

### *I CHING.* THE BOOK OF CHANGES

"Everything is subject to the laws of change" (Confucius)

"The only constant is change" (I Ching)

"Change is the only thing that is immutable" (Arthur Schopenhauer)

"Time as such does not exist, but only change"
(Ernst Mach)

### **The ancient Chinese text**

The *YiJing*—as written in modern phonetic transcription, pronounced "*I Ching*", and literally "book of changes"— is an ancient Chinese text that expresses a unified vision of reality, the cosmovision of Taoism: Tao governs all phenomena of the universe and is the underlying unity of all of them.

The *I Ching* covers all aspects of reality, considering the universe as a unity and totality. It is an instrument of divination (oracle), a text of alchemy, a treatise of philosophy, a metaphorical system, a text of meditation, a



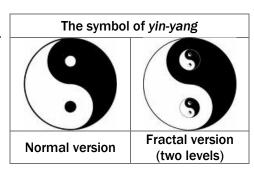
Richard Wilhem (1873-1930)

symbolic system, a mathematical language (where geometry and binary arithmetic come together), a book on social and natural laws, a treatise on psychology, a healing system, a philosophical computer, a calendar, a method of self-realisation, a treatise on the laws of consciosness, a treatise on karma, a treatise on creativity, etc.

The *I Ching* is the most influential text in China since its appearance some 3000 years ago. It is the oldest book in the world. In the West it has had a great impact since 1923, when Richard Wilhem translated it into his own language, German.

#### Yin and yang

The unity of the phenomena of the universe is fundamentally based on the juxtaposition of the pairs of opposites, which are not in a confrontational relationship but of complementarity and mutual inclusion. Moreover, Chinese philosophy accepts the paradox as a starting point. In fact, the *Tao-Te-King*, begins with a paradox: "The true Tao cannot be named".



According to ancient Chinese culture, yin and yang are

the two fundamental polarities of the universe, the two universal principles that exist in all things. Their interaction produces the evolution of all the systems of the universe. Everything

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is dual, everything has a complement, except *Tao* himself, which is beyond duality.

- *Yang* is the masculine principle, active, firm and fixed. It symbolizes time and light. It is represented by a continuous line.
- *Yin* is the feminine, passive, receptive, flexible and malleable principle. It symbolizes space and darkness. It is represented by a split line.

Yin and yang have the following properties:

- They are complementary, not opposed. In fact, they are represented within a circle that integrates and unites them.
- They are dynamic and cyclical (one is progressively transformed into the other). The *yin*, when it reaches one end becomes *yang*, and vice versa.
- They are interdependent. The magnitude of one determines the magnitude of the other. They are two phases of the same phenomenon.
- These are connected principles, represented by the small circles within each of them. *Yin* is never completely *yin*, it always contains a certain amount of *yang* content. And vice versa, as shown in the figure.

For example, night and day are interconnected, while one contains something of the other. Darkness and light interpenetrate each other. Night is the constant companion of the day.

The *yin-yang* symbol reflects the interrelationship of both principles, where the dark side corresponds to the *yin* and the light side to the *yang*. The *yin-yang* symbol is actually considered fractal, i. e. that both yin and yan contain the totality (yin-yang), and so on, to infinity. The sinuous line between yin and yang indicates the mutual interdependence of these two principles. If they were joined by a diameter, it would indicate a simple juxtaposition. At a geometrical level, the length of the sinuous central line is the same as the length of each of the two lateral semicircumferences, as can be easily deduced.

### The change

The idea of change in hexagrams is represented because continuous lines can be split and split lines can be joined together.

The main concept of *I Ching* is change or mutation. Everything is constantly changing, brought about by the confrontation between the two opposing forces of *yin* and *yang*. Everything changes, except one thing: change itself, that is, the only thing that remains is the immutability of change. Situations change, but the laws that express them (the rules of the game) do not change.

Beyond change is the *Tao*, the source of all that exists. The *Tao* is the absolute, the undifferentiated, the state of unity, wholeness, fullness and perfection. In the *Tao* we find harmony and wisdom. The *I Ching* provides a model to relate to change, to flow with it, to transcend it and reach the *Tao*.

### The hexagrams

The *I Ching* system consists of 64 hexagrams. Each hexagram consists of two trigrams. Each trigram consists of 3 lines. Each line can be either *yin* (represented by a split line) or *yang* (represented by a continuous line). There are  $2^3 = 8$  trigrams and  $2^6 = 8^2 = 64$  hexagrams.

Each hexagram (drawing from the bottom-up) represents a state pattern, archetypal situation, or a state of consciousness. Each line is a degree or dimension associated with that state.

In turn, each line (yin or yang) can be fixed (stable or young) or changing (mobile, dynamic or old). A mobile yin line becomes yang and a mobile yang line becomes yin. Therefore, each hexagram can be transformed into any other hexagram. In total the changes can be displayed from  $64^2 = 4096$  possible modes. A change is expressed by two hexagrams, where the first reflects the underlying basic situation (diagnosis) and the second expresses trends that modify the basic situation (forecast).

### The eight basic trigrams

If we assign the value 1 to a continuous line (yang) and 0 to a split line (yin), the hexagrams represent subsequent binary numbers (considering them from bottom-up):

Nº	Trigram	Name	Atribute	Relationship	Simbology
7 = 111		Pure Yang	Heaven	Father	Creation, Firmness,
6 = 110		Adaptation	Wind	Eldest daughter	Dynamicity Fluidity, Infiltration
5 = 101	III	Cohesion	Fire	Middle daughter	Light, Intelligence, Enlightenment
4 = 100		Immobilization	Mountain	Minor son	Stability, Immobility
3 = 011	=	Rejoicing	Lake	Minor daughter	Achievement, Peace, Optimism
2 = 010	Ш	Ditch	Water	Middle son	Change, Crisis, Movement
1 = 001	==	Tremor	Thunder	Eldest son	Energy, Action
0 = 000		Pure Yin	Earth	Mother	Love, Generosity, Substance, Foundation

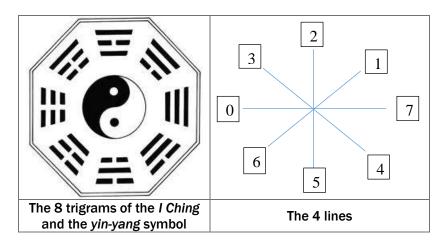
These eight trigrams correspond to four dimensions, where two opposing trigrams appear in each dimension:

Trigram			Opposite trigram		
7 = 111		Heaven	0 = 000		Earth
6 = 110	=	Wind	1 = 001	==	Thunder

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5 = 101	Fire	2 = 010	==	Water
4 = 100	Mountain	3 = 011		Lake

These 4 dimensions are usually represented by four lines of the following shapes:



Note that the opposing trigrams on the same line are symmetrical and their corresponding numbers add up to 7.

Each trigram represents a basic or primitive concept. The Heaven and Earth trigrams represent the pure *yang* and the pure *yin*, respectively. The Thunder trigram represents *Chi* (the universal energy of nature). The other 5 (Lake, Fire, Wind, Water and Mountain) correspond to the 5 elements (metal, wood, water, fire and earth). These 5 elements are not fixed, but phases of change and types of energy.

Why are the basic elements trigrams? There are several interpretations:

- 1. Because in each trigram the top line represents Heaven, the middle line represents man and the lower line represents the Earth. Man acts as a mediator between Heaven and Earth.
- 2. Because from the union or interaction of the two fundamental principles (*yin* and *yang*) a third arises. The children (older, middle, younger) represent the experiences, the results of that interaction.
- 3. Because the number 3 is the number of the consciousness, the number that balances the opposites, that transcends duality and from which everything emerges. Lao-Tse said: "The Tao produced One; One produced Two; Two produced Three; Three produced All things".

A hexagram is the combination of two trigrams:

• In general, the lower trigram corresponds to the deep aspect. And the upper to the superficial aspect.

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- The upper trigram corresponds to Heaven. The lower trigram corresponds to the Earth. The intermediate term is not represented, since it is the hexagram itself that unites the two poles, the two influences, acting as a mediator between Heaven and Earth.
- The lower trigram also symbolizes the inner world or inner attitude, motivation. And the upper trigram symbolizes the outer world or the outer attitude, the intention. The *I Ching* is a tool to help align, harmonize or synchronize our internal and external attitudes, create a reality of our own and be masters of our destiny.
- The two trigrams produce a derivative concept. For example, the Peace hexagram is made up of the Heaven (bottom) and Earth (top) trigrams. And the Elegance hexagram is composed of the Cohesion trigram (bottom) and the Immobilization trigram (top).

### Conscious, subconscious and Tao

Each hexagram of the *I Ching* expresses a state of mind, of the conscious and the subconscious, of the rational and the intuitive. The six lines of the hexagram represent six different degrees or dimensions of the same thing. They are space-time dimensions, which are inseparable. At the lowest level we have the world of external physical sensations, the conscious, objective world and the past. At the highest level we have the spirit, the subconscious, the inner, subjective world and the future. The dimensions corresponding to the six lines are:

Line	Dimension
6	Spirit
5	Soul
4	Body
3	Feeling
2	Thought
1	Sensation

- To consult the *I Ching* is to consult our subconscious, which knows everything. The answers are symbolic and metaphorical. In the depths of the subconscious are the answers to all problems, because the subconscious is connected with the *Tao*, which knows everything (including the future).
- The *I Ching* acts as an intermediary with the subconscious. It helps us connect (or tune in) to our subconscious. In addition to helping you make decisions, our intuitive faculties develop.
- Consciousness is associated with the trigram 111 (Heaven). The subconscious is associated with the trigram 000 (Earth). The *I Ching* affirms that it is necessary to harmonize conscious (Heaven) and subconscious (earth) so that the results (the children) are health, happiness, peace, security and abundance.
- The *I Ching* helps us to discover the inner and outer universe. It reveals to us the relationship that exists between conscious and subconscious. Everything that happens to us in the outer

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world is a reflection of the inner world.

• The *I Ching* connects us with superior dimensions of reality. One of the hexagrams, the so-called "Former Sky" refers to a higher dimension of reality. From this higher dimension emanates, in a coherent way, the whole universe. The consultation of the *I Ching* allows us to broaden our consciousness and attain wisdom.

In the hexagrams of the *I Ching* are represented what we modernize associate with the modes of consciousness of the cerebral hemispheres. The left hemisphere (objective world) would correspond to the lower trigram and the right hemisphere (subjective world) to the upper trigram.

#### The bigrams

Combining *yin* and *yang*, we have 4 possible bigramas and 4 levels of change gradation:

Bigram	Opposite bigram
3 = 11 = extreme  yang	0 = 00 = extreme  yin
2 = 10 = mínimum yang	1 = 01 = mínimum $y$ in

### The time

Consciousness perceives time as change. Time is encoded in the *I Ching*, the book of changes. Time is configured as a finite set of primitive, discreet and irreducible elements, in the same way that matter is composed of chemical elements. There are 64 primitive elements of time, as many as hexagrams. The perception or consciousness of time would be a flow or sequence of these basic elements.

- The six degrees or dimensions of a hexagram reflect the past (below) and future (above).
- Time is structured in a cyclical form, in such a way that the three dimensions of time (past, present and future) coexist.
- Subjective (inner) time is a state of consciousness.
- Consciousness and past go hand in hand. Future and subconsciousness are also linked. We can change our future if we harmonize consciousness (external world) and subconsciousness (internal world).
- Time is already configured, even if we do not perceive it. But configured does not mean determined, that is, destiny is not inexorable. The future has a virtual feature. The "Former Heaven" is where the future takes shape. Fate arises from ignorance, from a mechanical and unconscious life, from the inability to understand situations and from managing negative and destructive tendencies. By living consciously and reflectively, it is possible to modify the future and achieve harmony with the whole.

The Former Heaven can be considered a kind of individual karma that conditions our future. But for the *I Ching*, individual karma is only one aspect of cosmic karma, the ensemble of structural and functional restrictions of the universe.

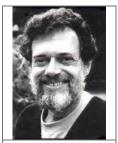
### • The active past.

The past has consequences. They are seeds that we sow and accumulate, forming the "active past". All the contents of the past are continually interacting with each other, generating new connections between them. This active past returns in one way or another, sometimes in unexpected ways. It is the great game of return or karma.

# Fractal time

The *I Ching* is a fractal model of the structure of time, as it reflects the self-imageing or holonomic nature of evolution at all levels: individual, collective, cosmic and historical.

Historically, Terence McKenna [1994] developed a theory called "Novelty" or "Timewave Zero". Novelty is the level or cumulative amount of change over a certain period and also the degree of connectivity, order and creativity. It is the opposite of entropy, which measures the degree of disorder, disconnectedness, decomposition and uniformity. Novelty is a fundamental magnitude for the description of any temporal system, in the same way that in physics it is used the speed, the angular moment, etc.



Terence McKenna (1946-2000)

For McKenna, beyond Newtonian (linear and absolute time) and Einstenian (relative time and curved space-time in the presence of matter) conceptions, time possesses a fundamental property, which is connectivity. This property

time possesses a fundamental property, which is connectivity. This property is already found in the beginning of the universe (Big Bang) and is preserved and condensed throughout spacetime.

This theory is based on the study of the changes between one hexagram and the next. By studying the King Wen sequence (the oldest known sequence of hexagrams in *I Ching*), McKenna discovered fractal cycles (self-similar) based on periods divisible by 64 (the number of hexagrams), i. e. each level is 64 times lower than the previous one. In each cycle the amount of novelty is preserved. Time is a fractal wave of novelty.

According to McKenna, time is accelerating, all the information generated over thousands of years is being compressed successively, and time will be unified (or will experience maximum condensation) on December 22, 2012, date that coincides with the end of the sacred Mayan calendar (*Tzolkin*). This date is called "Point Zero". At this point time collapses and change feeds itself, i. e. everything that happens is new in the absolute sense. In a normal change the new state is different from the previous one, but it is relative because it may have occurred before. At Zero Point, everything that happens is new (not happened before), everything is connected. It is a state of synchronicity of matter and spirit. It is a state in which the level of novelty reaches its maximum value.

The Zero Point is a point of pure consciousness of wholeness and maximum connectivity and creativity. It is a continuous process, where everything that emerges is self-organized in new and creative ways. The date of the Zero Point is interpreted as a change of epoch, of paradigm of consciousness, of a new type of time. The Zero Point can be identified with pure consciousness, where time does not exist, disappears.



In Taoism, the state of pure consciousness is called *Wu Chi*. It is the state of pure consciousness, empty, formless, and the source of all creativity. When we connect with *Wu Chi*, we are in the *Tao* and all

creativity. When we connect with *Wu Chi*, we are in the *Tao* and all creativity comes naturally. The opposite of the *Wu Chi* (empty) is *Tai Chi* (the external dual manifestation). *Wu Chi* is symbolized by an empty circle (and by the number 0) and *Tai Chi* by the fractal symbol of *yin* and *yang* (and by the number 1).

### Addenda

### The I Ching Consultation

It is usually done by three coins, which are tossed six times, one for each line (bottom-up). If we call A=head=yang and B=tail=yin, the possible combinations are:

Coins	Interpretation	Line type	New line (Hexagram 2)
AAA	Old yang	Changing	Young yin
AAB	Young Yang	Fixed	Young yang
ABB	Young yin	Fixed	Young yin
BBB	Old yin	Changing	Young yang

### I Ching and Science

On a scientific level, due to its fascinating parallelisms, the *I Ching* has been related to the mysteries of the quantum world (level 1), to the genetic code (level 2) and to the macrocosm (level 3). This suggests a correspondence or analogy between the internal and external phenomena, superior and inferior, where the 8 trigrams would represent the structural base of all phenomena, which would only be manifestations of a universal or archetypal organizational pattern.

The *I Ching* also symbolizes the creation of the universe. The 1 (the unit) becomes 2 (*yin-yang* duality), which in turn produces 4 (the 4 dimensions or directions: cardinal points, solstices, corners of the universe, etc.), then 8 (the trigrams) and then 64 (the hexagrams).

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### Jung and the I Ching

Jung met the *I Ching* through his friend Richard Wilhem, the translator of the Chinese text into German. Jung wrote the foreword to the 1948 edition. After studying the ancient Chinese text, Jung deduced that it was precisely the superior or transcendental reality that he had sensed unifies everything that exists and where all phenomena have full meaning.

According to Jung, the *I Ching* is based on a principle he called "synchronicity", a principle of acausal connection in which archetypes are expressed by synchronizing the inner and outer world, the physical and the psychic.

### The I Ching and the DNA

DNA is a double helix molecule located in the nucleus of cells. Each helix consists of a sequence of elements called nucleotides, which in turn consist of three fixed elements and one variable (nitrogen base). The bases store the DNA information and there are 4 types: A (Adenine), T (Thymine), C (Cytosine) and G (Guanine), so that the bases A and T are always linked between the two helixes, as well as the bases C and G. There are  $4^3 = 64$  different "words" formed with these 4 codes. The two strands of the helix are complementary at base pair level.

In 1968, Marie-Louise von Franz –a disciple and collaborator of Jung– published an essay (in an anthology of psychology articles entitled "Symbol des Unus Mundus") in which she suggested the possible analogy or structural correspondence between *I Ching* and the DNA code. But it was Martin Schönberger [1979] (from the following year) who discovered the parallels between the two systems. Johnson Faa Yan [1993] later expanded on these findings.

### The analogies are as follows:

- 1. Both are based on polarities: *yin-yang* (*I Ching*) and vertical up-down orientation (DNA).
- 2. Both are composed of 4 basic elements. In the *I Ching* they are *yin* and *yang*, in their static and dynamic variants, grouped in pairs. In DNA there are 4 "letters" available (A, T, C and G), also grouped in pairs (A-T and C-G).
- 3. Three of these elements form a triplet: a trigram (*I Ching*) or a genetic code called "codon" (DNA).
- 4. The reading direction of the codes in both systems is perfectly determined.
- 5. There are 64 pairs of trigrams (*I Ching*), which make up all the posible archetypal states. There are 64 possible combinations of 3 nucleotides or word pairs (DNA) with which all living beings are built.
- 6. Two of these triplets have a name: beginning and end. In the case of DNA, they serve as punctuation separators between code sequences. In *I Ching*, hexagrams 63 and 64 have a similar function.
- 7. In recent years a new branch of genetics has emerged called epigenetics, whose essence is the change of DNA itself, as in the *I Ching*.

Thus, it can be affirmed that the I Ching explains the dynamics of consciousness and that DNA explains the dynamics (the functioning) of life (metabolism).

#### The *I Ching* and the disciplines

The *I Ching* is used in Taoist meditation, as well as in other disciplines such as Chi Kung, Tai Chi, Feng Shui and Chinese medicine (acupuncture).

The trigrams, as archetypes, are made accessible to the consciousness and the physical body through physical exercises such as the Pa Kua, of Tai Chi. There is one Tai Chi exercise associated with each trigram.

#### The I Ching in the Basilica of Pilar de Zaragoza

One of the hexagrams of the *I Ching* is represented on the domes of the lateral naves of the Pilar de Zaragoza Basilica: the Wei Chi, which is made up of 6 continuousdiscontinuous alternative lines, which is the union of the two trigrams representing fire and water, respectively. This hexagram appears 64 times repeated on the outer part of the dome of the Basilica. The Pilar thus houses a unique vestige of Taoist symbolism in a western temple.



Dome of the Basilica of Pilar

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