The signs of the equinoxes (the Peace and the Standstill) are just at the middle. That is to say, the connecting line of these hexagrams symbolically follows the culmination of the Sun, as it apparently ascends and descends in the sky as the months pass. Accordingly, this line is called the Sun-line.

Considering the positions of the calendar months and the course of the Sun-line, the following analogies can be revealed:

- The twelve meridians of the Yi-globe correspond to the twelve months of the year.
- The Equator of the Yi-globe complies with the heavenly Equator.
- The Sun-line, crossing the Equator, ascending and descending as the months pass, corresponds to the ecliptic.

Naturally, the correspondences are strictly symbolic, since no actual dimensions or proportions are in question.

Summarizing the above observations, the following statement can be made:

## (6) The Yi-globe is the symbol of the sky as well. Its duodecimal graduation corresponds to the number and sequence of the calendar months. The line connecting these hexagrams is analogous to the annual movement of the Sun in the sky.

It is possible that the Sun-line has another interesting meaning. As it is apparent, each of its hexagrams belongs to the houses of the Creative and the Receptive. (See the palaces of the hexagrams in Figure 1.04.) In Figure 3.04, the hexagrams of the house of the Creative are framed by broken lines, while those of the Receptive are framed by continuous ones. On the front side of the Yi-globe (on the Eastern hemisphere), the Sun-line contains six hexagrams of the house of the Receptive, and on the backside (on the Western hemisphere), there are six hexagrams from the house of the Creative. In addition, both of these series begin with the corresponding primal power.

The Da Zhuan reads as follows: "The way of the Creative brings about the male. The way of the Receptive brings about the female" (Ibid, 285). Based on the distribution of the hexagrams, the possibility presents itself to consider the Western half of the Sun-line symbolically as the "way of the Creative," and the Eastern half as the "way of the Receptive."

It was easy to recognize that the duodecimal division of the Yi-globe and the location of the twelve calendar months determine a one-year cycle. From ancient times, however, the Chinese method of measuring time has been based on the twelve earthly branches-not only in the case of the year, but also in the case of other intervals of time. Consequently, it can be supposed that the time cycle of the Yi-globe can also be taken for a day consisting of twelve double hours or a longer period of twelve years.

## The sexagenary cycle

The Chinese calendar applied a sixty-day cycle as early as the Shang-dynasty (18-12 ${ }^{\text {th }}$ century BC). This method combined the ten heavenly stems with the twelve earthly branches, denominating the days one by one after these combinations. The first term of this cycle was formed by adding the first branch to the first stem, then the second branch to the second stem, and so on. In such a way, after the sixtieth day, the series started again. Later on, the method was transferred to the succeeding years, and the earthly branches were replaced by twelve animals. This sexagenary cycle is still in use in China for counting the years.

How naturally the number sixty and its form of $5 \times 12$ fit into the structure of the Yi globe deserves attention:

- The hexagrams are distributed among the twelve meridians and among the five levels on them. Thus, the number of potential positions for the hexagrams is exactly sixty. (From among these sixty positions, some do not contain any hexagram, while some of them bear two or three of them).
- The number of hexagrams on the five levels of the globe's surface is fifty-four, plus six double trigrams on levels II and IV (three on each level), which makes sixty altogether.

The above statements imply that the spherical positions of the hexagrams represent a sexagenary time cycle.

Further analysis reveals how this correspondence applies to real life. For example, an interrelation can be found between the distribution of the sixty hexagrams on the different levels and the phases of human ages (Table 3.2).

Table 3.2

| Level | Duration (years) | Age | Definition |
| :---: | :---: | :---: | :--- |
| I | $\mathbf{6}$ | $\mathbf{1}$ to $\mathbf{6}$ | Childhood |
| II | $\mathbf{1 5}$ | $\mathbf{7}$ to 21 | Youth |
| III | $\mathbf{1 8}$ | $\mathbf{2 2}$ to 39 | Active adulthood |
| IV | $\mathbf{1 5}$ | $\mathbf{4 0}$ to 54 | Years of maturity |
| V | $\mathbf{6}$ | $\mathbf{5 5}$ to $\mathbf{6 0}$ | Old age |

The interrelation between the names of the hexagrams and the positions of the levels was demonstrated in the subsection High and Low. The statements made there apply to the human ages as well. The phenomena of levels I and II represent starting or low positions and the ascending from there; they may be associated with youth. The problems of adulthood accumulate in level III, while the hexagrams of levels IV and V are characteristic of the years of maturity and old age being associated with attained goals and the possession of material and spiritual goods.

It is also worth considering that, in addition to the above general peculiarities, certain hexagrams refer specifically to the features of the age, and these hexagrams are positioned exactly on the level corresponding to the given age. Consider the following examples:

- Level I (childhood): Return and Splitting Apart can be associated with birth.
- Level II (youth): Difficulty at the Beginning and Youthful Folly refer to age; Progress, Pushing Upward, and Approach are the activities of the young.
- Level III (young adulthood): The Marrying Maiden, Influence or Wooing, Duration, and Development are connected with marriage. This level contains the branching points of life towards Abundance or Oppression, Increase or Decrease, Limitation or Dispersion.
- Level IV (years of maturity): Inner Truth and The Family present the results of inner development. The greatness corresponds to the attained spiritual level: The Power of the Great, Preponderance of the Great, and The Taming Power of the Great, while Retreat marks the end of the age.
- Level V (old age): Break-through and Coming to Meet perhaps already refer to ascending into a higher region, to be followed by Return again on level I.

The number of the hexagrams on the individual levels is different. Levels I and V contain the fewest hexagrams referring to human life being rather determined in childhood, and old age has fewer possibilities of choice. Life is most varied during active adulthood; this is the period of life when one makes the most important decisions, and accordingly, the greatest number of hexagrams can be found on this level (level III).

The above observations show that the symbolism of the Yi-globe, besides heavenly phenomena, embraces human conduct as well. That is to say, it actually realizes not only the unity of time and space but that of the macrocosm and microcosm as well.

## FIRE AND WATER - THE SIX-POINTED STARS

In several parts of the world, equilateral triangles symbolize the primal powers of the universe. The triangle with its peak upwards represents-among many others-fire (as a fundamental principle), while the one with its peak downwards stands for water. The two triangles placed above one another, in the form of a six-pointed star, demonstrate the harmonic co-operation of the two cardinal elements and the balance of opposites, and this is used as the symbol for the macrocosm. All these ideas occur often in the Yijing as well. Thus, it is also expected to find similar forms in the Yi-globe.

## Triangles and hexagons

It is not necessary to spend a significant amount of time seeking the triangles in question, since they already occurred several times in the passages above, most expressively in Figures 2.10 and 2.14, demonstrating the hexagrams of levels II and IV having interrelation with After Completion (No 63) and Before Completion (No 64).

In Figure 3.05, the connections of the two signs of the Completion are separated according to the levels.
a) The connections of After Completion with the hexagrams No 39, 3, and 36 on level II
b) The connections of Before Completion with the hexagrams No 35, 40, and 4 on level II
c) The connections of After Completion with the hexagrams No 49, 37, and 5 on level IV
d) The connections of Before Completion with the hexagrams No 6, 50, and 38 on level IV


Figure 3.05

Note to Figure 3.05: Here, and in the next three figures, the trigrams beside the circlets of the hexagrams indicate the houses to which they belong. The hexagrams in the houses of the Kan and the Li are blue and red, respectively. The other six houses are also painted with different distinctive colors.

The figures, prepared based on the top-view of the Yi-globe, show that these groups of three around the signs of Completion form equilateral triangles, as marked by the broken lines. The hexagram After Completion is associated with two triangles that point downwards, while the triangles directed upwards belong to Before Completion.

With the purpose of further analysis, a trigram has been attached to each hexagram; this trigram stands for the house to which the given hexagram belongs. Based on this information, the character of the triangles can be determined as follows:
a) Features of the triangles associated with After Completion:

- The hexagram of After Completion belongs to the house of Kan (Water).
- The upper (i.e., superior) trigram of After Completion (010.101) is the sign of Water as well (010).
- From among the six hexagrams on the vertices of the two triangles, three hexagrams belong to the house of Water (No 3, 36, and 49), and one belongs to the
house of Kun (5), Xun (37), and Dui (39) alike. The last three hexagrams are of "feminine" (i.e., yin) character (mother and two daughters).
b) Features of the triangles associated with Before Completion:
- The hexagram of Before Completion belongs to the house of Li (Fire, 101).
- The superior trigram of Before Completion (101.010) is the sign of Fire as well.
- From among the six hexagrams on the vertices of the two triangles, three hexagrams belong to the house of Fire (No 4, 6, and 50), and one belongs to the house of Qian (35), Gen (38), and Zhen (40) alike. The last three hexagrams are of "masculine" (i.e., yang) character (father and two sons).
Based on the characteristics enumerated above, the two triangles associated with After Completion have to be considered to be of Water (yin) character and the other two, associated with Before Completion, are of Fire (yang) character.

The two triangles on level II and the other two on level IV form two hexagons (i.e., two six-pointed stars) (Figure 3.06). Each of them contains a triangle of Fire (yang) character and another one of Water (yin) character. These six-pointed stars fully manifest the associations generally attributed to this symbol:

- the unity and harmony of opposite forces (Fire and Water, yang and yin),
- the macrocosm, the universe,
- the interrelation with the Center of the World.


Figure 3.06
The position of the six-pointed stars within the Yi-globe and their interrelations with the hexagrams of Completion imply a further symbolic connotation as well. On the Yi-globe, the connecting lines of the hexagrams symbolically represent changes in the world. As the figures show, the changing of the hexagrams at the points of the six-pointed stars on level II will yield movement towards the center of the globe-towards of the signs of Completion, the

Center of the World. Then, the changes in these signs will create another star at an upper level (level IV). The interpretation of these movements is extremely meaningful if the connotations of the Center are considered: This is the beginning and the end, the place of perfect balance, where opposites dissolve, where God lives. Now it has been shown that one of the six-pointed stars unfolds from this center, and the other one shrinks and returns here.

Expansion from the center and contraction thereto are picturesque if the routes of changes are also indicated in the Yi-globe. Figure 3.07 demonstrates the result. There are two pyramids here that have two six-pointed stars for the base. Their peaks join at the Center, and the edges represent the paths of change. Thus, one of the pyramids represents the creation of the world, the expansion into material. The other one connotes the process when existence ceases at the end and everything returns to the beginning.


Figure 3.07
Applying current scientific expressions, one pyramid is the symbol of the "Big Bang," while the other one stands for the "Big Crash."

The essence of the passages above is presented below:
(7) The Yi-globe embraces the six-pointed star as a symbol, completing it with the sign of creation and destruction.

## The six-pointed stars and the Earlier Heaven

It should be noted that in Figure 3.06.a, the position of the three trigrams on the left side (the Qian, Dui, and Zhen, indicating the houses of the hexagrams No 35, 39, and 40) agrees with the placement of the same trigrams in the diagram of Earlier Heaven, only the Li is missing from them. Similarly, in Figure 3.06.b, the order of the three trigrams on the right (Xun, Gen, and Kun) corresponds to those in the Earlier Heaven, and the Kan is missing. The other six hexagrams belong to the houses of Li and Kan .

With the two six-point stars beside each other, this relationship is even more apparent. The arrangement of the houses where the above-mentioned hexagrams belong agrees with the sequence of Earlier Heaven. Figure 3.08 is a complex diagram in which the two hexagons, and their central hexagrams, are demonstrated.

In the figure, the houses of the six hexagrams mentioned above are indicated by the associated trigrams outside of the circle. Still, two trigrams are added to them that show the houses of the hexagrams in the center: the house of Before Completion (Li) and the house of After Completion (Kan). This diagram clearly shows the close interrelation between the two symbols of the universe: the six-point stars (in the Yi-globe) and the Earlier Heaven.


Figure 3.08

## DARK AND LIGHT — YIN AND YANG

The appearance of the cross and the six-point stars in the Yi-globe shows that this system of hexagrams not only does not differ from the traditional symbols of other peoples, but actually embraces them. Moreover, the Yi-globe is a richer form, definitely and clearly implying specific Chinese features in addition to the universal symbols. The following passages will analyze further the manifestation of the basic ideas of Chinese philosophy-the harmony of opposing forces, the interrelation of yin and yang-in the globe-system of the hexagrams.

The examination of the location of the hexagrams pertaining to the months on the Yiglobe will serve this purpose well. The five parallels split the meridians into six equal sections. The calendar hexagrams are positioned on the meridians so that the number of the sections under the hexagrams is identical to the number of firm lines contained by the given hexagram, while the number of sections above them is equal to that of the yielding lines. This is observable in Figure 3.09 where the meridians of the globe are laid out in plane.


Figure 3.09

As for the four cardinal calendar hexagrams (No 1, 2, 11, and 12), it has already been established that the distribution of their firm and yielding lines symbolically corresponds to the daily light and dark periods characteristic of the given month. Thus, the hexagram of the Creative is associated with the month of the summer solstice, when the number of light hours is at its maximum, and the hexagram has the most possible (six) firm lines. Similarly, the winter solstice, being in the darkest month, is associated with the Receptive consisting of six yielding lines, while the hexagrams of Peace and Standstill, having an equal number of firm and yielding lines, correspond to the periods of the vernal and autumnal equinoxes. The same
rule applies to the intermediate months: As the number of light hours increases and decreases, the number of firm lines increases and decreases, respectively; similarly, the yielding lines change with the dark hours. It should be noted that in these hexagrams (and only in these hexagrams), the firm and the yielding lines do not mix with each other, as a day has only one light and one dark period. All these features are in harmony with the Yijing: "The firm and the yielding are images of day and night" (Ibid, 289).

Thus, because the number of sections above the calendar sign is proportional to the number of dark hours on the meridians, it is well founded to take these parts to be dark and the parts below to be light. This distribution of the dark and light sections is illustrated in Figure 3.09 as well.

## The dark and the light sides of the Yi-globe

Extending the above concept to the Yi-globe and to the other hexagrams over the surface, the part of the globe above the Sun-line can be regarded as dark and the one below as light. Figure 3.10 shows the Yi-globe with the Sun-line splitting it, in such a way, into dark and light parts.


Figure 3.10

In this figure, the Yi-globe displays the dark side and the light side of the world. The world and its powers are divided into dark and light, yin and yang.

In this way, another basic concept of the Yijing-variations of the dark and the lightbecomes manifested in the Yi-globe.

- The Shuo Gua begins with the words: "In ancient times the holy sages made the Yijing thus: ... They contemplated the changes in the dark and the light and established the hexagrams in accordance with them." (Baynes 1997, 262)
- The Shuo Gua, however, associates the idea of dark and light only with the places of the lines: "The places are divided into the dark and the light. The yielding and the firm occupy these by turns." (Ibid, 264)
- R. Wilhelm interpreted this statement as follows: "...the alternating even and uneven places in the hexagrams are respectively designated as dark and light. The first, third, and fifth places are light; the second, fourth, and sixth are dark." (Ibid)
However, in some cases, the simple form of the hexagrams makes it difficult to interpret complex ideas by means of the lines (e.g., where general ideas such as the powers of the world are in question):
- They determined the Tao of Heaven and called it the dark and the light. (Ibid, 264)
- Looking upward, we contemplate with its help the signs in the heavens; looking down, we examine the lines of the earth. Thus, we come to know the circumstances of the dark and the light. (Ibid, 294)
- Therefore, by means of it we can penetrate the Tao of day and night, and so understand it. (Ibid, 296)
- That which lets now the dark, now the light appears as Tao. (Ibid, 297)
- Because of the meaning of the light and the dark, it corresponds with sun and moon. (Ibid, 302)
In the above statements, the ideas "dark" and "light" can be interpreted more easily by means of the Yi-globe, since they are applied to the hexagrams and their positions. It is expected that the globe will afford a deeper penetration into the symbolism of the Yijing and, by means of it, into the meaning of these expressions.

According to Figure 3.10, the world is divided into two parts. As far as the shape of the two parts is concerned, two formal phenomena can be noticed:
a) The plane of the north-south meridians divides the dark and the light areas into two halves; they are reflections of one another with respect to this plane. Since this is the
symmetry plane of the reversed hexagram pairs as well, both members of these pairs (i.e., a hexagram and its reverse) come into the dark or the light area (on the opposite sides of the globe, of course). The hexagrams constituting the borderline (the Sun-line) are exceptions; in this case, one member of each pair (the six hexagrams, from No 2 to 43, at the front side of the globe) can be considered as belonging to the dark side and the other member (hexagrams No 1 to 23, on the back side) to the light one. The reason is that the former signs belong to the house of the Receptive (i.e., they are of yin character), while the latter ones belong to that of the Creative (i.e., they are yang).
b) The dark and the light parts are geometrically congruent, while at the same time, they are also reflections of one another with respect to the center of the globe. Thus, the members of the complementary hexagram pairs always fall into opposite areas; that is to say, they are not identical, as far as the question of light and dark is concerned, but complete one another. This phenomenon also demonstrates the principle manifested in the diagram of Earlier Heaven, according to which the world is based on the harmonic co-operation of the opposites.

A further interesting phenomenon presents itself regarding the distribution of the hexagrams between the two halves: All the hexagrams belonging to the houses of the Zhen and the Dui fall to the light part, while the ones in the houses of the Gen and the Xun are located in the dark part. Again, it implies relation with the diagram of Earlier Heaven, because there, the Zhen and Dui (and Li ) trigrams are at the left side and represent ascending, creative forces (i.e., the yang side). The right side is of yin character, since there, the Gen and Xun (and Kan) trigrams stand for descending and passive forces. Thus, it is understandable that the distribution of the hexagrams between the dark and light areas on the Yi-globe has been developed according to the same rules.

## The yin-yang diagram

When the dark and the light parts are marked with different colors (e.g., with black and white), the Yi-globe shows a characteristic picture (Figure 3.11.a).

Figure 3.11.a symbolically indicates two hexagrams that also have an outstanding role with respect to the dark-light concepts. This is explained as follows.


Figure 3.11

On the preceding pages, it has already been pointed out that from the twelve hexagrams of the Sun-line, six signs belong to the house of the Qian and six to that of the Kun. There are two hexagrams left out from the eight hexagrams of each house: No 14 and 35 (from the house of Qian) and No 5 and 8 (from the house of Kun). They are placed such that one hexagram of the pairs falls into the dark and the other to the light part; this refers to both pairs alike. In order to emphasize the characteristic feature of the situation, it can also be explained as thus: There is one, and only one, dark hexagram (belonging to the Kun house) on the light half, while there is one, and only one, light hexagram (belonging to the Qian house) on the dark half of the Yi-globe. These two hexagrams of special position are the light Possession in Great Measure (No 14, 101.111) and the dark Holding Together (No 8, 010.000). It should also be noted that the hexagram of Possession in Great Measure is composed of the Li and Qian trigrams, while the Kan and Kun trigrams create the Holding Together hexagram. That is to say, in one of them, the effect of the two ascending trigrams of the four superior principles manifests itself, while in the other, the opposite, descending effect prevails. Thus, it is well founded to consider the Possession in Great Measure (No 14) hexagram to be the lightest hexagram (having the most positive character, apart from the Creative) and the Holding Together hexagram (No 8) to be the darkest hexagram (having the most negative character, apart from the Receptive). That is why Figure 3.11.a indicates just these two prominently light and dark hexagrams on the surface of the Yi-globe. (Hexagram 8 falls into the back side; therefore, it is shaded.)

Replacing the S -form curve by two semi-circles and placing the small circlets in the middle of the semi-circles would yield a more pleasant-looking, simpler image (Figure 3.11.b). This figure is already a familiar one; this is the yin-yang (Taiji) diagram, which is one of the most well-known symbols in the world, and it can be supposed that it was created by the described method. It is also certain that the two shapes, the Yi-globe and the yin-yang diagram, manifest exactly the same concept and by identical means; while one of them applies
a spatial form disclosing the details, the other shows a planar form concentrating on the content as much as possible.
(8) Among several universal symbols, the Yi-globe includes the wellknown yin-yang diagram as well. It is possible that the yin-yang diagram is nothing more than a simplified planar representation of the Yi-globe.

## Certainly, the same cosmic image stands for the background of both.

The yin-yang diagram appears in the Yi-globe in a more familiar way, in the form of accurate semi-circles. Looking at the lower and the upper hemispheres of the Yi-globe (Figure 3.12), it will be clear that adding the opposite halves of the hemispheres together, two yinyang diagrams will be formed.

In these diagrams, the hexagrams No 7 and No 13 are also present. They are the pairs of No 8 and No 14 with exchanged trigrams, also with extreme dark and light qualities.


Figure 3.12

## The Yin-yang Globe

A slight modification in the Western half of the Yi-globe results in a familiar form.
Figure 3.09 illustrates that the lengths of the dark and light meridian sections are proportional to the numbers of the yielding and firm lines of the calendar hexagram falling on the meridian in question. During the months of the first half-year (eleventh to third months),
the location of these sections also follows the structure of the hexagrams by the arrangement of the dark sections at the top and the light ones under them; as in the hexagrams, the yielding lines are above and the firm ones below. In the second half-year (fifth to ninth months), the meridians are split in the same way as in the first half-section: The dark sections continue to be at the top, though in this case, in the hexagrams, the yielding lines enter from below. Let us suppose, however, that during these months, the dark and the light sections of the meridians follow the structure of the calendar hexagrams (Figure 3.13).


Figure 3.13

In this case, on the Western side of the globe (the back side in the diagram), the boundary line between the dark and the light parts will be the No 16-45-12-25-10-1 line (i.e., the reversed Sun-line) with exchanged trigrams.

In this case, the light and dark sections of the meridians follow the line structure of the calendar hexagrams in each half (Figure 3.14).


Figure 3.14

As the figures show, the top view of the globe represents a perfect yin-yang diagram, and it is well founded to consider this form a spatial yin-yang diagram and call it a Yin-yang Globe. (It should be noted that such and similar forms often occur in other Chinese representations as well.)

## SUMMARY OF THE YI-GLOBE'S SYMBOLISM

The words of Confucius summarize the essence of the symbols: "The holy sages set up the images in order to express their thoughts completely; they devised the hexagrams in order to express the true and the false completely" (Ibid, 322). That is to say, the Master states that images and hexagrams can express more than words could imply. The sixty-four hexagrams reproduce the universe in its entirety whereby they represent primary "information sources" for the people in our time as well. The Yijing, being eternal, is able to convey its message to us, in our age as well. This message does not appear in words that would have been distorted in the course of time but in the image-not only in the hexagrams, but also in other symbols that have identical meaning for everybody. These simple geometrical forms are understandable in our day as well-for those who wish to understand them. The Yijing embraces all these symbols-concealed in the Yi-globe:

- the globe-the integrity and unity of the world: in the form of the Yi-globe;
- the point - the Center of the World: in the center of the globe, determined by the hexagrams of Completion;
- the straight line-the World Axis: represented by the rotation axis of the globe between Heaven and Earth;
- the circle-the cyclic quality of time: represented by means of the five-level wheels of twelve divisions;
- the cross-indicating the directions of space and time, as its branches split the globe;
- the triangles and the hexagons-the microcosm and the macrocosm extending from the Center and returning thereto;
- the square - the symbol of the Earth and man, determined by the four cardinal points;
- and the yin-yang diagram-the light and dark representation of the Yi-globe; thus, Chinese tradition permeates all this multiplicity.


## (9) The Yi-globe embraces all the cardinal metaphysical symbols of the peoples, revealing thereby that the hexagrams and the Yijing-apart from being special Chinese creations-form an integral part of the universal tradition.

The Yi-globe reveals a great deal to curious individuals and can be of great help in understanding the essence of the Yijing. As in the Book, also in the globe "... are included the forms and the scope of everything in the heaven and on earth." Certainly, it has more and deeper messages than those disclosed herewith. The Yijing says of itself, "... in this way man comes to resemble heaven and earth. ... His wisdom embraces all things, and his Tao brings order into the whole world" (Ibid, 295). Accordingly, it can be supposed that the Yi-globe symbolizes not only the macrocosm but also the microcosm, the man who comes to resemble it: the human being with his foot on the Earth, with his head in the sky, and embracing the world. That is to say, changes occur (also) within him, and when he wishes to change his fate, this change must occur in himself. Thus, he can attain completion in the heart.

The image concentrating the symbols in the Yi-globe can facilitate such contemplation (Figure 3.15).


Figure 3.15

## IV. The Origin of the King Wen Sequence

The previous chapters demonstrated a structure, the Yi-globe, embracing the sixty-four hexagrams in one closed spatial system. Now, as it was to be expected, a question arises: Is there any relation between the Yi-globe and the traditional, linear sequence of the hexagrams? It is known that this sequence has been unchanged for approximately two thousand years, and it may be still older if, according to tradition, it originated with King Wen. Thus, this supposed relation should be sought somewhere in the first millennium BC or even before.

In examining this traditional sequence (further on: King Wen sequence or KW sequence for short), it is hardly possible to find any relation between the content of a given sign and its place in the row. The few exceptions are The Creative and The Receptive on the first two places, the two hexagrams of Completion at the end, and the two double trigrams, The Clinging and The Abysmal that close the first part of the book. Though one commentary in the Yijing contains an explanation on the order of the hexagrams ( $X u$ Gua: The Sequence of the Hexagrams), even R. Wilhelm considered it unconvincing (Baynes 1997, 260). The Daoist philosopher Liu I-ming (1734-1821) analyzed the Yijing in another way, in the aspect of inner alchemy. He considered the hexagrams steps along the way towards perfect enlightenment. Other people found, or believed to have had found, other theories explaining the origin of the sequence. In fact, there is no generally accepted theory among them that would justify the place of each hexagram.

The Yi-globe fully expresses the message of the Yijing by means of its shape and by the arrangement of the hexagrams. There is no evidence, however, that this structure would have ever existed in the past. Still, for lack of other reliable bases, it seemed reasonable to look for the explanation of the sequence in this theoretical form, instead of some other, unjustified source.

## THE RULES OF THE KING WEN SEQUENCE

To begin with the comparison of the KW sequence and the Yi-globe, the two rules of pairing can to be taken as the starting-points.

These rules are as follows:
a) In the KW sequence, each hexagram (except the eight symmetrical ones) constitutes a pair with its reverse (twenty-eight pairs altogether).
b) The eight symmetrical hexagrams are in pairs with their complements (four pairs).

Looking at the Yi-globe (Figure 2.19 or 2.20), it is immediately apparent that here, the same rules apply:
a) In the Yi-globe, a hexagram and its reversed opposite are symmetrical to the $\mathrm{N}-\mathrm{S}$ vertical plane and, in the pictures, they are exactly behind each other. One may say that they are in pairs.
b) The symmetrical hexagrams are separated from the others. Six of them (No 1-2, 27-28, and 61-62) are on the outer (N-S) meridians and two (No 29-30) on the axis. They are also in pairs, and the members of the four pairs are symmetrical to the center of the globe.

## The lines of the Yi-globe

Apart from these conformities, there is an additional relation between the two arrangements that is not noticeable at first glance but still essential. This relation or regularity can be recognized by the examination of the projected planar image of the Yi-globe. Here, the meridians have been transformed into vertical lines and the parallels into horizontal ones (Figure 4.01), similarly to the cylindrical projection of the globe, but here, the Western hemisphere remains behind the Eastern one.


Figure 4.01

In the precise projection, the hexagrams at the front side of the globe would wholly cover the ones on the backside. Here, to facilitate visibility, the rear hexagrams are shown beside their front-side pair, in a slightly shifted position. The hexagrams that constitute the triple groups on level III (on the Equator) and originally overlap each other are separated here, whereby they form three distinct rows. The signs on the axis are removed from the main diagram in order to avoid further multiple overlapping.

It is well visible that on the surface of the Yi-globe, the hexagrams are arranged in the forms of specific lines. On Figure 4.01, these lines or groups are marked by capitals from A to G2. They are as follows:

- Group A: the vertical branch of the standing cross. - On the Yi-globe, they are the hexagrams on the main E-W circle.
- Group B: the horizontal branch of the standing cross. - On the Yi-globe, they are the middle hexagrams of the triple groups on the Equator (the so-called "main line" hexagrams) and the two hexagrams in the center of the globe.
- Group C: the left branch of the diagonal cross. - On the Yi-globe, they are the "calendar" hexagrams, the so-called Sun-line.
- Group D: the right branch of the diagonal cross. - On the Yi-globe, it is the opposite pair of the Sun-line, with exchanged trigrams.
- Group E: the four groups between the branches of the two crosses. - On the Yi-globe, they are the hexagrams on the main N-S circle and the four hexagram pairs next to them, on levels II and IV.
- Group F: the six double trigrams on the axis. (The diagram is on the right.)
- Group G (G1 and G2): the lower and the upper horizontal branches of the standing cross. - On the Yi-globe, they are the outside hexagrams (the "floating signs") of the triple groups on the Equator.
Two pairs belong to more than one group. According to their structure and meaning, they have been assigned to the following groups:
- No 1-2: group A
- No 11-12: group B.


## Groups, based on the component trigrams

Going over each group, listed above, one can see that the hexagrams that belong to the same group have another interrelation with each other, in addition to their spatial connections in the Yi-globe. Namely, the hexagrams in the individual groups are composed of trigrams that correspond to certain, specific conditions. Accordingly, the composition of the hexagrams follows the next rules. (Where the trigram pairs are shown, also the hexagrams with the exchanged trigrams are implied.)

- Group A: the combinations of the trigrams Qian and Kun with themselves and with Li and Kan (Qian-Qian, Kun-Kun, Qian-Li, Qian-Kan, Kun-Li, Kun-Kan)
- Group B: all the combinations of the complementary trigrams, i.e., the trigram pairs of the Earlier Heaven (Qian-Kun, Li-Kan, Zhen-Xun, Gen-Dui)
- Group C: the "calendar" hexagrams
- Group D: the calendar hexagrams with exchanged trigrams
- Group E: all 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)
- Group F: the six double trigrams (the Creative and the Receptive are in Group A)
- Group G (the union of G1 and G2): all the balanced hexagrams that are in direct connection with the six double trigrams. They are the hexagrams that have three firm and three yielding lines and can be derived directly, by changing one of their lines, from the double trigrams. According to the trigram components: Li-Zhen, Li-Gen, Kan-Dui, Kan-Xun, Zhen-Dui, Gen-Xun.

It can be seen that the hexagrams in these groups are exactly the same as those in the lines of the Yi-globe. These properties of the hexagrams follow, on the one part, from the structure of the Yi-globe, and on the other part, they might have been defined independently, according to other aspects.

## Groups of the opposite pairs

Besides the structural and compositional connections discussed above, there is a third important relationship among the hexagrams of the eight groups. This relationship shows the coherence of the opposite hexagrams not only in the cases of the reversed pairs and the eight symmetrical signs, as in the KW sequence, but in the cases of all the reversed pairs, all the complementary pairs, and the pairs with exchanged trigrams. In detail:

- In every group, each hexagram stands together with its reversed and complementary pair.
- In the groups A, B, E, F, the pairs with exchanged trigrams are also together.
- The groups C and D have hexagrams with exchanged trigrams.

These groups clearly demonstrate the coherence of the three kinds of opposites that Chinese philosophers see as important in the interpretation of the hexagrams. (Naturally, these properties directly follow from the arrangements of the hexagrams.)

Table 4.1 shows the distribution of the hexagrams in the individual groups, with the indication of the reversed and the complementary pairs.

Table 4.1

| Group | hex. | rev. | compl. |  | Group | hex. | rev. | compl. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | hex. | rev. |  |  |  | hex. | rev. |
| A | 1 | = | 2 | = | E | 27 | = | 28 | = |
|  | 5 | 6 | 35 | 36 |  | 61 | = | 62 | = |
|  | 7 | 8 | 13 | 14 |  | 3 | 4 | 50 | 49 |
| B | 11 | 12 | = | = |  | 37 | 38 | 40 | 39 |
|  | 31 | 32 | 41 | 42 | F | 29 | = | 30 | = |
|  | 63 | 64 | = | = |  | 51 | 52 | 57 | 58 |
| C | 19 | 20 | 33 | 34 | G1 | 53 | 54 | = | = |
|  | 23 | 24 | 43 | 44 |  | 55 | 56 | 59 | 60 |
| D | 15 | 16 | 9 | 10 | G2 | 17 | 18 | = | = |
|  | 25 | 26 | 46 | 45 |  | 21 | 22 | 48 | 47 |

Notes to Table 4.1:
Group: the mark of the group
hex.: the first (odd) hexagram of a pair in the group
rev.: the reversed pair of the first hexagram
compl.: the complementary pairs of the first and the reversed hexagrams
$=$ : the reversed pair is equal to the first hexagram, or the complementary pair is equal to the reversed.

## A new rule for the KW sequence: The Rule of Ten

As it has been demonstrated above, the sixty-four hexagrams can be arranged into eight groups (the groups from A to G) in two ways:

- according to the lines of the Yi-globe
- according to the component trigrams.

The different methods produce identical results. The groups contain the same hexagrams in each of the two cases. One can say that the hexagrams in the groups functionally belong together in two ways (though these functions are not independent from each other). Consequently, these groups are acceptable for further investigations.

Summing up, the hexagrams in the functional groups are as follows. Looking at the emphasized numbers in the list, also some kind of relationship among the ordinal numbers can be easily found.

- Group A: 1-2, 35-36, 5-6, 7-8, 13-14. - The hexagrams are in the set of the first ten ordinals, from 1 to 10 (two deviations).
- Group B: 11-12, 63-64, 31-32, 41-42. - The difference between the numbers is ten (one deviation).
- Group C: 19-20, 23-24, 33-34, 43-44. - The difference between the numbers is ten (one deviation).
- Group D: 15-16, 25-26, 9-10, 45-46. - The difference between the numbers is ten (one deviation).
- Group E: 27-28, 37-38, 61-62; 3-4, 39-40, 49-50. - There are two groups of three and there is a difference of ten between the members of the groups (two deviations).
- Group F: 51-52, 57-58, 29-30, and Group G1: 53-54, 55-56, 59-60. - The hexagrams in the union of groups F and G1 are in the set of the sixth ten ordinals, from 51 to 60 (one deviation).
- Group G2: 17-18, 21-22, 47-48. - There are no numerical relations.

As it is apparent, the relationship between the emphasized ordinals in the first six groups is always in connection with the number ten. The majority of the hexagrams in two groups (group A, and F+G1) belong to a set of ten consecutive numbers and in four groups (group B, C , D , and E ) the difference between the numbers is ten. These connections are frequent enough to be considered regularities. Due to the repetition of the number ten in the six groups, a rule can be laid down, and it may be called the Rule of Ten.

## The Rule of Ten

## §1: Let the sixty-four hexagrams of the KW sequence be distributed into six

 groups according to the next formula:a) Ten hexagrams from 1 to $10,(1-2,3-4,5-6,7-8,9-10)$
b) Every tenth hexagram from 11-12 to 41-42, (11-12, 21-22, 31-32, 41-42)
c) Every tenth hexagram from 13-14 to 43-44, (13-14, 23-24, 33-34, 43-44)
d) Every tenth hexagram from $15-16$ to $45-46$, ( $15-16,25-26,35-36,45-46$ )
e) Every tenth hexagram from 27-28 to 47-48 (27-28, 37-38, 47-48), and from 2930 to 49-50 (29-30, 39-40, 49-50)
f) Ten hexagrams from 51 to 60 , (51-52, 53-54, 55-56, 57-58, 59-60), and the eight hexagrams, remaining from the above groups (17-18, 19-20, 61-62, 63-64).
§2: The hexagrams in each group of par. §1 will have two common functional properties (with one or two deviant pairs in each group):

- There is a special rule for the selection of the component trigrams.
- The hexagrams are identical to those of a particular line in the Yi-globe.
§3: The common functional properties of the hexagrams in the individual groups are as follows (except the deviants). (In the lists where the trigram pairs are given, also the hexagrams with the exchanged trigrams are implied.)
a) Here, there are the combinations of the trigrams Qian and Kun with themselves and with Li and Kan (Qian-Qian, Kun-Kun, Qian-Li, Qian-Kan, Kun-Li, KunKan). - The same hexagrams like in Group A.
b) All the combinations of the complementary trigrams (Qian-Kun, Li-Kan, ZhenXun, Gen-Dui). - The same hexagrams like in Group B.
c) The calendar hexagrams. - The same hexagrams like in Group C.
d) The calendar hexagrams with exchanged trigrams. - The same hexagrams like in Group D.
e) All the combinations of the three daughter trigrams with each other (Li-Xun, LiDui, Xun-Dui), and the same of the three sons (Kan-Zhen, Kan-Gen, Zhen-Gen). - The same hexagrams like in Group E.
f) The six double trigrams (the Creative and the Receptive are in Group a) and the balanced hexagrams that are in direct connection with them. According to the trigram components: Li-Zhen, Li-Gen, Kan-Dui, Kan-Xun, Zhen-Dui, Gen-Xun. - The same hexagrams like in the union of Group F, G1, and G2.

The Rule of Ten is the third rule that applies to the King Wen sequence. Until now, however, it has not been disclosed and has been unknown.

The presence of the deviant hexagrams in the groups, though in a small percent only, makes difficult to accept this rule 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 of the hexagrams, the Rule of Ten could be validated without references to any deviant pairs. In this case, the KW sequence had to be considered distorted in comparison to a previous correct status. In the next passages the possibility of such a solution will be examined.

## THE KING WEN MATRIX

For further study, it will be practical to arrange the hexagrams in a two-dimensional array, with ten elements in one direction. That is, the hexagrams of the KW sequence have to be divided into groups of ten or, for practical reasons, into groups of five pairs. In such a way, seven groups will be formed, with only two pairs in the last one. Then, we have to arrange these groups vertically, in seven columns, with the ordinal numbers going from the top down. As a result, a matrix will be created with five rows and seven columns. In this arrangement, each cell will have one pair of hexagrams, and every fifth pair (and every tenth ordinal number) will go into the same row, next to each other. Three cells at the end will be empty. Figure 4.02 shows the result.

| $1-2$ | $11-12$ | $21-22$ | $31-32$ | $41-42$ | $51-52$ | $61-62$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :--- |
| $3-4$ | $13-14$ | $23-24$ | $33-34$ | $43-44$ | $53-54$ | $63-64$ |
| $5-6$ | $15-16$ | $25-26$ | $35-36$ | $45-46$ | $55-56$ |  |
| $7-8$ | $17-18$ | $27-28$ | $37-38$ | $47-48$ | $57-58$ |  |
| $9-10$ | $19-20$ | $29-30$ | $39-40$ | $49-50$ | $59-60$ |  |

Figure 4.02

In fact, this matrix is the two-dimensional variant of the King Wen sequence. After it, this arrangement can be called the King Wen matrix.

Replacing the ordinal numbers with the corresponding hexagrams, also the composition of the hexagram will be visible (Figure 4.03).


Figure 4.03

Notes to Figure 4.03:

1. The numbers on the upper side denote the limits of the ordinals in the corresponding column. On the left side, there are the positions inside the columns.
2. The vertical line $x$ - $x$ is the separating line between the two parts of the hexagrams, as they are in the KW sequence. Cutting the KW matrix in two, in the middle: it may be the simplest explanation of the unequal number of the hexagrams in the two parts.

It can be seen that the hexagrams of the individual groups from $a$ to $f$, defined in the Rule of Ten, are present here in adjoining cells, apart from two pairs of group $f$. Thus, a definite region can be attached to each of the six groups. In the diagram, these regions are marked by different colors, similarly to the corresponding lines of the Yi-globe in Figure 4.01. By the help of this matrix, it is rather easy to compare the groups of the KW sequence (from $a$ to $f$ ) with the functional groups from $A$ to $G$.

In the diagram, the deviant pairs are marked with small circlets. According to the ordinal numbers, each of these pairs has a given position in the matrix but by function it belongs to another region. In these cases, the color of the circlet shows the proper room of the pair. For example, the hexagrams Difficulty at the Beginning and Youthful Folly are in the cell

No 3-4, in room $a$, because of their ordinals in the KW sequence. According to the function, however, their proper place would be in room $e$ (marked with the green circle).

The distribution of the hexagrams in the colored regions illustrates the Rule of Ten. Apparently, the significant majority of the hexagrams in these regions belong to the corresponding functional group. Based on this regularity, it can be stated that the KW matrix had to be existent before the relatively irregular KW sequence. Afterwards, still sometime in the past, the KW matrix was extended in a row, following the rules of Chinese reading (reading the columns from the top down). In such a way, the adjacent hexagrams in the horizontal rows departed from each other, and their connections became unrecognizable.

This kind of transformation of the KW matrix may have happened when the demand occurred to make records of the hexagrams together with the associated judgments and line texts. In the course of recording, the hexagrams were written at the top of a bamboo slip (or a column on silk) and the corresponding texts below; the longer texts followed them on other pieces or in the next column. Thus, in this operation, the succession of the hexagrams mechanically followed the rules of Chinese writing, and the columns (with the hexagrams at the top) followed one another in a row. That is to say, the linear sequence of the hexagrams was only a formal necessity, determined by the way of writing. By that time (before the second c. BC), the original groups had probably been forgotten. Afterwards, these texts served as the basis of the canonized Yijing classics. Later on, it was not possible or necessary to make any changes in this sequence, and it has remained unchanged until today.

A similar case would occur if somebody read an English poem in Chinese way, beginning with the first words of the lines, then the second words, and so on. In the end, the sense of the verse would completely disappear.

## THE YI-MATRIX

The presupposed former variant of the KW matrix, where each hexagram was in the corresponding region, can be produced directly from the matrix itself, in the following way. The "good" hexagrams have to remain in their cells, and the "deviant" pairs should move to the rooms where they functionally belong. Combining the names of the Yi-globe and the matrix form, this new arrangement is called the Yi-matrix (Figure 4.04).


Figure 4.04
It is visible that here, the hexagram pairs with the small circlets have gone to their corresponding cells, in the rooms of the same color. Now, it is possible to tell what would have been the ordinal numbers of the transposed hexagrams if they had remained at their original places. For example, the Progress and the Darkening of the Light would have been numbered 3 and 4 respectively (instead of 35 and 36); the Fellowship with Men and the Possession in Great Measure would be 9 and 10 (instead of 13 and 14); and so on.

In the Yi-matrix, every paragraph of the Rule of Ten is valid, without any deviances. For example, each element of the Yi-globe fits into one of the corresponding rooms in the Yimatrix as follows:

- room a): the vertical branch of the standing cross (group A)
- room b): the horizontal branch of the standing cross (group B)
- room c): the left branch of the diagonal cross (group C)
- room d): the right branch of the diagonal cross (group D)
- room e): the four groups between the branches of the two crosses (group E)
- room f): the six double trigrams on the axis (group F), and the upper and lower horizontal branches of the standing cross (groups G1 and G2).
Based on the observations above, it can be stated that the Yi-matrix represents an essential connection-that is to say, a cardinal link-between the Yi-globe and the KW sequence. On the one hand, it contains the basic elements of the Yi-globe, in a recognizable arranged form. On the other hand, it follows all the three rule of the King Wen sequence: the positions of the reversed pairs, the positions of the symmetrical pairs, and the Rule of Ten, without referring to any deviant pairs.

In such a way, the Yi-matrix had to be the basic form of the two-dimensional arrangements in which the KW matrix, and afterwards the KW sequence, originated.

## CHANGES IN THE YI-MATRIX

The hypothesis of this chain of transformations, containing the Yi-globe-Yi-matrix$K W$ matrix-KW sequence arrangements, could be absolutely confirmed if an explanation were found for the different positions of the hexagrams in the KW matrix in comparison with those in the Yi-matrix. The following section examines these deviations in detail.

It is rather easy to find reasons for two differences that refer to the pair No 29-30 (the Abysmal and the Clinging) and No 63-64 (After Completion and Before Completion). In the Yijing, the sixty-four hexagrams are divided into two parts, from No 1 to 30 and from No 31 to 64 . It can be supposed with reason that the removal of these two pairs was the consequence of this partition and it happened intentionally.

Originally (in the Yi-matrix), the Abysmal and Clinging pair was in cell No 61-62. Thus, the Creative and the Receptive (No 1-2) were at the head of the first column, while the Abysmal and Clinging at the last one. In the diagram of the Earlier Heaven, these hexagrams, in their simple trigram form, represented th four cardinal points of the world. In the Yi-matrix, in the above way, they served as the signs of the beginning and the end of the created world. After the linear arrangement of the hexagrams and their separation in two parts, as a matter of course, the Abysmal and the Clinging changed place with the Inner Truth-Preponderance of the Small pair, and went forward to a similar, important position, to the end of the first part, to the place No 29-30. The other pair took their previous place, No 61-62.

A similar changeover may have occurred in cells No 21-22 and 63-64. The functionally correct place of the After Completion and Before Completion pair was in the cell 21-22. After the partition, it was also necessary to finish the second part with one of the cardinal hexagrams, similarly to the first part. For this reason, the two signs of Completion were removed to the end of the sequence, changing place with the Biting Through-Grace pair in cell No 63-64. In such a way, the two pairs, the Creative-Receptive and the After Completion-Before Completion, as the symbols of the Heaven and the Earth, and the Beginning and the End, produced a symbolic frame to the whole material.

In such a way, a reasonable explanation can be given for the location of four "deviant" pairs. These modifications were likely in connection with the arrangement of the hexagrams into a linear sequence, and they probably occurred at the time of the appearance of the text in book form or soon after that.

The remaining six pairs are in close connection with each other and form a group. These pairs are as follows (according to their places in the Yi-matrix):

- 3-4: Progress - Darkening of the Light
- 35-36: Taming Power of the Small - Treading
- 9-10: Fellowship with Men - Possession in Great Measure
- 13-14: Approach - Contemplation
- 19-20: Oppression - The Well
- 47-48: Difficulty at the Beginning - Youthful Folly

Looking at the new places of these pairs in the KW matrix, it can be seen that they have changed places successively, one after the other, and not at random. The first pair went to the cell of the second one; the second went to the place of the third, and so on. At the end, the sixth pair went back to the first empty cell. Here, one series of moves rather than six different changes occurred. Figure 4.05 shows this group of the six pairs, separately from the matrices.


Figure 4.05

These pairs were settled in the Yi-matrix according to the first row of the picture. The arrows show the movements of the pairs in the matrix. Of course, in their new places (second row), they got new ordinals. For example, the pair Progress-Darkening of the Light (in the first column) moved from the cell 3-4 to 35-36. Consequently, their ordinal numbers changed to 35 and 36 in the KW sequence. Then, from the cell 35-36, the pair Taming Power of the Small-Treading went further into the cell 9-10, and their ordinals became 9 and 10 respectively. The series of movements continued in this way, and at the end, the sixth pair, the Difficulty at the Beginning-Youthful Folly, moved from position 47-48 to the empty cell of the Progress-Darkening of the Light, No 3-4.

There is no reasonable explanation for this chain of displacements. It is not probable at all that the changes occurred at random, in such a long series and independently from each other. It is true, however, that no reasons can be found why these changes would have been intentionally made. Still, the latter case seems acceptable.

Still, there is an interesting occurrence in the Yi-matrix, where two pairs of group $f$ stand separately, in the cells 17-18 and 19-20. They belong to group $f$, according to the Rule of Ten. It can be thought that, in an earlier variant of the Yi-matrix, they were together with group $f$ in the last column, and their present cells were empty. Because there is not any information about such a situation in the past, this question is not discussed here.

Table 4.2 shows the positions of the moving hexagrams in the Yi-matrix and the KW matrix. (It has to be remembered that the ordinal numbers of the hexagrams in the KW sequence are the same as the positions in the KW matrix.)

Table 4.2

| Name | positions <br> in the <br> Yi-matrix | positions <br> in the <br> KW matrix |
| :--- | :---: | :---: |
| After Completion- <br> Before Completion | $\mathbf{2 1 - 2 2}$ | $\mathbf{6 3 - 6 4}$ |
| Biting Through- <br> Grace | $\mathbf{6 3 - 6 4}$ | $\mathbf{2 1 - 2 2}$ |
| Abysmal- <br> Clinging | $\mathbf{6 1 - 6 2}$ | $\mathbf{2 9 - 3 0}$ |
| Inner Truth- <br> Preponderance of the Small | $\mathbf{2 9 - 3 0}$ | $\mathbf{6 1 - 6 2}$ |
| Progress- <br> Darkening of the Light | $\mathbf{3 - 4}$ | $\mathbf{3 5 - 3 6}$ |
| Taming Power of the Small- <br> Treading | $\mathbf{3 5 - \mathbf { 3 6 }}$ | $\mathbf{9 - 1 0}$ |
| Fellowship with Men- <br> Possession in Great Measure | $\mathbf{9 - 1 0}$ | $\mathbf{1 3 - 1 4}$ |
| Approach- <br> Contemplation | $\mathbf{1 3 - 1 4}$ | $\mathbf{1 9 - 2 0}$ |
| Oppression- <br> The Well | $\mathbf{1 9 - 2 0}$ | $\mathbf{4 7 - 4 8}$ |
| Difficulty at the Beginning- <br> Youthful Folly | $\mathbf{4 7 - 4 8}$ | $\mathbf{3 - 4}$ |

The displacements of the hexagrams in the Yi-matrix can be summarized as follows:

1) The hexagrams in cell 61-62 were exchanged with those in 29-30. The purpose 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. The purpose was to close the linear (King Wen) 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.

These findings fairly well explain the deviances in the KW matrix, and it is highly probable that in a former two-dimensional arrangement, in the Yi-matrix, the Rule of Ten was valid without any exceptional hexagrams.

## THE DEVELOPMENT OF THE KING WEN SEQUENCE - SUMMARY

In this chapter, 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 matrices or the transformations mentioned here.

In spite of all these objections, based on the rules of the arrangement of the hexagrams in the KW sequence (first of all, on the new Rule of Ten), the existence of the King Wen matrix has to be considered certain. The KW sequence had to originate in a two-dimensional arrangement and in the King Wen matrix alone.

The existence of the Yi-matrix before the KW matrix can be justified from two sides. Firstly, from the side of its "descendant," the KW matrix, the Yi-matrix is the orderly form of the latter, not having its conspicuous irregularities. Secondly, from the side of its "predecessor," the Yi-globe, the columns and rows in it are in full agreement with the structure of the globe.

[^3]Figures 4.06 and 4.07 summarize the process of the arrangements, whereby it is easy to follow the entire process of development. Figure 4.06 demonstrates the transformation of the Yi-globe into the Yi-matrix.


Figure 4.06

Then, the arrangement of the hexagrams changes, and, through the KW matrix, the KW sequence comes into being (Figure 4.07). In the diagrams, it is well visible that the elements, belonging together in the Yi-globe (and designated with the same letters), gradually move away from one another. In the KW matrix, they are already totally dispersed, and their connections are unrecognizable.


| A | B | G2 | B | B | F | E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| E | A | C | C | C | G1 | B |
| A | D | D | A | D | G1 |  |
| A | G2 | E | E | G2 | F |  |
| D | C | F | E | E | G1 |  |


| $1-2$ | 3.4 | $5-6$ | 7.8 | 9.10 | $11-12$ | $13-14$ | $15-16$ | $17-18$ | $19-20$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | $\mathbf{E}$ | A | A | D | B | A | D | G2 | C |


$-$| $21-22$ | $23-24$ | $25-26$ | $27-28$ | 29.30 | $31-32$ | $33-34$ | $35-36$ | $37-38$ | $399-40$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| G2 | C | D | E | F | B | C | A | E | E |


| $41-42$ | $43-44$ | $45-46$ | $47-48$ | $49-50$ | $51-52$ | $53-54$ | $55-56$ | $57-58$ | 59.60 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | C | D | G2 | E | F | G1 | G1 | F | G1 |


$-$| $61-62$ | $63-64$ |
| :---: | :---: |
| $\mathbf{E}$ | $\mathbf{B}$ |

Figure 4.07

Summing up, the sixty-four hexagrams took the following main structural forms during the series of transformations:

1) The original, oldest form is the Yi-globe (or any other similar distribution of the hexagrams).
2) The projected planar image of the Yi-globe is only an explanatory diagram before the next matrix arrangement.
3) In the Yi-matrix, the hexagrams were represented in pairs and, according to the structural elements of the Yi-globe, in rows and columns. The interrelations among the hexagrams partly remained, but the time relations became unrecognizable.
4) The King Wen matrix, the direct predecessor of the "traditional" sequence, has been developed from the Yi-matrix by means of the exchange of several hexagrams in the cells.
5) The KW sequence has been formed by means of the expansion of the columns of the King Wen matrix. Thus, the original three-dimensional structure has been degenerated to a one-dimensional sequence in which the spatial connections among the hexagrams remained only in traces and in a hardly recognizable form. Consequently, the following can be reasonably supposed:
(10) The sequence of the hexagrams known today and considered traditional is derived directly from a two-dimensional arrangement, and distantly from the Yi-globe. This sequence is the one-dimensional, distorted variant of the Yi-globe; however, it still contains its elements in a latent form.

## THE SIGNIFICANCE OF THE TRADITIONAL (KING WEN'S) SEQUENCE

If it is accepted that the above-described assumption, aiming at the origin of the traditional (King Wen's) sequence, is 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 the archetypal image, the Yi-globe, or in another, structurally similar arrangement. That is to say, the sequence itself is nothing but a simplified, dimensionless variant of the Yi-globe. This variant is without space and time, and the interrelations of the hexagrams are hardly recognizable. Moreover, the random or intentional misplacements that occurred in the order of the hexagrams over the course of time almost completely destroyed the little information that had remained. Any other deduction based on this sequence can only lead one astray.

Still, the traditional sequence has huge importance, since-even in fragments and in distorted form, as the only "survivor"-it has continued to exist for approximately two thousand years, embracing and transmitting the Yi-globe to us. Thereby, it demonstrates that the sixty-four hexagrams enclose the totality of the world. Furthermore, at the same time, this sequence confirms the existence of the Yi-globe, or an adequate form in the past.

## V. Conclusions

This study was initiated with the intention of finding a form or order for the sixty-four hexagrams that could represent the cosmological content of the Yijing, which was expressed, for example, in the following words: "In it are included the forms and the scope of everything in the heaven and on earth, so that nothing escapes it" (Baynes 1997, 296). As a result, a spherical arrangement-the Yi-globe-has been developed, which apparently meets the aforementioned expectations.

The reconstruction of the Yi-globe started from the evolutionary phase of the universe and followed the steps of manifestation in the force field between the Heaven and the Earth. The final, spherical form expressed the unity and totality of the world.

The arrangement of the hexagrams demonstrates the structure and operation of the fundamental elements of the universe. The space is three-dimensional, and the six points show the main directions. The time is cyclical, and one cycle is divided into twelve parts.

The whole structure is perfectly balanced; the hexagrams are in symmetrical positions in all the three dimensions and centrally as well. The positions of the hexagrams clearly show the basic principle of Chinese philosophy, the harmony of opposites. The light and dark halves of the Yi-globe symbolize the dual nature of the world.

The Yi-globe represents not only general qualities but also the details. For example, the basic hexagrams, the Creative and the Receptive, the other six double trigrams, the Before Completion and the After Completion, and the twelve calendar hexagrams are at the most important, characteristic points of the globe, corresponding to their meanings. Besides, other meaningful details of the globe have been shown, and more are likely awaiting disclosure.

The hexagrams are joined together by the paths of changes, which follow the transformations of the lines. In this way, the changes in the world can be observed and the operation of the universe understood.

The Yi-globe is not an artificial, unfounded, or isolated object. It has grown out of the sixty-four hexagrams naturally, and it includes the most important universal symbols of the world.

All these features enumerated above, and the others dealt with in detail in the study, strengthen the reasoning according to which the Yi-globe is the image of the cosmos and correctly represents the complete, cosmogonical, and cosmological worldview of the mythical past.

There is an additional result deriving from the discovery of the Yi-globe. Based on the facts originated in the structure of the globe, it can be definitively stated that the traditional King Wen sequence itself does not have any particular meaning, and it is only the deformed and irrelevant variant of a former two-dimensional arrangement. Moreover, it is most likely that this sequence of the hexagrams has been derived from the Yi-globe, and it is the last, though distorted, remnant of the Yi-globe.

## Part 2

## The descendants of the Yi-globe: The Yi-yantra, the Yi-spiral, and the human microcosm

In Part 1, the subject of this study was the origin, development, and structure of the Yiglobe. In the course of the reconstruction and analysis, the author's ambition was to start from known facts or well-founded suppositions and advance using logical reasoning and valid arguments. The results apparently confirm the original presuppositions.

During the work, new ideas derived from the Yi-globe also came up, which, while worthy of attention, perhaps did not meet the stringent rules of scholarly reasoning. Thus, they have been added to this study separately as illustrations of the rich, comprehensive symbolism of the Yi-globe.

In Part 2, some of these ideas and forms are demonstrated.

## VI. The Yi-yantra

Symbols that are similar to the Yi-globe and that have identical or analogous connotations can be found in the cultures of other peoples as well. One of them, the Hindu yantra, was chosen to lend formal solutions to the development of the Yi-globe (Chapter I). Consequently, it is not at all surprising that when comparing the structure of the globe with the yantras, a great number of common forms can be found in them.

## THE YANTRAS AND THE YI-GLOBE

For the sake of recognizing the general structural elements in the yantras, Figure 6.01 presents some simplified, black-white variations.


Figure 6.01

The lower and the upper semicircles of the Yi-globe (Figures 2.09 and 2.11), where the hexagrams are shown in plane, best serve for direct comparison. There, the structural features common with the yantras are clearly visible: the arrangement of the hexagrams around the center, the concentric circles embedded into one another, and the perfect balance and symmetry.

The analogy between the Yi-globe and the yantras can be recognized in almost every formal detail, if the Chamunda-yantra is taken as an example (Figure 6.02).


Figure 6.02

The similarity between the two symbols is still more complete with respect to the metaphysical contents. Yantras are the symbols of deities, whereby one part represents a god (generally, a goddess) itself, while the other part stands for the cosmic activity (function) attributed to the deity and the power manifested in the latter; thus actually, a yantra symbolizes the whole universe as well. The power of the yantras lies in the concentrated visualization-completed with the vibration of the associated mantras-capable even in itself of raising and directing cosmic energies into the human psyche, whereby man merges into the deity in his mind and, at last, becomes one with the universe, the cosmic wholeness.

When the properties of the two symbols were further analyzed, the following cosmological analogies between the Yi-globe and the yantras were found (Table 6.1).

Table 6.1

| yantra | Yi-globe |
| :--- | :--- |
| The central point of the yantras is the bindu. <br> This is the beginning and the end of all <br> existence, "the creating womb of the <br> universe." | Two hexagrams, Before Completion and <br> After Completion, are in the center of the Yi- <br> globe, in the same position. They represent <br> the beginning and the end, the creation and <br> the annihilation. |
| In the yantras, the increasing circles refer to <br> the evolving cosmic powers, while the lotus <br> petals show the way in which the powers are <br> directed. | The paths among the levels, starting from the <br> center and from the concentrically placed <br> hexagrams, show the movements that come <br> about in the changing world. |
| The triangles in the center are usually the <br> symbols of the two main deities, Shiva and <br> Shakti, representing the two cardinal <br> principles. The hexagon connotes the Shiva- <br> Shakti duality, the joint manifestation of the <br> static and dynamic forces; that is to say, the <br> creation of the world. | In the Yi-globe, the triangles and the <br> hexagons that lead outwards from the center <br> of the Yi-globe are of fire and water, light and <br> dark, male and female, etc. They possess dual <br> characters, and as such, they symbolize the <br> two primal powers of the world. |
| In the yantras, the outer, square frame <br> represents the plane of existence. The four <br> gates enable entrance from the outer, material <br> world into the inner and holy cosmic force <br> field. | They mark the frames of earthly existence: <br> space and time. |
| The composing symbols have partial <br> associations only. The unity of the universe <br> manifests in them by the synthesis of the | A cross splits the Yi-globe into four parts. <br> earthly conditions, and if they are brought <br> together-in the form of the Yi-globe-they <br> stand for the whole universe. |

The comparison clearly reveals that the Yi-globe and the yantras represent the same spiritual content and that most of their formal elements are identical as well. Accordingly, it is fully justified to take the Yi-globe as a special yantra.

Figure 6.03 demonstrates how easily the Yi-globe transforms into the form of a yantra. Since this yantra perfectly reflects all the connotations of the Yi-globe, its name is Yi-yantra.


Figure 6.03

On the petals (or other geometrical elements) of the yantras, mantras are written. On the Yi-yantra, the hexagrams replace the mantras at the corresponding places. (This replacement is merely formal here, since the function of the mantras manifests only when they are expressed in words. The usage of the Chinese names of the hexagrams would certainly be more appropriate for the disclosure of analogy.)

Based on the exposed analysis, the connotations of the individual geometrical elements in the Yi-yantra are as follows:

- The two circlets in the center stand for the two signs of Completion, representing the Center of the World, the starting point of creation, and at the same time the place of final dissolution.
- The creative forces, which are to give birth to the macrocosm and microcosm, emanate from the center. This process is represented by the hexagon.
- The eight double trigrams surrounding the hexagon represent the differentiated primal powers arranged according to the Earlier Heaven. The two squares show that they already embrace the created world, but only in inherent (i.e., not manifested) form.
- The red circle around the squares unites the ten hexagrams on the axis of the Yi-globe. The parallel blue circle is level I of the Yi-globe, whereto the powers of the Receptive extend, and wherefrom changes (forces) direct outwards in the direction of level II. The six orange petals of the lotus (the six hexagrams) show these directions.
- The next pair of the orange and blue circles, and the twelve orange petals with the twelve hexagrams stand for levels II.
- The next circle contains eighteen orange petals, representing level III. At its outer circle, the development (evolution) ends. On level III, the golden petals show the opposite direction of the movement.
- From here, the development is directed inwards (involution). The way goes through levels IV and V, to the final dissolution in the Creative in the Center.
- The square surrounding the Yi-globe represents the external existence; its gates provide access towards the inward world. The square area stands for the created world, shown by the trigrams indicated therein and arranged according to the Later Heaven.


## OTHER ANALOGUES

It would be possible to continue the list of symbols that show analogy with the Yiglobe. For example, the Yi-globe contains many of the symbolic elements of the mandalas; perhaps, it could be taken for a spatial mandala. The diagrams of the Arising Heaven (Figure 2.03) and the planar projection of the Yi-globe (Figures 2.21, 2.22, and 2.23) closely resemble the Tree of Life and Jacob's ladder known from the Hebrew Kabbalah. The ten hexagrams on the axis may correspond to the Ten Sephirot, and the set of paths among the sefiras (i.e., the paths leading to God) may be analogous with the transitions among the hexagrams. An
interrelation can also be found between the levels of the divine qualities and the five levels of the globe.

The numerology of the Yi-globe may be the subject of a further study. It is said that the Yijing embraces all worldly phenomena. According to numerology, the archaic numbers refer to ideas and images as well, but simultaneously, they also connote ideas (i.e., they stand for the whole world as well).

The following is an interesting example from the numerology of the Yi-globe. There are 54 hexagrams on the surface of the Yi-globe-if the ten hexagrams on the axis are deducted from the 64 . These 54 hexagrams represent the manifested world. The number 54 equals 6 times 9 , where 6 is the number of the Earth (the old yin, the negative moving line), and 9 stands for the Heaven (the old yang, the positive moving line). Thus, the 6 times 9 (54) represents the Earth (6) and the Heaven (9) together; namely, the whole moving world, the myriad things whirling around the axis.

These analogies, and some others, represent further arguments to support Statement (9) at the end of Chapter III, according to which the Yi-globe is perfectly embedded in the traditions of other peoples of the world. Perhaps further analysis of the globe would promote the approach towards a better understanding of the universal, unique tradition.

## VII. The Yi-spiral

The Yijing (the wing Shou Kua) refers to the Dao of Heaven, the Dao of Earth, and the Dao of man, and reads, "In ancient times the holy sages made the Book of Changes thus: ... They combined these three fundamental powers" (Baynes 1997, 264). That is, man is also taken for a fundamental power. This ternary is expressed in the lines of the hexagrams, as it is well known by the readers of the Book: "The two lowest places are those of the earth, the third and fourth are those of man, and the two at the top are those of heaven" (Wilhelm, Richard 1997, 265).

In the Yi-globe, the hexagrams are arranged in five planes (from level I to V) between the Heaven (the Creative) and the Earth (the Receptive). These hexagrams have to be regarded as the products of the interaction of the two primal powers; they stand for myriad things (i.e., the elements of the manifested world). Man is the subject of this manifestation as well, and so, they represent man as well. That is, the same ternary (Heaven - Man - Earth) appears here in the Yi-globe as in the lines of the hexagrams. This arrangement perfectly corresponds to the words of The Doctrine of the Mean: "The superior man ... can assist the transforming and nourishing powers of Heaven and Earth. Able to assist the transforming and nourishing powers of Heaven and Earth, he may with Heaven and Earth form a ternion" (Confucius 2004, 12).

The five planes of the hexagrams have a natural hierarchical order, according to their positions in the space between the Heaven and the Earth: Level I is the lowest, and level V is the highest. This hierarchy also appears in the number of the firm lines, and it is recognizable in the names and meanings of the hexagrams as well.

Based on these ideas, several new features of the Yi-globe will be presented here.

## THE WAY

Enlightenment, salvation, deliverance, liberation, self-realization, initiation, and intimacy with God are among the most essential aims of every tradition and religion. In a certain sense, all these ideas may be symbolically expressed as "ascending from the earth to heaven." According to Daoist teachings, when one lives in harmony with nature (i.e., follows the Way), one arrives at complete enlightenment and becomes united with the Dao. In connection with this, it is widely accepted that the investigation of the I Ching and the application of its principles is nothing short of the essential practice of the Dao. The Book of Balance and Harmony reads as follows:

Sages are sages simply because of the application of the principles of the I Ching. Application of the I Ching is accomplished simply by openness and tranquility. ... If openness and tranquility are continued for a long time, one becomes spiritually illumined. (Cleary 1986, 10)

The symbol that comprises all the hexagrams of the I Ching-the Yi-globe-actually shows a way from Earth to Heaven. Along this way, going through the five planes is in complete agreement with René Guénon's symbolism:
[The axis] measures the distance between Heaven and Earth, that is, the very extent of the Cosmos in the vertical direction which marks the hierarchy of states of manifested existence while joining them one to other across this multiplicity of states, which appear in this respect as so many rungs by which a being on the way of return toward the Principle can raise itself from Earth to Heaven. (Guénon 2002, 24)

On the Yi-globe, the "rungs" are the hexagrams on the surface, which represent the distinct states of manifested existence and, among them, the states of human existence. These hexagrams are arranged in five circles along the axis of the globe; each of these circles corresponds to a hierarchical level in spiritual development. The seeker of the Way has to live through these states in contemplation. Once the aspirant has passed through all the states in a given circle, he can ascend to a higher level of existence.


Figure 7.01

On the following pages, this Way will be followed gradually. Figure 7.01 displays the scene.

1) The first step, starting from the Receptive (hexagram No 2), clearly leads to hexagram 24 (Return, Turning Point). In this hexagram, a light (firm, yang) line enters to the lowest place, under the pure dark (yielding, yin) lines, indicating the beginning of illumination.
2) In the succeeding hexagrams, after the Return, the light line ascends to higher and higher places. Each step leads to a higher spiritual state on the given hierarchical level. Following the ascending line, the way moves clockwise in the circle. After arriving at the highest place in hexagram 23 (Splitting Apart), the light line returns down to where it started (i.e., to hexagram 24). Having gone through every state in the cycle, a second yang line is added below, indicating that the aspirant has earned a higher level in the hierarchy. Thus, the way ascends to level II, to hexagram 19 (the Approach).
3) On level II, from hexagram 19, the way goes in the same direction (clockwise) as before, while the two light lines ascend to higher places one by one. After arriving at the two highest places in hexagram 20 (Contemplation, The View), the light lines move down from the top to the first place, and the way returns to hexagram 19. Here, the situation of level I repeats itself: A new yang line is added to the hexagram, which leads the aspirant to a higher state of existence on level III, to hexagram 11 (The Peace).
4) On level III, there are six groups of three hexagrams in the circle. In each group, the three hexagrams overlap each other on the corresponding meridian (main line). If one wants to go through all the hexagrams one by one, it is necessary to determine the order of succession within the triple groups. In this way, two different sequences will occur depending on the location of the two "floating signs" on the sides of the third hexagram, which is fixed in the middle place.

[^4]

Figure 7.02

In the next diagram, the two different sequences of circle III are shown separately, with the images of the hexagrams (Figure 7.03).


Figure 7.03

Starting from hexagram 11, in circle III.a, the light lines ascend in the direction of the hexagrams $54,55,32$, and so on. In circle III.b, the direction is opposite and goes gradually through the hexagrams $54,60,41$, etc.
It is known from the reconstruction of the Yi-globe (Chapter 2, The Five Levels) that the hexagrams in the lower levels have been arranged as the descendants of the Receptive (Circle I, II, and III) and in the upper levels as those of the Creative (Circle V, IV, and III). According to the symbolic meanings of the Yi-globe (cosmos, macrocosm, microcosm), it is reasonable to refer to these levels as "lower world" and "upper world," respectively. On the Way, a seeker of complete


#### Abstract

enlightenment has to learn both the lower and the upper world in their full integrity. Thus, at first, one has to circulate in circle III, as in the last phase of the lower world (i.e., to move clockwise, according to sequence III.a) (Figure 7.03). Afterward, he/she enters into the upper world and goes in the opposite direction, following sequence III.b.


Summing up the above explanations, the way on level III proceeds in the following manner. Arriving at hexagram 11 (The Peace), it continues to the left and covers the full circle (sequence III.a). Then, it makes a 180-degree turn and follows the route of sequence III.b. Returning to hexagram 11, a fourth yang line arrives and elevates the way to level IV, to hexagram 34 (The Power of the Great).
5) On level IV, one has to follow the ascending light lines again; so, from hexagram 34, one goes to the right, towards hexagram 5 (The Waiting), and the way keeps moving counterclockwise. From hexagram 34, the next step leads to level V (hexagram 43, Break-through).
6) The last cycle, on level V , begins with hexagram 43. In this hexagram, only a single dark line has remained, on the sixth place, and the ascending light lines gradually press this dark line down to the lowest place (hexagram 44, Coming to Meet). Closing the circle at hexagram 43, the wandering over the states of manifested existence has been completed.
7) From hexagram 43 , by adding a single light line, the aspirant arrives at the highest level, the Creative, to the pure yang state, the complete enlightenment. The way has come to completion.

Figure 7.04 shows the whole way.
The figure below is not accurate in all aspects. Namely, the transitions from one level of the hierarchy to the other cannot be made by leaps, as they are indicated in the diagram. In every cycle and in every step, one light line in the actual hexagram ascends one place higher, which means a higher level of illumination. This increasing illumination has to be symbolically shown in the diagram by raising the line of the route a bit higher in every step within the cycle. Thus, at the end of the cycle, the way approaches the height of the next level, and the transition between the two levels will proceed smoothly.


Figure 7.04

In a correct representation, the route of advancement shows a spiral on the surface of the Yi-globe (Figure 7.05).


Figure 7.05

This curve symbolizes the way to complete enlightenment, the way from the Earth to the Heaven. Along this way, one's inner illumination gradually grows, while one passes through every state of human existence until arriving at one's ultimate goal.

In fact, this curve is a double spiral, since its lower and upper halves coil in opposite directions. One-half of this spiral follows a path along the lower hemisphere: It belongs to the "lower waters" or the "lower worlds." It coils outwards here, signifying the phase of evolution from birth to full development. The other half is in the "upper waters" or "upper worlds." Coiling inwards, it indicates involution, withdrawal, and completion at the end.

In Figure 7.05, the axis of the Yi-globe is highlighted. This is the World Axis, clearly demonstrated in Chapter III. Here, it is the closing section of the cycle, going through the unmanifested states. It is the path of the spirit from the inner Center to the manifestation on the Earth, and from the Heaven to the dissolution in the Center.

## The Yi-globe and the World Egg

In order to reveal the multi-dimensional symbolic meanings of the previous spiral, a brief survey regarding the general symbolism of spiral curves follows below.

The spiral forms play universal and complex roles among traditional and religious symbols. Figure 7.06 shows a simple (Archimedean) spiral and a double spiral.


Figure 7.06
These and many similar forms primarily represent the following general subjects:

- movement: they always indicate some kind of movement (for the most part, cyclic and periodic phenomena, like the motion of the sun, moon, water (ebb and flow, rise and fall))
- way, route: lines of movement
- power, force: motive power/force
- spirit, breath, breathing
- time: cycles and periods (eras, solar years, lunar months, days)
- coiling outwards: creation, birth, growth, development-evolution
- coiling inwards: withdrawal, contraction, completion, death-involution

Double spirals: two simple spirals of opposite character (left- and right-handed, coiling inand outwards) connected to each other at one or both ends:

- unity of opposite powers: action and reaction
- transition, transformation, inversion
- space and time: motion in space

Spatial (three-dimensional) spirals:

- the axis of the world
- connection between Earth and Heaven
- the path to God

Decorative elements: all over the world, the spirals often occur as ornamental motifs. They have been known since prehistoric times, and they are used on objects of different kinds in the present day.

In China, the spirals, particularly the double spirals, are among the most widely known and important symbols. Their origin goes back to the mythical era: Spiral motifs have been found on carved stones, earthenware, and painted potteries from the third millennium BC and even earlier. Double spirals of the S-form type also occur in ancient ideographs. (See Bulling 1952, 161.)

A frequently used double spiral can be found in the well-known yin-yang diagram: It is the boundary line between the two halves (Figure 7.07).


Figure 7.07
The views of several philosophers on this matter are worth noting:

- "The double spiral represents the completion of the sigmoid line, and the ability of the sigmoid line to express the intercommunication between two opposing principles is clearly shown in the Chinese Yin-Yang symbol" (Cirlot 1990, 306-307).
- "From a cosmic point of view, the double spiral may be regarded as the flattened projection of the two halves of the egg of the world, ... or of the Upper and Lower Waters" (Ibid).
- "This double spiral ... which can be regarded as the planar projection of the two hemispheres of the Androgyne, offers an image of the alternating rhythm of evolution and involution, of birth and death" (Lebasquais 2002, 31).
- "The two spirals can be considered as the indication of a cosmic force acting in opposite direction in each of the two hemispheres, which, in their broader application, are of course the two halves of the 'World Egg,' the points around which the two spirals coil being the two poles" (Guénon 2002, 31-32).

An important conclusion can be drawn from the above opinions, as Guénon clearly expressed in the following words: "It [the yin-yang diagram] is also, according to another and more general traditional symbolism, the 'World Egg;' whose two halves, when they separate, become Heaven and Earth respectively" (2002, 29-30).

According to the analysis (Chapter III), the yin-yang diagram may be also the planar representation of the Yi-globe. Consequently, the following can be taken as true:

## (11) The Yi-globe is an alternate form of the World Egg. Its lower and upper hemispheres correspond to the two halves of the latter.

It is necessary to mention snakes or serpents here, as they frequently appear among the symbols, coiled around themselves, and forming a spiral. Figure 7.08 shows a spherical spiral, moving upwards uniformly on the surface of the Yi-globe. This is a simplified variant of the way of enlightenment (Figure 7.05), representing the ascending route from the Earth to the Heaven. If this spiral were replaced by a snake, a well-known symbol would be revealed: the snake that surrounds the World Egg (i.e., the Yi-globe). This is traditionally the symbol of the creation of the world.


Figure 7.08

## THE YI-SPIRAL

The Yi-globe itself is a rather complicated form, but taking its complex symbolism in consideration, it is still the best solution possible to convey all the knowledge about the hexagrams and their roles in cosmology. With the double spiral on its surface, however, the whole structure has become much more complicated and difficult to draw on paper.

To simplify things, one has to prepare the planar projection of this three-dimensional spiral and place the hexagrams in the corresponding positions. Using the analogy of the Yiglobe, this form will be called the Yi-spiral (Figure 7.09).


Figure 7.09

This diagram has preserved most of the symbolic meanings that were enumerated above and present in the three-dimensional variant. It contains all the fifty-four hexagrams that are on the way of enlightenment, on the surface of the Yi-globe, and has quite a few qualities that are characteristic features of it:

- the presence of the two poles and their opposite characters
- the direction of development (starting from the two poles)
- the circular and cyclic arrangement of the hexagrams
- the indication of the movements (the changes), time, etc.

Considering the form and meaning, the Yi-spiral can be taken as a new, expressive form of the hexagrams, the symbol of the manifested world. The two hexagrams of Completion and the six double trigrams do not have worldly manifestation, and so, they are not shown here.

## A special double helix: the Sun-line

A double helix is a spatial curve that consists of two (typically congruent) helices, one of them translated along the common axis. In science, for example, this is commonly known as the structure of nucleic acids, such as DNA and RNA. In symbolism, however, the two helices coil in opposite directions around a (vertical) axis or, when they are shown in the form of snakes, around each other. Their symbolic meaning is usually the same as that of the planar double spirals: duality, complementary opposition, movement, power, etc.

An example of the double helices is the two "nadis" ("ida" and "pingala") or subtle currents, known in traditional Indian medicine and yoga; they coil around the "sushumna" nadi, the central canal of the subtle body. Another such configuration is the two serpents of the "caduceus" (the "wand of Hermes"). Fu Xi can also be seen in ancient pictures in a similar form, coiled together with his wife (and/or sister) Nuwa.

The Sun-line on the surface of the Yi-globe was already analyzed in Chapter III (Figure 3.04). It is composed of two parts. Each part is a single turn of a special helix; there is a left-handed spiral on the front (East) side of the globe and a right-handed one on the back (West). They are mirror images of each other, interconnected at the end points of the axis and forming a loop around the sphere (Figure 7.10).


Figure 7.10
These helices are very special, indeed. They curve around the hemispheres, but the top views are circular (see Figure 7.10 above).
When spherical coordinates are applied, the equations of the two spirals are very simple:

$$
\begin{aligned}
& \text { on the front side } r=R \text {, and } \Phi=\Theta \text {, where } 0 \leq \Theta<\pi \text {, } \\
& \text { on the back side } r=R \text {, and } \Phi=2 \pi-\Theta \text {, where } \pi \leq \Theta<2 \pi \text {. }
\end{aligned}
$$

Here, the basic plane of the coordinate system is the equatorial plane, the azimuth reference line goes to the South, and R is the radius of the globe; r (radius), $\Theta$ (azimuth), and $\Phi$ (polar angle) are the spherical coordinates.

It has already been demonstrated that the Sun-line represents the cyclic character of time and the apparent annual motion of the Sun on the sky. Based on the present references to the double helices, it is easy to see that the Sun-line also represents the force field between the two opposite powers, the Heaven and the Earth, where the elements of the universe have been manifested. Moreover, they apparently show two paths: one from Earth to Heaven and another in the opposite direction. In this way, this loop indicates a route of circulation that is, considering the symbolism of these paths, another route of the eternal return.

## VIII. The Yi-globe and the Microcosm

According to the teaching of the Yijing, a wise man is supposed to contemplate on the hexagrams, thereby understanding their connotation. The book states the following regarding this process:

In this way, man comes to resemble Heaven and Earth; he is not in conflict with them. His wisdom embraces all things, and his Tao brings order into the whole world; therefore, he does not err. (Baynes 1997, 295)
This saying includes the traditional idea that man was originally created in the semblance of Heaven; that is, he represents a certain kind of microcosm, thereby having an inherent ability to apply the heavenly laws to himself, thus harmonizing with Heaven. The Yijing renders guidance for the solution of this task, disclosing the rules of harmonious human life. Therefore, since ancient times, the book has exerted its influence not only on the spiritual development of men but also on the preservation and curing of bodily health as well. In addition, the theoretical fundaments of traditional Chinese medicine reflect the spirituality of the Yijing. The frequently quoted saying of Sun Simiao ${ }^{9}$-"You cannot master medicine until you have studied the Yijing"-is generally accepted in this sphere.

In Part 1, the Yi-globe was discussed as the symbol of the macrocosm, but in the sense of the above theory, the human world, the microcosm, should also be represented in it. This consideration encourages the research of microcosmic ideas in the Yi-globe. Hereafter, it will be disclosed that the Yi-globe contains several properties that are comparable to the fundamental features of the human organism.

## THE YIJING AND THE NEI JING

To demonstrate the relationship between the Yijing and Chinese medicine, the Nei Jing serves the purpose best, since the theoretical and practical material embraced by it forms the basis of each following Chinese medical work and therefore still exercises its influence in our time. The Nei Jing's surviving millenaries is due to its being not only a medical book but also rather a philosophical treatise on health and illness. For example, Ilza Veith writes that in ancient China, "Medicine was but a part of philosophy and religion, both of which propounded oneness with nature, i.e. the universe" $(2002,10)$. Thus, it is impossible to understand the Nei Jing without being familiar with the Chinese thinking of that time, with special regard to the three fundamental concepts: the Dao, the yin-yang duality, and the theory of the five elements. From among these concepts, the first two are also discussed in the Yijing
as cardinal ideas and so, being a common spiritual base, create a relationship between the two works.

Instead of following further speculations, the citations presented below will illustrate how the Dao and the yin-yang duality appear in these two cardinal works of Chinese philosophy and Chinese medicine.

1) Structure of the universe: the duality of the world.
a) In the Yi Jing: ${ }^{10}$

- "That which lets now the dark, now the light that appears is Tao."
b) The same in the Nei Jing: ${ }^{11}$
- "The principle of Yin and Yang is the basic principle of the entire universe. It is the principle of everything in creation."

2) The aim of the wise man: to understand the changes in the world and to follow the Dao accordingly.
a) Yi Jing:

- "As the firm and the yielding lines displace one another, change and transformation arise."
- "Since in this way man comes to resemble heaven and earth, he is not in conflict with them. His wisdom embraces all things, and his Tao brings order into the whole world; therefore he does not err."
b) Nei Jing:
- "If Yin and Yang change the people will change likewise, and their destiny can then be prefigured."
- "Obedience to the laws of Yin and Yang means life; disobedience means death."

3) Parting of spirit and form.
a) Yi Jing:

- "In the heavens phenomena take form; on earth shapes take form."
b) Nei Jing:
- "In Heaven there are ethereal spirits; upon earth there is form and shape."

4) Yin and yang: dark and light.
a) Yi Jing:

- "That which lets now the dark, now the light that appears is Tao."
b) Nei Jing:
- "Heaven was created by an accumulation of Yang, the element of light; Earth was created by an accumulation of Yin, the element of darkness."

As the citations show, the ideas of the Yijing appear in the Nei Jing almost word for word. In the latter, however, these sentences refer to the restoration of the balance of the bodily state. Nowadays, the principles of the Yijing also find an ever-increasing application, not only in spiritual field but also in everyday practice. For example, medical practitioners and doctors work and cure patients using these traditional principles.

The third spiritual base of the Nei Jing, the five-element theory, is not included in the Yijing. This does not unconditionally mean that this theory was unknown at the time the book was written, but rather, it denotes that the Yijing dealt with such higher levels of existence where the differentiation of the world into the five elements had not yet been taken into consideration.

## THE YI-GLOBE AND THE MICROCOSM

To find the signs of the microcosm in the Yi-globe, knowledge of the Chinese approach to the human organism in the Zhou age and in the times before is required. It is also the Nei Jing that offers help, because it deals with the fundamental elements of acupunctural healing, and this is the method that best expresses the cosmological views in Chinese medicine.

The acupunctural method is based on the theory that the organs of the human body are interrelated through a well-defined channel system, the so-called meridians, ${ }^{12}$ and through these channels, energies flow, regulating (promoting or hindering) the operation of the organs. These meridians are not some physically or anatomically differentiated parts of the human organism (such as, for example, the blood vessels); rather, they should be considered routes or lines of force.

According to the Nei Jing, a person has ten or twelve internal organs (depending on definition), of which five (or six) are solid (viscera) and five (or six) are hollow (bowels). ${ }^{13}$ The principle of duality is clearly apparent here, as well: The solid organs are of yin character, while the hollow ones are of yang character.

There are twelve main meridians ${ }^{14}$ in the channel system, running more or less parallel with the centerline of the body and along the limbs, in the layers under the skin of the arms and the legs. Inside the body, each of them joins with an inner organ; thus, there are heart-, lung-, gall-bladder-, etc. meridians. The main meridians have so-called acupunctural points through which they can take in and drain off energy. By stimulating these points (by puncture,
burning, or other, modern techniques), one is capable of regulating the energy conditions of the organism, whereby it can be used for curing (this is the basic method of acupunctural treatment). The remaining-sixty in total-secondary channels extend the functions of the main meridians, distributing their effects in the small parts of the body, but they have their own individual functions as well. Together with the main meridians, they constitute a complex but harmonized system that embraces the body as a whole. These secondary channels (except for two extra meridians) have no acupunctural points.

The main meridians are of yin or yang character as well, depending on their adjoining inner organs. In three of the six yin meridians, the life energy flows from the toes towards the relevant organ, while in the other three, it flows from the organ towards the fingers. In the yang meridians, the flow is reversed (i.e., from the hand towards the organ and from the organ to the toes.) Accordingly, there are three of each leg-yin, arm-yin, arm-yang, and leg-yang meridians. If a man stands with his arms stretched upwards, it can be taken that in the yin meridians, the energy passes upwards from below (quasi having the origin in the Earth), while in the yang ones, the energy flows downwards from the top (from Heaven). The yin meridians are located over the front side of the body and the inner side of the limbs, while the yang ones (with two exceptions) go over the back side and the external surface of the limbs. The main meridians are connected in a series, thus constituting a closed circuit that promotes the continuous circulation of energy.

The parts of the body where the meridians join one another are as follows:

- two yin meridians: on the breast,
- two yang meridians: on the face,
- the yin meridians with the yang: at the lower section of the limb (i.e., under the elbow or the knee).

Table 8.1 summarizes the process of the energy flow and the junction points of the meridians.

The energy in the different meridians is not time-constant; it has a two-hour daily maximum in each meridian. Between the two maximums, it gradually changes; that is, it decreases to the minimum and then increases again. That is to say, the daily maximum "circulates" among the meridians during the 24 hours, passing over bihourly from one to the other following the above sequence. The last column of the table shows the time when this maximum resides in the given meridian.

Table 8.1

|  | Meridian | Abbr. | yin/yang | from | to | direction | Max. (hours) |
| ---: | :--- | :---: | :--- | :--- | :--- | :--- | :---: |
| 1. | Lung | Lu | yin | breast | arm | upwards | $3-5$ |
| 2. | Large Intestine | LI | yang | arm | face | downwards | $5-7$ |
| 3. | Stomach | St | yang | face | leg | downwards | $7-9$ |
| 4. | Spleen | Sp | yin | leg | breast | upwards | $9-11$ |
| 5. | Heart | Ht | yin | breast | arm | upwards | $11-13$ |
| 6. | Small Intestine | SI | yang | arm | face | downwards | $13-15$ |
| 7. | Urinary Bladder | UB | yang | face | leg | downwards | $15-17$ |
| 8. | Kidney | Kd | yin | leg | breast | upwards | $17-19$ |
| 9. | Pericardium | Pc | yin | breast | arm | upwards | $19-21$ |
| 10. | Triple Heater | TH | yang | arm | face | downwards | $21-23$ |
| 11. | Gall Bladder | GB | yang | face | leg | downwards | $23-1$ |
| 12. | Liver | Lv | yin | leg | breast | upwards | $1-3$ |

Based on the location of the main meridians in the body and the time of the energymaximums, a figure can be made (Figure 8.01), in which the different meridians are assigned to the time of the maximums (specifically, to the middle of the bihourly maximums).


Figure 8.01

The diagram demonstrates the following features in a very simplified manner:

- The meridians on the surface: vertical lines, on the arm (above the circle), and on the leg (under the circle)
- The meridians in the depth: dotted sections of the circle, in the breast (yellow), and in the face (orange)
- The connection between the meridians: horizontal lines of dots
- The character and direction of the energy: according to the arrows (upwards: yin, downwards: yang).

A comparison of the above diagram with the network of the Yi-globe (Figure 8.02) reveals several similar features.


Figure 8.02

1) The most remarkable common feature is the identical number (i.e., twelve) of meridians and their equal distribution in the time cycle (i.e., at two-hour intervals).
2) The relation with Heaven constitutes the foundation of human life; this is defined by the Nei Jing as follows: "The Yellow Emperor said: From earliest times the communication with Heaven has been the very foundation of life; this foundation exists between Yin and Yang and between Heaven and Earth and within the six points" (Veith 2002, 105). The following explanation is added by Ilza Veith: "The six points are: the four points of the compass, the Zenith and the Nadir" (Ibid).

- The cardinal points of the Yi-globe are exactly the same: the Creative (the Heaven, the Zenith), the Receptive (the Earth, the Nadir), and the ends of the horizontal cross: the four cardinal points.

3) In the main meridians, the energy of Heaven and Earth, the yang and the yin, flows downwards and upwards. This is the energy that nourishes the different organs and gives life to the human being.

- The meridians of the Yi-globe have been considered as lines of force, and the hexagrams as the elements of the created world. Consequently, there is an interrelation here between the human body and the universe as well as between the human organs and the hexagrams.

4) If during treatment, for example, there is too much energy in a meridian, the surplus can be removed through the appropriate point by means of acupuncture at the time of the maximum. The same effect can be achieved 12 hours later (or earlier) by strengthening the energy of the opposite meridian. This is the so-called "middaymidnight rule." This rule applies in reverse order as well: The energy can be activated or strengthened by stilling the energy of the opposite meridian.

- Figure 8.01 shows that the features of the opposite meridians are contrary in every respect: If one of them is leg-yin, the other will be arm-yang; if it is legyang, the other will be arm-yin; and so on. When the energy in one of them is at the maximum, it is at the minimum in the other, and vice versa.
- According to Chinese philosophy, the world is operated by opposite forces, which, instead of combating, aim at completing one another to accomplish balance. This idea is demonstrated by the diagram of the Earlier Heaven (Figure 1.01) and by its three-dimensional version, the Yi-globe. Thus, when the oracle is consulted, apart from the meaning of the resulting hexagram, the opposite (inverse and reversed) hexagrams should also be taken into consideration. On the Yi-globe, a hexagram and its inverse (complementary) pair are at the antipodes. Thus, here, the location and the role of the opposites are the same as those in the case of the human body.

The four sections above emphasize the features of the human meridians, which-in symbolic relation-are reflected in the Yi-globe. If one draws a variant of the Yi-globe, where the twelve "heavenly" meridians are replaced by the twelve human meridians, it becomes apparent how these features correspond to the structure of the globe (Figure 8.03).


Figure 8.03

Based on the conformities, this picture can be rightly regarded as a symbol of the human microcosm.

In addition to these features, the Yi-globe has even more elements that may bear microcosmic connotation, but the exact determination of the relations requires further analysis. Some of these elements are listed below and completed with their possible analogies.
5) The hexagrams on the surface.

- The hexagrams are located on the meridians of the Yi-globe according to specific rules. The question is as follows: What is the relation between the hexagrams and the corresponding human meridian? The associated internal organ, its illnesses, the acupunctural points, etc. may be taken into consideration.

6) The Sun-line (Figure 3.04).

- The Sun-line consists of two parts. One part passes upwards along the eastern side of the Yi-globe from the Receptive to the Creative over six calendar hexagrams belonging to the house of the Receptive (and thus of yin character).

The other part is the continuation of the former one and leads to the Receptive on the western side. It touches the other six calendar hexagrams belonging to the house of the Creative (and of yang character). In such a way, a complete circle is formed, crossing each of the twelve meridians, passing from the Earth to Heaven and returning to the Earth.

- In a human body, apart from the twelve main meridians, there are eight "extra" meridians. Only two of them have acupunctural points: the Conception Vessel (Ren Mai) and the Governor Vessel (Du Mai). The Conception Vessel (alias: Sea of Yin Channels) is of yin character, with its surface section passing from the groin on the abdominal side up to the lower lip along the center line of the body. The Governor Vessel (Sea of Yang Channels) is of yang character, and its origin is the same as that of the Conception Vessel; however, it goes along the back side, in the line of the backbone, and reaches the palate through the top of the head. These two channels constitute a complete circle having the main function of regulating the energy flow in the twelve main meridians, being in connection with each of them. Thus, it can be seen that the route and the character of the Sun-line fully comply with these two meridians in many respects, and it can be taken as their symbolic representation.

7) The Equator and the Axis.

- A similar relationship can be found on the one part between the Dai Mai (Belt Channel) extra meridian and the Equator and on the other part between the Chong Mai (Sea of Blood Channel) and the Axis of the Yi-globe, as far as the routes and the roles are concerned.

These similarities in content and form-even if only partial ones-offer a slight possibility to suppose that the Yi-globe was the symbol of the human microcosm as well as the representation of the macrocosm.

## THE END

## Appendix

THE TRADITIONAL（KING WEN）SEQUENCE（after Baynes 1997，$v$ to vii）

## Part 1

| hex | No | Name | hex | No | Name |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 衰 | 1 | The Creative | 立三 | 16 | Enthusiasm |
| 高高 | 2 | The Receptive | 孪言 | 17 | Following |
| 产言 | 3 | Difficulty at the Beginning | 衰気 | 18 | Work onWhat Has Been Spoiled |
| 衰言 | 4 | Youthful Folly | 立亨 | 19 | Approach |
| 三氣 | 5 | Waiting（Nourishment） | $\overline{\overline{\underline{\underline{\underline{E}}}} \underline{\underline{E}}}$ | 20 | Contemplation（View） |
| 衰 | 6 | Conflict | 氯 | 21 | Biting Through |
| 言言 | 7 | The Army | ㅌㅡㅡㅡㅡㅡㅡㄹ | 22 | Grace |
| 亨言 | 8 | Holding Together | 亨言 | 23 | Splititing Apart |
| 衰 | 9 | The Taming Power of the Small | 嗃亨 | 24 | Retum（The Turning Point） |
| 三 | 10 | Treading | 三三衰 | 25 | Innocence（The Unexpected） |
| 䂜 | 11 | Peace | 硅 | 26 | The Taming Power of the Great |
|  | 12 | Standstill | 春言 | 27 | Corners of the Mouth（Providing Nourishment） |
| 衰 | 13 | Fellowship with Men | 衰 | 28 | Preponderance of the Great |
| 三巟 | 14 | Possession inGreat Measure | 春言 | 29 | The Abysmal（Water） |
| 言気 | 15 | Modesty | ㅋㅡㅡㅡㅡㅡㅡㄹ | 30 | The Clinging（Fire） |

## Part 2

| hex | No | Name | hex | No | Name |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 衰少 | 31 | Influence（Wooing） | ㅡㅡㅡㅡㅡㅡㅡㄹ | 48 | The Well |
| 衰 | 32 | Duration | 孪 | 49 | Revolution（Molting） |
| 衰 | 33 | Retreat | 彦 | 50 | The Caldron |
| 衰気 | 34 | The Power of the Great |  | 51 | The Arousing（Shock，Thunder） |
| 彦言 | 35 | Progress | 研 | 52 | Keeping Still（Mountain） |
| 言立 | 36 | Darkening of the Light | 彦 | 53 | Development（Gradual Progress） |
| 衰 | 37 | The Family | 立ㅡㅡㅡㅡㄹ | 54 | The Marrying Maiden |
| ㅋㅡㅡㅡㅡㅡㅡㄹ | 38 | Opposition |  | 55 | Abundance |
| 彦言 | 39 | Obstruction | $\overline{\overline{\overline{\underline{E}}}}$ | 56 | The Wanderer |
|  | 40 | Deliverance | 彦 | 57 | The Gentle（The Penetrating． Wind） |
| 奏言 | 41 | Decrease | 㕩亚 | 58 | The Joyous（Lake） |
| 衰言 | 42 | Increase | 覀言 | 59 | Dispersion |
| 衰垔 | 43 | Break－through（Resoluteness） |  | 60 | Limitation |
| 衰 | 44 | Coming to Meet | 衰 | 61 | Inner Truth |
| 彦 | 45 | Gathering Together | 彦 | 62 | Preponderance of the Small |
| 言立 | 46 | Pushing Upward |  | 63 | AfterCompletion |
| ㅎㅡㅡㅡㅡㅡㅡN | 47 | Oppression（Exhaustion） | ㅋㅡㅡㅡㅡㅡㅡㅡN | 64 | Before Completion |

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## Contact

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${ }^{1}$ From one of the "Xiping Stone Classics" in 175-183 AD. (Hertzer 1996, 154)
${ }^{2}$ "In 279 AD , an even earlier manuscript of the Yijing was discovered in the tomb of King Xiang of Wei, who died in 296 BC." (Shaughnessy 1997, 18)
${ }^{3}$ The ordinal numbers from 1 to 64 indicate the places of the hexagrams in this traditional sequence. The numbers themselves, however, are not the parts of the Yijing. Owing to their simplicity, they are generally only used to identify the hexagrams.
${ }^{4}$ (Baynes 1997, 265, 268)
${ }^{5}$ The works of Andreas Schöter, Bradford Hatcher, Chris Lofting, and Lothar Teikemeier are listed in the Bibliography.
${ }^{6}$ Naturally, the diagram in itself is not a new one. In mathematics, it can be taken as a cubical graph, a Hasse diagram for Boolean algebra (of three elements), or a cubic lattice (of eight points) where the eight vertices (points) assign the eight trigrams. Such structures have been dealt with already by several authors in connection with the Yijing over the past two or three decades. (See, for example, E. D. Sung's book and the writings of Andreas Schöter in the Bibliography.) The novelty of the Arising Heaven lies in the method of approaching the task to find an adequate structure for the trigrams corresponding to the text of the Yijing. Here, the elements that take part in the process of solution are symbols (parents and offspring) and not simple mathematical objects. They settle in the space by their own interaction, prescribed in the book. In such a way, the diagram of the Arising Heaven has to be seen as a complex symbol, the image of the genesis of the principal powers, and not as a mathematical schema only.
${ }^{7}$ In fact, this is the distribution of the hexagrams according to the number of firm lines, which was already known several centuries before our time. The arrangement of the groups above each other is not unusual either (Marshall 2010, "Yin-yang hexagram arrangement"). If
all the sixty-four hexagrams and the interconnections between them were drawn in Figure 2.04, it would lead to the known Hasse diagram (for $n=6$ ). Here, however, one has to bear in mind that the different groups mean different generations, the connecting lines mean the paths of change, and the whole picture represents the evolution of the worldly phenomena.
${ }^{8}$ The first (known) spherical arrangement for the hexagrams was published in Lothar Teikemeier's book in 1988 (I Ching = Tarot, private edition) and 1998 (Lyra, I Ging gleich Tarot, Holos Verlag). Teikemeier developed this arrangement on the mathematical principle of the Hasse diagrams and named it Ichingsphere. The Yi-globe and the Ichingsphere have the same structure with two differences. First, he placed six hexagrams (the middle signs of the six triple groups in the Yi-globe) inside the sphere, onto a smaller circle. Secondly, making use of the Ichingsphere, he demonstrated certain numerical relations between the Yijing and the Sepher Yetzirah but did not deal with its other roles and meanings.
${ }^{9}$ A Daoist priest and medical expert (581-682 AD).
${ }^{10}$ Source of the citations in sections 1 to 4: Da Zhuan, Part I. (Baynes 1997).
${ }^{11}$ Source of the citations in sections 1 to 4: Su Wen, Chapters 1, 2, 5, and 6 (Veith 2002).
${ }^{12}$ The arrangement of the channels in the human body is similar to that of the geographical meridians. The word "meridian" only began to be used when the method became known in Europe.
${ }^{13}$ The five viscera are as follows: liver, lung, spleen, heart, and kidney. The pericardium (or heart constrictor) is taken as the extra sixth. The five bowels are as follows: gallbladder, large intestine, stomach, small intestine, and urinary bladder. The sixth is the socalled triple heater. The two extra organs have no anatomic equivalent, and they are added to the ten others only in certain cases.
${ }^{14}$ Actually, two times twelve meridians are in question, since each meridian has a pair of the same function. The members of a pair are placed on the right and the left side of the body, in symmetrical positions with respect to the centerline; thus, they are not discussed separately.


[^0]:    * Author's translation

[^1]:    * Readers who are not interested in the technical details may skip this section and go directly to the "Final compilation."

[^2]:    ${ }^{\dagger}$ Author’s translation

[^3]:    As it was previously described, the grouping of the hexagrams in the structural elements of the Yi-globe exactly corresponds to the composition of the hexagrams from trigrams, according to a definite rule. That is, the structure of the Yi-matrix may follow also from this latter, or any other, arrangement. Having the Yi-globe, however, which has the advantage of being based on sound reasoning, it is named here as the predecessor of the Yi-matrix. Naturally, new research works may reveal other solutions.

[^4]:    Explanations: The fixed hexagrams on the meridians are the pairs 11-12, 31-32, and 41-42. For a detailed explanation of the "fixed" and "floating" hexagrams, see Chapter II, Figure 2.09, and the following passage.

    These two kinds of order appeared in the course of reconstruction of the lower and the upper circles of the Yi-globe (Figure 2.09 and Figure 2.11, respectively). At the time when the two sets of circles were interconnected, the floating signs moved to their balanced position on the main line and joined the fixed hexagrams, which were already there. Figure 7.02 shows these two sets anew, without the paths of changes.

