



Chapter 2: The rhythms of the dance

The ideas of rhythm and dance naturally come into mind when one tries to imagine the flow of energy going through the patterns that make up the particle world. Modern physics has shown us that movement and rhythm are essential properties of matter; that all matter, whether here on Earth or in outer space, is involved in a continual cosmic dance.

Fritjof Capra, *The Tao of Physics*

The mechanistic Newtonian view of the universe dominating the modern Western tradition is based on the assumption that ‘the cosmos itself [is] a giant clockwork — possibly, as for Descartes, wound up and supervised by God — that could be truthfully explained by a mechanical model (and only validly explained by a mechanical model)’ (Leshan & Margenau 1982:6). According to this world view, the whole universe, like a huge machine assembled from a multitude of different objects, is set in motion and governed by immutable laws of motion. The dominant Cartesian-Newtonian cosmology of the nineteenth and early twentieth centuries gives Westerners confidence in science as presenting the most realistic and reliable world picture and true knowledge, even though this is limited to technical information about natural phenomena.

The search for truth or ultimate foundation has been at the heart of the projects of science and philosophy in the West. Logic and reason are regarded as main tools in formulating philosophical means of understanding the phenomenal world. However, the exploration of modern physics in the twentieth century has given rise to a growing understanding of the fact that nothing seems to answer our longing for truth as a stable and reliable rock on which we can secure our thoughts and actions. H. I. Brown (1987:230) points out that ‘it has become progressively clearer that the sciences cannot provide certainty and have no a priori foundation.’ The supremacy of logic and rationality in science and philosophy has been shaken. In this light it seems impossible for philosophy and science to fulfil their traditional role in providing answers to questions about ultimate reality. This state of affairs seems to imply that there is something wrong somewhere in Western belief. Nietzsche envisions this inevitable emergency of our time. His attack on the search for truth and his demand for a self-examination of science are always the main tasks in his writing.

Holding a mechanical world view, some Westerners might regard the *I Ching* as alien. Through adopting a holistic world view and through an understanding of



Nietzsche's critique on the metaphysical philosophical tradition and science may lead one to appreciate the wisdom of the *I Ching* and the Chinese sensibility. Other themes — Nietzsche's critique of language, the numbers dealt with in the *I Ching* and the Chinese writing system, involving the external impact on individuals — are also explored in this chapter.

2.1. The truth game

What are man's truths ultimately? Merely his *irrefutable* errors. (GS 265)

For more than two millennia the *I Ching* has been appreciated as a book of divination in China, yet it appears bizarre and difficult to understand to many Western readers because of its apparently incomprehensible symbols and cryptic sayings. H. Wilhelm (1995:8) introduces the *I Ching* to his audience in this way:

This book is difficult to understand; it is so full of cryptic sayings and seemingly abstruse matters that an explanation is often not readily available, and we are tempted to fall back on interpretation to get at the meaning. To us children of an essentially rational generation it poses a problem we are at first reluctant to face; we are led into a region in which we do not know the terrain, and which we have forbidden ourselves to enter except possibly in rare moments of imaginative daring. We ask ourselves if what we are to meet there is not a kind of speculation that lacks any connection with our world.

The different world views of the Chinese and the Westerners seem to be responsible for the difficulty the *I Ching* poses to the modern rational Western mind insisting on a mechanical interpretation of the natural world and life. The ancient Chinese world view emphasizes movement and change in the natural world, developing a system of symbols in the *I Ching* to express the dynamic patterns which are constantly formed and dissolved again in the cosmic flow of the Tao. The authors of the *I Ching* hold a conviction that Tao embraces all, so that everything, through being interrelated and interdependent, belongs to the indivisible whole, and is the manifestation of Tao. 'Therefore they fathomed the tao of heaven and understood the situations of men. Thus they invented these divine things in order to meet the need of men' (1950:317). They compiled the *I Ching* in order to reveal the Tao. Therefore with its help its reader can meet everything in the right way. While the Chinese enjoy consulting the

oracle of the *I Ching* for their destiny, many Westerners might doubt the rationality of this book of wisdom and consider it as ‘a kind of speculation that lacks any connection with our world.’

The modern Western sensibility emphasizes rationality, objectivity and truth, and thus disregards the *I Ching* as simply an imaginative and unscientific work. Modernist scientists search for the basic laws of nature, regarded as invariable and eternal, by which the natural world is governed. Isaac Newton regards the laws he discovered as ‘manifestations of God’s perfection’ (Zukav 1979:28). Capra (1975:286) notes that ‘Newton’s universe was constructed from a set of basic entities with certain fundamental properties, which had been created by God and thus were not amenable to further analysis.’ In this mechanistic view of nature, the giant cosmic machine of the universe is considered as being entirely causal and determinate. All that happens has a definite cause and brings about a definite effect, so that we should be able to predict the future of any part of the system if we knew the details of its state.

Many scientists in Nietzsche’s time regard Newtonian laws as divine. Apart from these scientists who make an effort to find out and to prove the laws which govern the natural world, the metaphysical philosophers also search for the truth in terms of the human faculty of reason. Nietzsche observes how ‘man projects his drive to truth, his “goal”, outside himself as a world that *is*, as a metaphysical world, as a “thing-in-itself”, as an already existing world’ (WLN 9[91]). Nietzsche’s critique of language and science can be shown to throw some light on the differences between the Chinese and the Western sensibilities.

D. L. Hall (in Deutsch & Bontekoe 1997:214) indicates that ‘one of the fundamental contrasts noted by both Chinese and Western scholars is that suggested by the Western quest for “truth” and the Chinese search for the “way.”’ The Chinese hold a dynamic world view which is based on the awareness of the unity and interrelation of all earthly things, as well as the experience of all phenomena in the world as various transitory stages in the ever-flowing Tao. Thus, they are concerned with the interrelationships of things and events in transient human existence, asking the questions: ‘How is life to be lived?’ or ‘How may I realize the Way (*Tao*)?’ The Westerner is interested in the ‘basic building blocks’ of matter, asking the question: ‘What kinds of things are there?’ and responds by providing an idea of the ‘basic stuff’ of which the world and all matter is made. Apart from the scientists who are



considered to be able to provide an answer to the question as to the nature of matter, many wise men of the West also commit themselves to the same investigation from a philosophical or religious point of view.

The mechanistic Newtonian world view remains the standard assumption until the early decades of the twentieth century. The study of the subatomic world later in the twentieth century, however, might contribute to an understanding of the *I Ching* and of the basic contrast between the Chinese and the Westerners. The classical notion of composite 'objects' consisting of a definite set of 'constituent parts' cannot be applied to the world of subatomic particles. The natural assumption that objects, like 'particles', are real things that perform their movement in space and time according to causal laws, is abandoned by quantum mechanics. Zukav (1979:19) explains that 'a "quantum" is a quantity of something, a specific amount. "Mechanics" is the study of motion. Therefore, "quantum mechanics" is the study of the motion of quantities. Quantum theory says that nature comes in bits and pieces (quanta), and quantum mechanics is the study of this phenomenon.' Modern physics pictures matter as being in a continuous dancing and vibrating motion whose rhythmic patterns are determined by molecular, atomic and nuclear structures, rather than as passive and inert. Capra (1975:225) provides the following description of the subatomic world:

The exploration of the subatomic world in the twentieth century has revealed the intrinsically dynamic nature of matter. It has shown that the constituents of atoms, the subatomic particles, are dynamic patterns which do not exist as isolated entities, but as integral parts of an inseparable network of interactions. These interactions involve a ceaseless flow of energy manifesting itself as the exchange of particles; a dynamic interplay in which particles are created and destroyed without end in a continual variation of energy patterns. The particle interactions give rise to the stable structures which build up the material world, which again do not remain static, but oscillate in rhythmic movements. The whole universe is thus engaged in endless motion and activity; in a continual cosmic dance of energy.

The dance of the subatomic world involves an enormous variety of patterns revealing order. This corresponds to the ever-flowing pattern of the Tao expressed as natural order in the sixty-four hexagrams of the *I Ching*. The characteristics of the subatomic world also show rhythm, movement, and constant change, following very definite and clear patterns. The tendency of subatomic particles is to react to confinement with motion. 'The smaller the region of confinement, the faster will the particle "jiggle"



around in it. This behaviour is a typical “quantum effect” (Capra 1975:192). This suggests a basic restlessness of matter. In the collision experiments of high-energy physics, the primary colliding particles are always dissolved and several new particles are formed which go through either further collisions or decay. Scientists observe a continual flow of energy through a great variety of particle patterns in a rhythmic dance of creation and destruction.

Constantly changing patterns rather than substance in particle movements seems to suggest the Chinese world view of the Tao rather than the Western quest for truth. Particle interactions, oscillating in rhythmic movements, ‘give rise to the stable structures which build up the material world’ (Capra 1975:225), as noted earlier. Capra (1975:203) indicates that ‘atoms consist of particles and these particles are not made of any material stuff. When we observe them, we never see any substance; what we observe are dynamic patterns continually changing into one another — a continuous dance of energy.’ In particle experiments physicists have found that the universe is characterized by an eternal dynamic changing process. In order to divide matter and to study the properties of particles, physicists attempt to make subatomic particles collide, using high energies. However, they cannot obtain smaller pieces, because they ‘just create particles out of the energy involved in the process. The subatomic particles are thus destructible and indestructible at the same time’ (Capra 1975:78). Capra (1975:78) remarks about this paradox that

we adopt the static view of composite ‘objects’ consisting of ‘basic building blocks’. Only when the dynamic, relativistic view is adopted does the paradox disappear. The particles are then seen as dynamic patterns, or processes, which involve a certain amount of energy appearing to us as their mass. In a collision process, the energy of the two colliding particles is redistributed to form a new pattern, and if it has been increased by a sufficient amount of kinetic energy, this new pattern may involve additional particles.

The characteristics of the subatomic world require that the assumption about composite ‘objects’ consisting of ‘basic building blocks’, should be reconsidered. The basic patterns of matter are subatomic particles which are not ‘objects’, according to quantum mechanics. Subatomic particles do not exist with certainty at definite places, but only show “tendencies to exist” or “tendencies to happen.” How strong these tendencies are is expressed in terms of probabilities. A subatomic particle is a “quantum,” which means a quantity of something. What that something is, however,

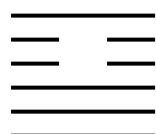


is a matter of speculation’ (Zukav 1979:32). Since physicists have discovered that mass, as a form of energy, is no longer linked to material substance, subatomic particles cannot be seen as consisting of any basic ‘stuff’, but as bundles of energy. Energy is linked to processes, implying that the nature of subatomic particles is intrinsically dynamic. Subatomic particles, created experimentally in collision processes exist for less than a millionth of a second. The short-lived particles represent transitory patterns of dynamic processes. In this sense the traditional Western priority of asking the question, ‘What?’, becomes less relevant than asking the question, ‘How?’, as of more importance in Chinese tradition.

The notion of imitating the Tao of heaven and following the Tao of earth and the Tao of man, as emphasized in the *I Ching*, appears to be the truth to the traditional Chinese mind. Truth, in this context, relates to proper adaptation to one’s society and to the web of human relationships. Truth as perceived by the Chinese is interpreted by Hall (in Deutsch & Bontekoe 1997:218) in this way:

‘Truth’ involves a trust in the quality of one’s relationships. It is the capacity to foster productive patterns of relationship within one’s natural, social, and cultural context, enabling one to enhance the possibilities of one’s enviroing conditions in order to realize themselves fully, while at the same time maintaining one’s own integrity as a unique and viable member of ‘the ten thousand things’.

For the ancient Chinese thinkers, ‘truth’ might probably be interpreted as the knowing of the Way or *Tao* and its practice in daily life by each individual according to their environment. Confucius (1993:54) says: ‘When the Way prevails in the state, be enterprising in speech and enterprising in action; but when the Way does not prevail in the state, be enterprising in action but prudent in speech.’ Confucius often speaks of Tao as a way of life and his use of the word ‘is essentially ethical in meaning, denoting the principle of truth, particularly, the right way of living’ (Liu 1955:152-153). The traditional Chinese thinkers advocate the cultivation of the Tao in daily life. Hall (in Deutsch & Bontekoe 1997:216) calls this ‘the “pragmatic” understanding of truth that best approximates the Chinese sensibility.’ This pragmatic understanding of truth is denoted in the hexagram *Ta Ch’u/The Taming Power of the Great*:



above KÊN KEEPING STILL, MOUNTAIN

below CH’IEN THE CREATIVE, HEAVEN



The upper trigram of this hexagram is *Kên*, 'Keeping still'. The attribute of its image, mountain, indicates firmness and genuineness. The lower trigram is *Ch'ien*, 'The Creative'. Its image, heaven, refers to strong creative and true power. Both trigrams 'point to light and clarity and to the daily renewal of character. Only through such daily self-renewal can a man continue at the height of his powers' (1950:104). Thus the 'Commentary on the Decision' of this hexagram notes:

THE TAMING POWER OF THE GREAT. Firmness and strength.
Genuineness and truth. Brilliance and light. Daily he renews his virtue.
(1950:515)

Nietzsche's notion of truth seems to side with the Chinese pragmatic truth, rather than with the modern Western philosophical tradition. He favours a pragmatic criterion for truth in life rather than a notion of truth deriving from reasoning. He indicates that 'a person's happiness is dependent upon the fact that somewhere there exists for him a truth which is *not debatable*: a crude example is the well-being of one's family considered as the highest motive for action' (*PB* 46). Nietzsche urges us to reconsider the value of life over and above 'truth', by asking the questions: 'What in us really wants "truth"?' (*BGE* 1), 'What does truth matter to human beings!' (*U* 19[175]). He distinguishes two different views of life, 'the *over-fullness of life*' and 'the *impoverishment of life*' (*GS* 370). The former 'is richest in the fullness of life,' and implies that 'what is evil, absurd, and ugly seems, as it were, permissible, owing to an excess of procreating, fertilizing energies that can still turn any desert into lush farmland' (*GS* 370). Conversely, the latter seeks 'a certain warm narrowness that keeps away fear and encloses one in optimistic horizons' (*GS* 370). For Nietzsche, different ideas of truth might apply to different views of life. With reference to his notion of the Will to Power, he believes that the view of an over-fullness of life involves the excessive strength of one's will power, whereas that of an impoverishment of life represents a weak will power. Thus he rejects the modern Western traditional standard of truth, because his standard of truth is that it is valid for one who implements it successfully to increase power, but false for one who fails to do so. R. H. Grimm (1977:38) indicates that for Nietzsche, 'truth is a function of the increase of power, and this is the only "standard" for judging the "truth" or the vital value of anything.' In this sense Nietzsche's interpretation of the notion of truth differs from the modern Western traditional conception.



According to the modern Western tradition, “truth” is the epistemic designation of ultimate privilege, the highest sanction to be bestowed upon a belief. Having been baptized “True”, a belief is no longer subject to question, revision or reinterpretation’ (Schrift 1990:152). Many thinkers are concerned with a reality beyond appearance, searching for a standard in accordance with which various things might be measured. Nietzsche criticizes this emphasis on ‘truth’:

What then is truth? A movable host of metaphors, metonymies, and anthropomorphisms: in short, a sum of human relations which have been poetically and rhetorically intensified, transferred, and embellished, and which, after long usage, seem to a people to be fixed, canonical, and binding. Truths are illusions which we have forgotten are illusions (*WL 1*).

Nietzsche’s point is that language rests upon the metaphorical translation of actual experiences into images, words and concepts. Language, by its very nature, is incapable of telling us anything about things as they really are. However, as we forget the origin of our language, we lay claim to some sort of truth about the real world which does in fact not mirror reality at all. In this sense, to Nietzsche, truth appears to be simply an illusion, a lie. He defines a lie as ‘wishing *not* to see something that one does see; wishing not to see something *as* one sees it’ (*A 55*). He believes himself to be ‘the first to *discover* the truth by being the first to experience lies as lies’ (*EH Destiny 1*). Nietzsche states that we have, for millennia, looked upon the world ‘with blind desire, passion, or fear’ (*HAH I 16*), so that ‘we have arranged for ourselves a world in which we can live’ (*GS 121*), by inventing signs and formulas, with the help of which we may reduce the swirling complexity of life in order to endure it. The demand for truth is juxtaposed with the necessity of illusion. For Nietzsche, truth is only another name for illusion: ‘Truths are illusions which we have forgotten are illusions.’ Truth cannot be known in terms of language, which is abstraction consisting of a system of concepts, metaphors and symbols which form a partial map of reality.

Nietzsche indicates that ‘to be truthful means to employ the usual metaphors’ (*WL 1*), explaining that ‘a uniformly valid and binding designation is invented for things, and this legislation of language likewise establishes the first laws of truth’ (*WL 1*). His point is that language is nothing but metaphor. We have the power to make the ‘appropriation of an unfamiliar impression by means of metaphors. Stimulus and recollected image [are] bound together by means of metaphor’ (*P 148*). Thus we



communicate. Language is a means necessary for communication. In order to be communicable something needs to be fixed, simplified, specifiable, and 'it must be experienced in a *trimmed* form, as "*recognisable*" (WLN 9[106]). The human intellect trims the chaotic material perceived by the senses to become similar, subsumed under related headings. We logicize the world of 'phenomena' as 'the trimmed world which we *experience as real*' (WLN 9[106]). We become liars who 'use the valid designations, the words, in order to make something which is unreal appear to be real' (WL 1). We immerse ourselves in linguistic conventions, believing that we have a logical scheme to measure the things directly before us as mere objects and thus employ language against the awareness of a universe hostile to us. Nietzsche reminds us that we do not only designate things with words and concepts, but 'we think originally that through them we grasp the *true* in things' (WS 11).

Nietzsche states that 'by making of logic a criterion of *true being*, we are well on the way to positing all those hypostases – substance, predicate, object, subject, action, etc. – as realities: i.e., to conceiving a metaphysical world, i.e., a 'true world' (- *but this is the illusory world once again...*)' (WLN 9 [97]). Logic is generally regarded as a valid tool in formulating philosophical notions. Nietzsche, however, questions this *principle of non-contradiction* as the final and most fundamental one upon which all proofs are based. He criticizes the sensualist prejudice

that I cannot say at the same time of one and the same thing that it is *hard* and it is *soft* (the instinctive proof 'I cannot have two opposite sensations at the same time' – *quite crude and false*). The conceptual ban on contradiction proceeds from the belief that we *are able* to form concepts, that a concept doesn't merely name what is true in a thing but *encompasses* it ... In fact *logic* (like geometry and arithmetic) only applies to *fictitious truths that we have created*. Logic is the attempt to understand the real world according to a scheme of being that we have posited, or, more correctly, the attempt to make it formulatable, calculable for us... (WLN 9[97]).

Nietzsche's critique of logic is supported by certain facts about the human brain. Our brain is divided into two halves which are connected at the centre of the cerebral cavity by tissue. The left side of our brain functions in a different manner from the right side. Each of the two parts of our brain perceives the world in a different manner. The left hemisphere is regarded as 'rational', but the right hemisphere is 'irrational'. Zukav (1979:39) indicates that

The left side of our brain perceives the world in a linear manner. It tends to organize sensory input into the form of points on a line, with some points coming before others. For example, language, which is linear (the words which you are reading flow along a line from left to right), is a function of the left hemisphere. The left hemisphere functions logically and rationally. It is the left side of the brain which creates the concept of causality, the image that one thing causes another because it always precedes it. The right hemisphere, by comparison, perceives whole patterns.

Because the right hemisphere controls the left side of the body, and the left hemisphere controls the right side of the body, we ‘associate the right hand (left hemisphere) with rational, male, and assertive characteristics and the left hand (right hemisphere) with mystical, female, and receptive characteristics’ (Zukau 1979:40). The left and right hemispheres of the brain function in different ways, revealing the yin/yang relationship. The principles of yin and yang on which the *I Ching* is based can thus be regarded as being asserted by biological fact. Zukav (1979:40) indicates that ‘The Chinese wrote about the same phenomena thousands of years ago (yin and yang) although they were not known for their split-brain surgery.’

According to Nietzsche, man considers the human intellect as the central consciousness of the universe, regarding himself as ‘a “*rational*” being’. Nietzsche notes that man

now places his behaviour under the control of abstractions. He will no longer tolerate being carried away by sudden impressions, by intuitions. First he universalizes all these impressions into less colourful, cooler concepts, so that he can entrust the guidance of his life and conduct to them. Everything which distinguishes man from the animals depends upon this ability to volatilize perceptual metaphors in a schema, and thus to dissolve an image into a concept. (WL 1)

The passage indicates that we logicize our chaotic sensory impressions in terms of abstract concepts. Nietzsche points out that ‘abstractions are metonymies, i.e. substitutions of cause and effect. But every concept is metonymy, and knowing takes place in concepts’ (P 11). Nietzsche’s point is that concepts trim the context of the immediate experience in which they arise, so that they are divorced from the changing stream of life in which they function. After long usage we mistake a maze of concepts as ‘fixed, canonical, and binding’ and we are unaware that its nature is as fragile and airy as a spider’s web. Nietzsche criticizes the way we degrade and negate this constantly changing phenomenal world and long for an immutable transcendent



world. Nietzsche disparages our ‘construction of a pyramidal order according to castes and degrees, the creation of a new world of laws, privileges, subordinations, and clearly marked boundaries’ (WL 1). This represents to us a regulative and imperative world which is firmer, more universal, more human than the immediately sensuously perceived world. Yet, according to Nietzsche, this spider’s web is constructed on running water — on an unstable foundation, because we forget that the original perceptual metaphors are metaphors and mistake them for the things themselves. He states that ‘we operate only with things that do not exist: lines, planes, bodies, atoms, divisible time spans, divisible spaces. How should explanations be at all possible when we first turn everything into an *image*, our image!’ (GS 112) Nietzsche mentions as an example of this form of reasoning the definition of a mammal. After having inspected a camel, one declares ‘look, a mammal’, and thus brings a truth to light. Nietzsche, however, argues that

it is thoroughly anthropomorphic truth which contains not a single point which would be ‘true in itself’ or really and universally valid apart from man. At bottom, what the investigator of such truths is seeking is only the metamorphosis of the world into man. He strives to understand the world as something analogous to man, and at best he achieves by his struggles the feeling of assimilation. (WL 1)

E. Blondel (1991:134) states that ‘for Nietzsche, what we grasp are things, which exist not in themselves, but are linked to one another according to concepts isolated in them by language. Language is therefore the *a priori* of all thought. This is so much so that we are no longer even aware of the limits between thought and language.’ Nietzsche’s point that ‘even one’s thoughts one cannot reproduce entirely in words’ (GS 244) shows his awareness of the limitation of language. He states that ‘language and the prejudices upon which language is based are a manifold hindrance to us when we want to explain inner processes and drives: because of the fact, for example, that words really exist only for *superlative* degrees of these processes and drives; and where words are lacking, we are accustomed to abandon exact observation because exact thinking there becomes painful.’ He concludes that ‘we are none of us that which we appear to be in accordance with the states for which alone we have consciousness and words, and consequently praise and blame’ (D 115). According to Nietzsche, ‘words are acoustical signs for concepts,’ and ‘one also has to use the same words for the same species of inner experiences; in the end one has to have one’s



experience in *common*' (BGE 268). All words are simply interpretations of our inner experiences, interpretations needed in order to communicate with one another. This interpretation is an effort 'to collect material, to conceptualize and arrange a vast realm of subtle feelings of value and differences of value which are alive, grow, beget, and perish' (BGE 186). Nietzsche is aware of the inadequacy of our language to express ultimate reality and our experiences of the perpetual flux of existence. Perhaps the metaphor of 'pointing a finger at the moon', in the *Surangama Sutra*, may serve to illustrate Nietzsche's point of view:

This is like a man pointing a finger at the moon to show it to others who should follow the direction of the finger to look at the moon. If they look at the finger and mistake it for the moon, they lose (sight of) both the moon and the finger. Why? Because the bright moon is actually pointed at; they both lose sight of the finger and fail to distinguish between (the states of) brightness and darkness. Why? Because they mistake the finger for the bright moon and are not clear about brightness and darkness. (2005:60)

Nietzsche seems to urge us to look at the moon, i.e. the natural world and life, but not to analyse the finger, i.e. language, which is only a tool to make sense of life and physical reality. His major concern about truth with reference to language may be summarized by Grimm's (1977:107) comment:

Nietzsche is concerned with how well our linguistic constructs increase or otherwise enhance our will to power, and nothing else. He is not concerned with a word's reference or a concepts' logical content. He is exclusively concerned with how well these linguistic metaphors work for us as flexible, creative tools. Even if a concept says nothing about reality, it is useful insofar as it is a linguistic rule or connecting link between the other signs or metaphors of language.

Grimm (1977:25) states that, according to Nietzsche, truth 'is a function of activity: it is something we *do*.' Likewise, the ancient Chinese thinkers emphasize that Tao is hardly to be described in words, but has to be experienced in life. The Taoists also recognize that ultimate reality 'can never be adequately described by words, because it lies beyond the realms of the senses and of the intellect from which our words and concepts are derived' (Capra 1975:29). This is because in its basic oneness the universe is without speech. Chuang Tzu (1968:236) describes this natural state as follows: 'Heaven and earth have their great beauties but do not speak of them; the four seasons have their clear-marked regularity but do not discuss it; the ten thousand things have their principles of growth but do not expound them'. In fact, Tao is



beyond the understanding of many of us and beyond any analysis in terms of words and concepts. All things are the manifestation of Tao, which causes Chuang Tzu (1996:15) to ask: ‘As all life is one, what need is there for words?’ The notion of the basic oneness of the universe is one of the fundamental ideas in the *I Ching*. The awareness of the limitation of language to express this natural state of the universe is apparent in ‘Ta Chuan/The Great Treatise’ of the *I Ching*:

The Master said: Writing cannot express words completely. Words cannot express thoughts completely.

Are we then unable to see the thoughts of the holy sages?

The Master said: 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. Then they appended judgments and so could express their words completely. (1950:322)

The images and words of the *I Ching* work together to convey the thoughts of the holy sages, implying inadequacy on the part of our understanding. The authors of the *I Ching* recognize that speech and writing are imperfect means of representing thought, but instead of focusing on the means of communication, one should be aware of fulfilling one’s function according to the Tao as revealed in the *I Ching*:

Silent fulfillment, confidence that needs no words, depend upon virtuous conduct. (1950:324)

The authors of the *I Ching* champion ‘silent fulfillment’: that one should commit oneself to spiritual cultivation in order to attain ‘virtuous conduct’, which is more important than ‘words’. For Nietzsche too, remaining silent seems to be the best way to express the experience of the kaleidoscopic natural world which is beyond the understanding of the limited human mind. Zarathustra makes the following statement:

Do you bid me go and be silent because the *day* is coming now?

The world is deep — and deeper than day had ever been aware. Not everything may be put into words in the presence of the day. (Z III Before Sunrise)

The inadequacy of language is not only recognized by Nietzsche and the authors of the *I Ching*, but also by particle physicists. Capra (1975:159) indicates that ‘the subatomic world appears as a web of relations between the various parts of a unified whole. Our classical notions, derived from our ordinary macroscopic

experience, are not fully adequate to describe this world.’ We derive the notion of substance from the macroscopic, solid and stable, aspect of things from our everyday experiences, but at the subatomic level such a notion cannot be applied. In the high-energy collisions of subatomic particle experiments, matter appears as totally mutable. ‘All particles can be transmuted into other particles; they can be created from energy and can vanish into energy. In this world, classical concepts like “elementary particle”, “material substance” or “isolated object”, have lost their meaning; the whole universe appears as a dynamic web of inseparable energy patterns’ (Capra 1975:80). The findings of subatomic particle experiments do not only affirm that classical concepts are inadequate at the subatomic level, but also confirm the notion of the basic oneness of the universe, which notion the *I Ching* is based on.

Some people might regard the *I Ching* as a work of speculation, yet its ideas seem to correlate with those of science, as shown in the response of the Master to the question of how one is able ‘to see the thoughts of the holy sages,’ as cited earlier. Scientists employ the scientific method which requires that all theories are firmly based on experiments. In physics, knowledge is acquired through a process of scientific research proceeding in three stages. In the first stage, scientists try their best to gather experimental evidence about the phenomena to be explained. In the second stage, they correlate the experimental facts with mathematical calculations, constructing a mathematical model which, in a precise and consistent way, is used to predict further experiments. Finally, scientists will formulate a theory which interprets their mathematical model. The *I Ching* seems to exhibit these three stages. In the first stage, the holy sages observe nature to gather information and thus ‘set up the images in order to express their thoughts completely.’ In the second stage, they create the hexagrams ‘in order to express the true and the false completely.’ In the third stage, they append judgments and so can express their words completely. Readers of the *I Ching* might predict and control their destiny by consulting the oracle, demonstrated to follow a scientific method considered in the West as a rational means to attain scientific knowledge.

In Western culture, the central aim of science is the search for truth about the world we live in, and claims to truth are derived from objective procedures in science. R. Rorty (1991:35) indicates that ‘the notions of “science”, “rationality”, “objectivity” and “truth” are bound up with one another. Science is thought of as offering “hard”, “objective” truth: truth as correspondence to reality, the only sort of truth worthy of



the name.’ Investigators or researchers need to be ‘scientific’ and to arrive at their conclusions in a way worthy of the term ‘true’. They seek objective truth by using reason and scientific experiments. A scientific claim can be accepted as true if it is supported by evidence. Nietzsche, however, criticizes our faith in science: ‘Nothing could be more wrongheaded than to want to wait and see what science will one day determine once and for all concerning the first and last things and until then continue to think (and especially to believe!) in the *customary* fashion – as we are so often advised to do’ (WS 16). In this sense his critique of ‘truth’ may be applied not only to language, but also to science. He states that the construction of concepts, originally pertaining to language is ‘a labor taken over in later ages by *science*’ (WL 2). He believes that scientists work continuously on a great conceptual edifice, filling up this towering framework and arranging the anthropomorphic world:

Whereas the man of action binds his life to reason and its concepts so that he will not be swept away and lost, the scientific investigator builds his hut right next to the tower of science so that he will be able to work on it and to find shelter for himself beneath those bulwarks which presently exist. And he requires shelter, for there are fearful powers which continuously break in upon him, powers which oppose scientific ‘truth’ with completely different kinds of ‘truths’ which bear on their shields the most varied sorts of emblems. (WL 2)

According to Nietzsche, as the changing world is fearful to us, we confine ourselves to our airy shelter of language. Nietzsche’s critique is that we obtain concepts and forms ‘by overlooking what is individual and actual’ (WL 1). In fact, nature is acquainted with no forms and no concepts but ‘only with an “X”, which remains inaccessible and undefinable for us’ (WL 1). Although science is committed to the labour of investigating the true nature of things, we are not acquainted with the laws of nature, but only with its effects, that is only in its relation to other perceived laws of nature. ‘All that we actually know about these laws of nature is what we ourselves bring to them — time and space, and therefore relationships of succession and number’ (WL 1). We misinterpret the natural world within a limited human horizon because of misunderstanding nature and ourselves. Nietzsche states about this human illusion that man has

quite clearly convinced himself of the eternal consistency, omnipresence, and infallibility of the laws of nature. He has concluded that so far as we can penetrate here — from the telescopic heights to the microscopic depths — everything is secure, complete, infinite, regular, and without gaps. Science will be able to dig successfully in this shaft forever, and all the things that are discovered will harmonize with and not contradict each other. (WL 1)



Nietzsche indicates that humans strive to understand the world methodically — ‘to treat man as the measure of all things’ (*WL* 1). He rejects ‘man as the measure of the value of things, as judge of the world who in the end places existence itself upon his scales’ (*GS* 346). For Nietzsche, the search for truth is simply ‘an extravagant aberration of human vanity and unreason that for a long time was not recognized as such’ (*GS* 346). Truths are man-made devices designed to serve human vanity, the ‘*solitary* flame of vanity’ (*WL* 1) of the human intellect whose arrogance leads to deception. For Nietzsche, ‘man is by no means the crown of creation: every living being stands beside him on the same level of perfection’ (*A* 14). He compares the feeling of humans with that of the gnat to illustrate his point of view: ‘If we could communicate with the gnat, we would learn that he likewise flies through the air with the same solemnity, that he feels the flying center of universe within himself’ (*WL* 1). Nietzsche tells a fable that urges us to reflect on the human predicament and the value of facing our sure destiny — death:

Once upon a time, in some out of the way corner of that universe which is dispersed into numberless twinkling solar systems, there was a star upon which clever beasts invented knowing. It was the most arrogant and mendacious minute of world history, but nevertheless only a minute. After nature had drawn a few breaths the star cooled and solidified, and the clever beasts had to die. The time had come too, for although they boasted of how much they had understood, in the end they discovered to their great annoyance that they had understood everything falsely. They died, and in dying they cursed truth. Such was the nature of these desperate beasts who had invented knowing. (*PW*)

Nietzsche’s conception of the insignificance of the human species in the universe seems also to be apparent in an interview between Jo, god of the North Sea, and the Lord of the Yellow River in *Chuang Tzu*. Jo exclaims: ‘I sit here between heaven and earth as a little stone or a little tree sits on a huge mountain. Since I can see my own smallness, what reason would I have to pride myself?’ (1968:176). Although ancient Chinese philosophy places man in trinity with Heaven and Earth, the Tao of man requires that man should *follow* the Tao of heaven and earth. Man should be careful to follow the rhythms of nature, represented by the changing lines in the hexagrams: ‘They move inward and outward according to fixed rhythms. Without or within, they teach caution’ (1950:348). The ancient Chinese thinkers never consider man as the crown of creation, controlling the natural world. ‘Compared to



the ten thousand things, is [man] not like one little hair on the body of a horse?’ asks Chuang Tzu (1968:176-177). While many Western thinkers have made an effort to prove the divine origin of humanity, the ancient Chinese believe the way to enhance oneself begins with the realization of one’s pettiness. Jo accounts for this notion to the Lord of the Yellow River in this way:

You can’t discuss the ocean with a well frog — he’s limited by the space he lives in. You can’t discuss ice with a summer insect — he’s bound to a single season. You can’t discuss the Way with a cramped scholar — he’s shackled by his doctrines. Now you have come out beyond your banks and borders and have seen the great sea — so you realize your own pettiness. From now on it will be possible to talk to you about the Great Principle. (1968:175-176)

While Chuang Tzu employs the metaphor of a frog in a well to describe narrow-minded people, Nietzsche uses the metaphor of ‘blinding fog’ to designate deceitful human character, stating that ‘the pride connected with knowing and sensing lies like a blinding fog over the eyes and senses of men, thus deceiving them concerning the value of existence’ (*WL* 1). Nietzsche concludes that the most general effect of such pride is deception. This quality of deceit appears to be the underlying force of the search for truth. Both metaphors discussed above imply possible alternatives with regard to the value of existence, should the obstacles be overcome, *i.e.* the blindness and the well. We may be unaware that the conventional interpretation of our world is a manacle to our mind. Nietzsche’s philosophy is an attempt to undermine the metaphysical project of a ‘search for truth’ in order to convince us to open our mind and shift our ‘paradigm’ with regard to the value of existence. He claims that ‘for a man made rounded and whole by my way of thinking, “everything is at sea”, the sea is everywhere: however, the sea itself has lost depth.’ Nietzsche uses a sea metaphor to signify his hope of breaking our mind manacle. He longs for a ‘remarkable change on earth – Just as [when], through collapses, through the earth slowly breaking apart, the sea sank into the ruptures, caves and troughs and gained *depth*.’ (*WLN* 36[2]). The depth of the sea is beyond the understanding of the frog in the well. The Chinese sages do not deceive themselves in searching for the truth, but look for the way instead, the Tao of heaven and earth. Chuang Tzu (1968:236) states that ‘the sage seeks out the beauties of Heaven and earth and masters the principles of the ten thousand things.’ The Chinese intuition about the universe and life appears to be difficult to understand for those who hold a rational,



mechanical world view. Nietzsche's critique of philosophy and science might make such minds become aware of the inadequacy of the mechanical world view.

Nietzsche criticizes the mechanical model of the natural world which, from Descartes' time to the beginning of the twentieth century, has been used to interpret the universe as a great machine. He regards man as animal, stating that 'Descartes was the first to have dared, with admirable boldness, to understand the animal as *machina*', and 'our knowledge of man today goes just as far as we understand him mechanistically' (A 14). As the great machine is impersonal, its impersonality inspires scientists to endeavour to attain objective truth. They attempt to observe the external natural world objectively and impersonally: 'The concept of scientific objectivity rests upon the assumption of an external world which is "out there" as opposed to an "I" which is "in here"' (Zukav 1979:30). To observe objectively means to see the natural world as it would appear to an observer who had no prejudices about what he observed. The problem with this method is that to be 'objective' is a prejudice. It is impossible to be without a preformed opinion. Also, a scientist deliberately decides which segment of reality instead of another he would study in his experiment. This decision is a subjective expression. His decision affects his perception of reality.

Nietzsche perceives that the natural world is always in flux, changing each and every moment, so that 'the sphere of a subject [is] constantly becoming *larger* or *smaller* – the centre of the system constantly shifting' (WLN 9 [98]). He considers 'subject' as fiction, as 'the terminology of our belief in a *unity* among all the diverse elements of the highest feeling of reality: we regard this belief as the *effect* of one cause – we believe in our belief to such an extent that for its sake we imagine "truth", "reality", "substantiality" in general' (WLN 10 [19]). Nietzsche criticizes such a claim to objectivity as 'cold impersonality, where, as in all valuations, we tell something about ourselves and our inner experiences in a few words' (WLN 35 [32]). We employ words, concepts, as a means of evaluation, yet Nietzsche indicates that 'anger, hatred, love, pity, desire, knowledge, joy, pain – all are names for *extreme* states' (D115) and that we neglect the milder, middle degrees or the lower degrees, which also weave the web of our character and our destiny. Thus, we misunderstand ourselves and draw conclusions on the basis of data in which the exceptions outweigh the rules. In *Nietzsche: A Critical Life*, R. Hayman (1980:163) illustrates how Nietzsche arrives at a new understanding of objectivity: 'Previously it had been taken for granted that words could convey the objective truth about external reality; Nietzsche saw that there



can be no question of objectivity.’ Nietzsche’s critique of classical science seems to be supported by modern physics. To assert, for example, that light manifests as a wave-like or a particle-like phenomenon depends on the devices of scientists.

Zukav (1978:31) indicates that ‘according to quantum mechanics there is no such thing as objectivity. We cannot eliminate ourselves from the picture. We are a part of nature, and when we study nature there is no way around the fact that nature is studying itself.’ His claim is supported by the philosophical implication of Werner Heisenberg’s ‘uncertainty principle’ in new physics. ‘According to the uncertainty principle, we cannot measure accurately, at the same time, both the position *and* the momentum of a moving particle’ (Zukav 1979:111). Thus, when we observe a moving particle, we must *choose*, for any given moment, which one of the two properties, determinable momentum or determinable position, we wish to bring into focus. ‘If we precisely determine the position of the particle,’ Zukav (1979:111) says, ‘there is *nothing* that we can know about its momentum. If we precisely determine the momentum of the particle, there is no way to determine its position.’ The significance of the uncertainty principle is that ‘at the subatomic level, *we cannot observe something without changing it*. There is no such thing as the independent observer who can stand on the sidelines watching nature run its course without influencing it’ (Zukav 1979:112). Thus the physicist John Wheeler suggests replacing the word ‘observer’ with the word ‘participator’, because a particle physicist cannot play the role as a detached objective observer, being involved in the world he observes to the extent that he influences the properties of the observed objects. The idea of participation replaces observation in modern physics (Capra 1975:141). The participator, for the ancient Chinese thinkers, may arrive at a point where observer and observed, subject and object are indistinguishable, a state of understanding of the unity of all things, transcending the world of senses into an undifferentiated oneness. Thus Lao Tzu (1972:14) says:

Look, it cannot be seen – it is beyond form.

Listen, it cannot be heard – it is beyond sound.

Grasp, it cannot be held – it is intangible.

These three are indefinable;

Therefore they are joined in one.

Unlike the modern Western sensibility which favours an objective, disinterested attitude towards physical reality in the search for truth and which

emphasizes rational knowledge derived from the human faculty of reason, the ancient Chinese thinkers appreciate the rhythms of nature and adapt themselves accordingly. The movement of sun and moon clearly inspires the authors of the *I Ching*, as is apparent from the ‘Commentary on the Decision’ of the hexagram *Fêng / Abundance [Fullness]*:

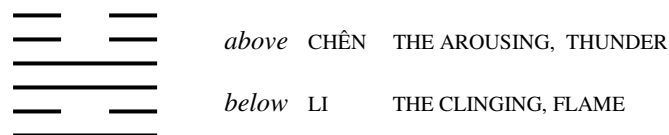
ABUNDANCE means greatness. Clarity in movement, hence abundance.

‘The king attains abundance.’ In this way greatness is emphasized.

‘Be not sad. Be like the sun at midday.’ One should give light to the whole world.

When the sun stands at midday, it begins to set; when the moon is full, it begins to wane. The fullness and emptiness of heaven and earth wane and wax in the course of time. How much truer is this of men, or of spirits and gods!
(1950:670)

In the observation of the constantly changing natural world, the ancient Chinese thinkers recognise universal laws of events and phenomena, that every increase is followed by a decrease, and fullness is followed by emptiness. Nietzsche describes to the same effect an ocean of forces, eternally changing ‘with an ebb and flood of its forms’ (*WLN* 38[12]). The authors of the *I Ching* assert that the natural world is always in flux, and that the only way to overcome the terror of changes lies in spiritual upliftment. This idea is demonstrated in this hexagram:



The hexagram *Fêng/Abundance [Fullness]* consists of the upper trigram *Chên*, thunder and the lower trigram *Li*, ‘The Clinging’, flame. Thunder symbolizes movement and flame symbolizes clarity. ‘Clarity in movement’ brings about abundance and greatness. Abundance signifies the changes of all earthly things. The hexagram pictures an upward movement in the process of development in terms of the images of thunder and flame. However, thunder, which is above, arouses shock and terror. The hexagram reminds the reader that the condition of abundance cannot be maintained immutably. Greatness at its uttermost would probably move towards the danger of regression, as after midday the sun begins to set. In this sense one should



uplift oneself spiritually by acting like the sun in giving light to all in order to overcome the continuous movement turning something into its opposite. 'There is only one means of making foundations firm in times of greatness, namely, spiritual expansion' (1950:670). The hexagram *Fêng/Abundance* reveals that change or movement is inevitable. Yet, as a result of observing and being inspired by nature, the authors of the *I Ching* show us a way to act according to the laws of nature, which is the crucial idea of the *I Ching*. For the ancient Chinese thinkers, these natural laws, as the Tao or the Way, are omnipotent and one should follow and cultivate oneself accordingly on a daily basis. Thus Mencius (1970:172) claims: 'The Way is like a wide road. It is not at all difficult to find. The trouble with people is simply that they do not look for it.' The ancient Chinese thinkers believe in self-cultivation in everyday life, so that the ever-flowing Tao would be manifested.

Unlike the Chinese thinkers, Western moral philosophers have attempted to discover firm and universal moral law by means of human reasoning. Solomon (2003:26) explains that morality is, according to Kant, 'the product of Practical Reason and as such a matter of universalised principles.' Kant attempts to establish an objective foundation for morality. The primary aim of his philosophy is to show that there is a basic, universal, objective moral law for all rational beings. Nietzsche criticizes the attempt to 'supply a *rational foundation* for morality' (BGE 186). He questions Kant's categorical imperative that there is an objective moral law grounded in pure practical reason. Nietzsche exclaims that 'even apart from the value of such claims as "there is a categorical imperative in us," one can still always ask: what does such a claim tell us about the man who makes it?' (BGE 187) On the contrary, Nietzsche asserts that 'everything in the domain of morality has become and is changeable, unsteady, everything is in flux' (HAH I 107). According to Nietzsche, it is impossible to provide a rational and static foundation for the principles of morality in a world of flux, 'in a world whose essence is will to power' (BGE 186). He criticizes the philosophers for 'aiming at certainty, at "truth", but in reality at "*majestic moral structures*"' (D P 3).

Nietzsche indicates that "'truth" turns into a *power* when we have first isolated it as an abstraction' (P 11). Rationality depends on our capacity for abstract thinking. Reason is generally considered as an instrument for determining the most effective means to a definite end. Scientists who aim at certainty and predictability are considered to be the ones capable of providing rational knowledge. The nature and



status of morality have been developed against the background of the conviction that in science at least we have clear and rigorous criteria of objectivity, truth, rationality, progress and the growth of knowledge. The scientist is considered as

the person who keeps humanity in touch with something beyond itself. As the universe was depersonalised, beauty (and, in time, even moral goodness) came to be thought of as 'subjective'. So truth is now thought of as the only point at which human beings are responsible to something nonhuman. A commitment to 'rationality' and to 'method' is thought to be a recognition of this responsibility. The scientist becomes a moral exemplar, one who selflessly expresses himself again and again to the hardness of fact. (Rorty 1991:35)

The natural sciences are considered as paradigms of rationality, and as a standard-setting sphere of culture rather than as simply an instrument of prediction and control. Yet, Zarathustra, Nietzsche's mouthpiece, teaches that 'in everything one thing is impossible: rationality' (*Z III Before Sunrise*). Nietzsche disagrees with the conviction of the universality of reason and the belief that there are universal standards and criteria of rationality. He comments that Descartes 'conceded authority to reason alone; but reason is merely an instrument, and Descartes was superficial' (*BGE* 191). He criticizes Descartes for 'a mode of thought that is fundamentally Christian-moral, which believes in a *good* God as the creator of things, it is God's truthfulness that *stands guarantor* for our sensory judgements' (*WLN* 2 [93]). His point is that if this assumption is invalid it becomes problematic to trust existence.

According to Bernstein (1983:16-18), Descartes claims to have discovered something that could serve as a foundation, a firm and permanent structure on which we could ground our knowledge. The radical implications of his *Meditations* have inspired many thinkers because of his demand that we should not rely on unfounded opinions, prejudices, tradition or external authority, but rely on the authority of reason itself. In *Meditations*, Descartes portrays a journey of the soul: a meditative reflection on human finitude through which we gradually deepen our understanding of what it really means to be limited, finite creatures who are totally dependent on an all-powerful, beneficent, perfect and infinite God. But we find that this spiritual journey is simultaneously terrifying and liberating. On the one hand, the terrifying quality of the journey is reflected in allusions to madness, darkness, and the fear of waking from a self-deceptive dream world. On the other hand, man is able to rest securely in the deepened self-knowledge that mankind is creature of a beneficent God who creates



man in his image. As we depend on God, we can be liberated from fear and anxiety. Descartes' search for a foundation is a quest for a fixed point, a stable rock on which we can secure our lives against the change that constantly threatens us. This leads us to an Either/Or premise. *Either* there is some support for our being, a fixed foundation for our knowledge, *or* we cannot escape the forces of darkness that cover us with madness, with intellectual and moral chaos. The background to Kant's inquiry into morality is an Either/Or. *Either* there is a universal, objective moral law, *or* the concept of morality is groundless and empty. Nietzsche makes a note on this in a late notebook: 'Replacement of the categorical imperative by the *natural imperative*' (WLN 9[27]).

Nietzsche condemns the 'Either/Or' premise, stating that people 'affirm some consensus of the nations, ... concerning certain principles of morals, and then they infer from this that these principles must be unconditionally binding also for you and me; or conversely, they see the truth that among different nations moral valuations are *necessarily* different and then infer from this that *no* morality is at all binding.' (GS 345). The either/or premise of morality seems an illusion. The way that we think our thoughts illusively restricts us to a paradigm of either/or. In reality, experience is never limited to only two possibilities. Zukav (1979:271) indicates that

our *conceptualisation* of a given situation may create the illusion that each dilemma has only two horns, but this illusion is caused by assuming that experience is bound by the same rules as symbols. In the world of symbols, everything is either this or that. In the world of experience there are more alternatives available.

Nietzsche's determination — "I will not deceive, not even myself"; *and with that we stand on moral ground*' (GS 344), recognizes the problem of morality. He asks about the morality problem: 'Why have morality at all when life, nature, and history are "not moral"?' (GS 344) Whether one is considered 'moral' or 'immoral', these concepts are simply human evaluations or interpretations of one's actions and, in fact, the human imagination exists in the natural world only in our limited human mind. According to Nietzsche, we arrive at the false presupposition that 'there are *identical* facts, that there exists a graduated order of *classes* of facts which corresponds to a graduated world-order: thus we *isolate*, not only the individual fact, but also again groups of supposedly identical facts (good, evil, sympathetic, envious actions, etc.)' (WS 11). Nietzsche urges that we should abandon this limited human horizon by



observing the natural world and recognize reality as it is. In a passage entitled '*Forgotten nature*', Nietzsche points out that 'we speak of nature and forget to include ourselves: we ourselves are nature' (WS 327).

Some new developments in science might throw some light on Nietzsche's point of view and perhaps such an understanding might lead us to change our paradigm to perceive the natural world as the quantum physicists do. The recognition of wave-particle duality has forced physicists into radical new ways of perceiving physical reality. Zukav (1979:65) comments on this experiment:

For most of us, life is seldom black and white. The wave-particle duality marked the end of the 'Either-Or' way of looking at the world. Physicists no longer could accept the proposition that light is *either* a particle *or* a wave because they had 'proved' to themselves that it was *both*, depending on how they looked at it.

Wave-particle duality reveals the limitations of the human horizon: 'We live out our lives in a limited situation of low velocities where the speed of sound (about 700 miles per hour) seems "fast." Therefore, our common sense is based upon our experiences in this limited environment. If we want to expand our understanding beyond the limitations of this environment, it is necessary to drastically rearrange our conceptual constructs' (Zukav 1979:147). Einstein is the first person to see that he has to do so in order to make sense of such impossible experimental findings as the constancy of the velocity of light for anyone who measures it, regardless of their states of motion. He concludes that if the velocity of light really is constant for all observers, then the measuring devices used by different observers in different states of motion must somehow differ in order to give all of them the same result. As Zukav (1979:148) observes 'the fact that moving clocks change their rhythm led Einstein to the inescapable conclusion that "now," "sooner," "later," and "simultaneous" are *relative* terms. They all depend upon the state of motion of the observer.' The findings of the special theory of relativity and quantum mechanics prove the assumptions of Newtonian physics to be quite limited, and thus compel us to broaden our mind into unimaginably expansive areas of reality.

The findings of new science seem to affirm Nietzsche's viewpoint that the world interacts with us and responds to our various devices without any absolute truth, but with the possibility of various interpretations. Nietzsche claims that 'the world [has] become "infinite" for us all over again, inasmuch as we cannot reject the possibility that it *may include infinite interpretations*' (GS 374). It follows that there is



no absolute truth to evaluate the correctness of any interpretation of the external world and our inner experiences. Newtonian physics holds true in explaining macroscopic phenomena, yet it cannot account for phenomena at microscopic level, so quantum mechanics is used to work with subatomic phenomena. Scientists have excellent grounds for taking the well-tested claims of present science to be true, yet these results remain tentative and subject to reconsideration, because the best established scientific knowledge of our day may have to be rejected, such as the Newtonian paradigm of absolute time and space has been replaced by Einstein's space-time continuum. All scientific developments are themselves the products of that very human intellect which seems incapable of grasping a final truth.

According to Nietzsche, science lacks the ability to determine the value of things: 'Science probes the processes of nature, but it can never *command* man. Science knows nothing of taste, love pleasure, displeasure, exaltation or exhaustion. Man must in some way *interpret*, and thereby evaluate, what he lives through and experiences' (WWK 199). Nietzsche believes that 'what is essential about organic being is *a new interpretation of what happens*, the perspectival, inner multiplicity which itself is something happening' (WLN 1 [128]). For Nietzsche, truth is a matter of perspective. He envisions the impact of his idea in this way: 'A great wind blows among the trees, and everywhere fruit fall down — truths. The squandering of an all-too-rich autumn: one stumbles over truths, one steps on and kills a few — there are too many' (EH TI 2). His point is that we should be aware of a phenomenal world which can be interpreted infinitely according to different interpreters in different places at different times. He states that 'if each of us had a different kind of sense perception — if we could only perceive things now as a bird, now as a worm, now as a plant, or if one of us saw a stimulus as red, another as blue, while a third even heard the same stimulus as a sound — then no one would speak of such a regularity of nature, rather nature would be grasped only as a creation which is subjective in the highest degree' (WL 1). Nietzsche rejects the conception of an independent and objective world structure, and the conception that truth consists in the satisfaction of a relationship of correspondence between a sentence and a fact. He claims that 'facts are just what there aren't, there are only interpretations' (WLN 7 [60]). For Nietzsche, 'the world is knowable: but it is variously *interpretable*; it has no meaning behind it, but countless meanings' (WLN 7 [60]). He labels this notion 'perspectivism'.



Schrift (1990:146) indicates that ‘Nietzsche puts forward the doctrine of perspectivism as an “empirical” conclusion regarding human finitude: because human beings are situated bodily at a particular point in space, time, and history, their capacity for knowledge is inevitably limited.’ Nietzsche’s perspectivism is aware of the possibility of infinite interpretation other than the Christian-moral interpretation of the world. As in Chuang Tzu’s frog metaphor, there is not only the well, but also an ocean in the natural world. The way to broaden our limited human horizon is expressed by Zarathustra when he compares man to a polluted stream: ‘One must be a sea to be able to receive a polluted stream without being unclean’ (Z P 3). As the human species is simply a part of the universe, Nietzsche attempts to make us reassess ‘the faith in a world that is supposed to have its equivalent and its measure in human thought and human valuations’ (GS 373). He critically observes about believers in the Christian faith: ‘*Not* to see many things, to be impartial at no point, to be party through and through, to have a strict and necessary perspective in all questions of value — this alone makes it possible for this kind of human being to exist at all’ (A 54). Perhaps his attack on the faith that ‘God is the truth, that truth is divine’ (GS 345) might lead the Western sensibility to become more understanding of the Chinese mind, which does not involve any faith in God. H. Chad (1993:39) refers to the cultural background of Chuang Tzu who ‘has no God to declare dead.’ Nietzsche’s slogan ‘God is dead’ (GS 125, Z P 2) might broaden the mind to perceive the world and life differently. Nietzsche employs a strategy of shock to convince us that we should not subjugate our mind to thoughtless conviction.

Nietzsche’s notorious ‘God is dead’ urges a reconsideration of the validity of the assumption of ‘Christianity as the guarantee of morality’ (TI Skirmishes of an Untimely Man 5). He indicates that Christianity ‘has truth only if God is the truth’ and he concludes that ‘when one gives up the Christian faith, one pulls the right to Christian morality out from under one’s feet’ (TI Skirmishes of an Untimely Man 5). Nietzsche defines the word ‘faith’ as ‘not *wanting* to know what is true’ (A 52), stating that ‘every kind of faith is itself an expression of self-abnegation, of self-alienation’ (A 54). He criticizes Christian doctrine ‘which is, and wants to be, only *moral*, ... with its absolute criteria (its insistence on god’s truthfulness, for example)’ (BT An Attempt at Self-Criticism 5). Nietzsche is aware of ‘its *hostility to life*, a furious, vengeful enmity towards life itself’ (BT An Attempt at Self-Criticism 5).



However, Nietzsche admits that ‘human beings need the *belief in truth*’, because ‘the belief that one possesses truth makes possible the highest and purest life’ (*U* 19 [175]). Van Tongeren (2000:8) indicates that Nietzsche ‘is more interested in what produces a healthy life than in what life really is,’ so that ‘life *is* a striving for health, growth, and self-enhancement, or as Nietzsche calls it, self-overcoming.’ In this sense Nietzsche favours an experimental approach to life in concrete action rather than a searching for truth in abstraction. He argues that ‘the value of truth must for once be experimentally *called into question*,’ and this is the task of ‘we godless men and anti-metaphysicians’ (*GM* III 24). His critique of science and the metaphysical tradition can be summarized by Brown’s (1987:230) remark that those ‘earlier thinkers believed that both science and philosophy provide certain knowledge of necessary truths. We must conclude that neither do.’

Solomon (2003:13) indicates that Nietzsche ‘is not a philosopher of abstract ideas but rather of the dazzling personal insight, the provocative comment. He does not reveal the eternal verities but he does powerfully affect his readers, goading them to see themselves in new and different ways.’ Nietzsche’s critique of science is echoed in Thomas Kuhn’s exploration of the development of science. Kuhn (1962:89) describes a ‘paradigm shift’ as a type of conversion through which one comes to see the world differently. ‘It is rather as if the professional community had been suddenly transported to another planet where familiar objects are seen in a different light and are joined by unfamiliar ones as well’ (Glick 1987:39). In *The Structure of Scientific Revolution*, Kuhn outlines the typical pattern of development in scientific inquiry. He indicates that in the controversies that arise when new and competing paradigms are proposed, there are no criteria of logical proof or any straightforward appeals to evidence that are competent to resolve the debate. Kuhn (1962:94) states that ‘this issue of paradigm choice can never be unequivocally settled by logic and experiment alone.’ He notes that ‘the normal-scientific tradition that emerges from a scientific revolution is not only incompatible but often actually incommensurable with that which has gone before’ (1962:102). The philosophical implication of Kuhn’s analysis of scientific revolution appears to be that one would see and experience reality totally differently as a result of a paradigm shift. This seems to relate to the implication of the *I Ching* that when situations require, change comes into being to meet the needs of new conditions, so that one should investigate the new environment in order to take appropriate action.

The authors of the *I Ching* are no doubt inspired by the observation of constantly changing natural phenomena and accordingly assert that change is inevitable, because the principles of yin and yang are always at work in the natural world. In the 'Ta Chuan/The Great Treatise', the parallels between the *I Ching* and the cosmos are shown:

Because of its changes and its continuity, it corresponds with the four seasons.

Because of the meaning of the light and the dark, it corresponds with sun and moon.

(1950:302)

By observing the movement of the sun, the holy sages recognize that the dark and light on the mountain or river, are due to the aspect of the sunshine. 'The term yin, the dark, and yang, the light, denote respectively the shadowed and the light side of a mountain or a river. Yang represents the south side of the mountain, because this side receives the sunlight, but it connotes the north side of the river, because the light of the river is reflected to that side. The reverse is true as regards yin' (1950:297). Thus the dark and the light are not regarded as contradictions, but as complementary aspects of the same phenomena in the *I Ching*.

In new physics a scientist from Denmark, Niels Bohr, has employed the term 'complementarity' to illustrate the wave-particle duality of light. Wave-like characteristics and particle-like characteristics are complementary aspects of light. Even though one of them always excludes the other, both of them are required for an understanding of light. Both wave-like and particle-like behaviours are properties of our *interaction* with light. Wave-like behaviour and particle-like behaviour are properties of *interactions*, depending on the scientist's choice of experiment. Properties do not belong to independently existing things, but to interactions, such as 'light'. Complementarity implies that the world does not consist of things, but of interactions. Its philosophical implication suggests that the wave-particle duality is a characteristic of *everything* (Zukav 1979:93-95). The dance of complementarity is expressed clearly in the Primal Beginning, or *t'ai chi t'u*, in the *I Ching*.¹ The symmetric arrangement of the dark yin and the light yang in the diagram indicates a rotational movement, implying that interactions of the two primal forces always take place. The two dots in the diagram 'symbolize the idea that each time one of the two forces reaches its extreme, it contains in itself already the seed of its opposite' (Capra

¹ See Appendix 2.



1975:107). This diagram expresses one of the main themes of the *I Ching*, that in the domain of nature and in that of man, when the development of anything arrives at one extreme, a reversal to the other extreme occurs. It demonstrates clearly the complementary aspects of nature.

The transformation of the forces of yin and yang is also shown in the sequences of the hexagrams. When a hexagram accounts for a favourable situation, the following hexagram will change to its opposite, an unfavourable situation, or vice versa, for example, the hexagram *Chien/Obstruction* and the hexagram *Hsieh/Deliverance*, the hexagram *Sun/Decrease* and the hexagram *I/Increase*. In 'The Sequence' it is said that 'obstruction means difficulty' (1950:579); 'things cannot be permanently amid obstructions. Hence there follows the hexagram of DELIVERANCE. Deliverance means release from tension' (1950:584). 'Through release of tension something is sure to be lost. Hence there follows the hexagram of DECREASE' (1950:589). 'If decrease goes on and on, it is certain to bring about increase. Hence there follows the hexagram of INCREASE' (1950:595). Thus, obstruction changes to deliverance, decrease to increase, similar to the alternation of dark and light, sunrise and sunset. The sixty four hexagrams can thus be regarded as representing an eternal process which embraces the patterns of change as expression of the principles of yin and yang.

According to the *I Ching*, the complementary nature of things creates a state of tension, which is the source of life, bringing forth changes which revivify everything and generate new things. This is the Tao at work. Capra (1975:106) indicates that 'in the Chinese view, all manifestations of the Tao are generated by the dynamic interplay of these two polar forces.' This is the Tao which is hidden in all events and all phenomena of the natural world. Thus, in Chapter 41 of the *Tao Te Ching*, it is noted that 'the Tao is hidden and without name. The Tao alone nourishes and brings everything to fulfillment' (1972:41). Changes, which are the effects of the interplay between the two polar opposites yin and yang, are considered natural progress in life, and are expressed by the alternation of the firm and the yielding lines in the *I Ching*. Thus, the two trigrams, *Chien/The Creative* and *K'un/The Receptive*, clearly designate the great impact of the principles of yin and yang:

The Master said: The Creative and the Receptive are indeed the gateway to the changes. The Creative is the representative of light things and the Receptive of dark things. In that the natures of the dark and the light are joined, the firm and the yielding receive form. (1950:343-344)



The importance of the principles of yin and yang is affirmed in the *I Ching*, but also appreciated in Nietzsche's philosophy. He recognizes that the seeming opposites, truth and untruth, certainty and uncertainty, are not contradictory, but rather complementary, and thus untruth or uncertainty should not be neglected as the metaphysicians neglect it. While the metaphysical philosophers are concerned with truth and certainty, Nietzsche asks: 'Suppose we want truth: *why not rather* untruth? and uncertainty?' (*BGE* 1) He criticizes 'the conception of a "true world," the conception of morality as the *essence* of the world (these two most malignant errors of all time!)' (*A* 10). He says about our self-deception that 'without the errors that repose in the assumptions of morality man would have remained animal. As it is, he has taken himself for something higher and imposed sterner laws upon himself' (*HAH I* 40). In this regard Nietzsche points out that

truth is ... not something that's there and must be found out, discovered, but something *that must be made* and that provides the name for a *process* – or rather for a will to overcome, a will that left to itself has no end: inserting truth as a *processus in infinitum*,² an *active determining*, *not* a becoming conscious of something that is 'in itself' fixed and determinate. It is a word for the 'will to power' (*WLN* 9[91]).

Nietzsche's attitude towards truth differs from that of the metaphysicians. While Nietzsche believes that truth '*must be made*' as a '*process*', the metaphysical philosophers believe that truth signals a correspondence between 'an apparent world' and 'a true world'. Their effort of searching for truth derives from the belief in an apparent/true world distinction and the assumption of a single-ordered cosmos. But Nietzsche rejects this twofold world interpretation. 'Any distinction between a "true" and an "apparent" world', Nietzsche says, is only 'a symptom of the *decline of life*' (*TI* 'Reason' in Philosophy 6). According to Nietzsche, man invents fables about a world 'other' than this one and thus degrades this natural world and its life. Thus he condemns the ascetic priest who rejects the physical world by saying 'that the world is *not worth*' (*GS* 346). Nietzsche asserts that we have interpreted the natural world 'far too long in a false and mendacious way, in accordance with wishes of our reverence, which is to say, according to our *needs*' (*GS* 346). 'It is our needs *which interpret the world*: our drives and their for and against' (*WLN* 7 [60]). The 'other world is merely assembled out of psychological needs' and Nietzsche regards it as 'an *escape*: to

² Process to infinity.



condemn this whole world of becoming as a deception, and to invent a world that lies beyond it as the *true* world' (WLN 11[99]). He points out that human beings desire 'the pleasant, life-preserving consequences of truth,' and they are hostile 'towards those truths which are possibly harmful and destructive' (WL 1). His point is that 'all valuations are only consequences and narrower perspectives *in the service of this one will*: valuation itself is only this will to power: to criticise being from the standpoint of one of these values is absurd and misleading' (WLN 11[96]). Nietzsche's notion of the 'Will to Power' proclaims the futility of searching for truth as something that is 'fixed and determinate,' a foundation of the value of life.

Nietzsche believes that it is the struggle for more power rather than 'truth' which determines the value of life. He notes that 'there is nothing to life that has value except the degree of power – assuming, precisely, that life itself is the will to power' (WLN 5[71]10). R. Schacht (1983:396) comments on this viewpoint that 'if by "life" (or "the world") one understands the fundamental and all-encompassing reality of which our existence is a part, it is not something the value of which can be judged or determined by reference to any independent criteria.' However, Nietzsche feels that 'there is an ultimate standard of value, which is to be conceived in terms deriving directly from a consideration of the essential nature of reality generally – and so of life and the world – the character of which he indicates by means of his notion of "will to power"' (Schacht 1983:396). According to Nietzsche, the value of life seems to be determined by one's ability to arrive at 'the highest *will to power*,' that is, 'to *imprint* upon becoming the character of being' (WLN 7[54]). This means that one should strive to attain a state of mind that has the quality of a mirror. Seeing this world as 'a monster of force', Nietzsche asks: 'Shall I show you [the world] in my mirror'? (WLN 38[12]) His recognition of the interplay of becoming and being, or change and changelessness, in human existence is absent from the modern Western tradition. Change, for Nietzsche, is the very quality of the world as Will to Power, and his critique on the modern Western tradition, which regards '*change* as the very essence of immorality and pregnant with disaster' (GM III 9) correlates with Chinese thought rather than with Western rationality.

Nietzsche's notion of the Will to Power expresses his awareness of the eternally changing world and the basic oneness of the universe, which bears affinity to the Chinese sensibility rather than to the modern Western philosophical tradition. His idea of the nature of life might be associated with the symbol *tai chi t'u*. The



symmetric arrangement of the yin and yang implies a continuous cyclic movement that brings about the endless changes in the universe, as in Nietzsche's 'ocean of forces storming and flooding within themselves, eternally changing' (*WLN* 38 [12]). It also implies the impossibility to find a fixed foundation, or absolute 'truth,' in this eternally changing cosmic process which gives rise to all things and events. One might perhaps regard the process itself as changeless, while the appearances, or manifestations, of the process change. Changelessness within change, as complementary aspects of nature, appears to the holy sages as an expression of the Tao. The notion of changelessness within change is expressed in the 'Judgment' of the hexagram *Ching/The Well*:

THE WELL. The town may be changed,
But the well cannot be changed.
It neither decreases nor increases.
They come and go and draw from the well. (1950:185 & 630)

In the 'Commentary on the Decision', it is said:

Penetrating under water and bringing up the water:
this is THE WELL.
The well nourishes and is not exhausted.
'The town may be changed, but the well cannot be changed,'
because central position is combined with firmness. (1950:630)

The nature of the well is the unchangeable within change and its shape remains the same from ancient times, while the town changes in its style of architecture, or is even destroyed because of changes in dynasties. The well is also a symbol of the social structure 'evolved by mankind in meeting its most primitive needs, ... independent of all political forms' (1950:186). Nations, cities, political structures change, but 'the life of man with its needs remains eternally the same — this cannot be changed. Life is also inexhaustible. It grows neither less nor more; it exists for one and for all. The generations come and go, and all enjoy life in its inexhaustible abundance' (1950:186). The well from which water is drawn remains in its place because of its firm foundation. Although the well itself does not change, it has great influence over man, because it nourishes life. The features of the hexagram in question involve nourishment required for a deep foundation of character and a perpetual connection with the source of life. The well consists of the features of change and changelessness,



which appear to be a manifestation of Tao. Such a holistic idea is embraced by Chinese sensibility with regard to the value of life. Nietzsche too holds a holistic and organic view of life rather than a mechanic one such as that of the intellects of his time. His notion of truth is apparent from the title of his book *Twilight of the Idols*: ‘What is called *idol* on the title page is simply what has been called truth so far. *Twilight of the Idols* — that is: the old truth is approaching its end’ (EH TI 1). Nietzsche’s provocative approach might break the ground for the manacle-minded to understand the wisdom of the *I Ching*.

The ancient Chinese thinkers hold a dynamic world view and believe that the multifarious earthly things are the expression of the ever-flowing Tao. The principles of dark and light, or yin and yang, are a manifestation of the Tao: ‘That which lets now the dark, now the light appear is tao’ (1950:297). The two primal powers of nature — the light and the dark — are designated in the lines of the *I Ching* as firm yang and yielding yin. The sixty-four hexagrams, consisting of yin and yang lines, are the symbols or patterns of the Tao, expressing the rhythmic, changing dance of the universe. Each of the hexagrams can change into another through the appropriate movement of the individual lines from yin to yang lines or vice versa, similar to the manifestation of the process of destruction and creation of particles in particle experiments. Truth might perhaps be interpreted, according to an understanding of the *I Ching*, in this way:

Yin + Yang	=	Tao
Change/Changelessness	=	Tao
Appearances	=	Process/Pattern

2.2. The rhythms of Chinese written language

The importance of intimate observation of Nature is not only emphasized by scientists in the West, but also in Chinese thought and is evident in their language, especially in their writing system. The Chinese have not shaped their language in the same manner as have Westerners with their dominant linear frame of reference. Nietzsche makes mention of ‘the common philosophy of grammar ..., the unconscious domination and guidance by similar grammatical functions — that everything is prepared at the outset for a similar development and sequence of



philosophical systems; just as the way seems barred against certain other possibilities of world-interpretation' (*BGE* 20). Some Westerners might consider a language like the Chinese language strange and bizarre. The Chinese ideograms 'are supposed to be outlandish, weird, devious, and as tricky as "the mysterious East"', notes Watts (1975:8). Such an attitude might perhaps appear an obstacle to understand the beauty and simplicity of the Chinese language.

The Western sensibility emphasises rational knowledge which is 'a system of abstract concepts and symbols, characterized by the linear, sequential structure which is typical of our thinking and speaking. In most languages this linear structure is made explicit by the use of alphabets which serve to communicate experience and thought in long lines of letters' (Capra 1975:27). However, the Chinese language does not make use of alphabets, but instead each Chinese character makes use of line drawings full of complex images. By using alphabets to form words and sentences, the alphabetic languages express themselves in a strictly linear fashion, while the Chinese ideographic writing system, which is a series of patterns, appears to be 'not so laboriously linear as an alphabetic language' (Watts 1975:7). The natural world is not a linear system, because it contains infinite varieties and complexities, a multidimensional world where things happen all together. Nature is a simultaneity of patterns at any given moment. Like these patterns, the pictographs of the Chinese writing system seem to be an expression of reality without assigning any human value to it in terms of a logical scheme. The beauty of the Chinese language is apparent in its characters, which can be described as patterns or pictures. The Chinese characters seemingly accord more easily with the processes of nature than words, as expressed by the Chinese proverb: a picture is worth one thousand words. Capra (1975:103) remarks with respect to the Chinese language that

the Chinese mind was not given to abstract logical thinking and developed a language which is very different from that evolved in the West. Many of its words could be used as nouns, adjectives or verbs, and their sequence was determined not so much by grammatical rules as by the emotional content of the sentence. The classical Chinese word was very different from an abstract sign representing a clearly delineated concept. It was rather a sound symbol which had strong suggestive powers, bringing to mind an indeterminate complex of pictorial images and emotions. The intention of the speaker was not so much to express an intellectual idea, but rather to affect and influence the listener. Correspondingly, the written character was not just an abstract sign, but was an organic pattern — a 'gestalt' — which preserved the full complex of images and the suggestive power of the word.



It is clear that the Chinese mind does not subjugate itself to abstract logical thinking in terms of grammatical rules, such as the designation of gender in nouns and the conjugation of verbs. Nietzsche criticizes the German language for assigning gender to ordinary nouns, complaining that ‘we separate things according to gender, designating the tree as masculine and the plant as feminine. What arbitrary assignments!’ (WL 1) Such assignments have not taken place in the Chinese language. Chinese verbs do not conjugate to specify whether a situation is past, present, or future. In fact, the same Chinese character can be used as noun, adjective or verb. A. Watts (1975:8-10) indicates that the Chinese language ‘makes no rigid distinctions between parts of speech. Nouns and verbs are often interchangeable, and may also do duty as adjectives and adverbs. When serving as nouns they do not require the ritual nuisance of gender, wherewith adjectives must agree, nor are they declined.’ The difference between Chinese and alphabetic languages indicate vastly different systems of interpreting the natural world.

Chinese characters assume a square form which seems to symbolize the all-embracing earth. According to the *I Ching*, ‘the symbol of heaven is the circle, and that of earth is the square’ (1950:13). The sixty-four hexagrams, like the Chinese characters, are also in square form. In ‘Ta Chuan/The Great Treatise’, it is said that

the nature of the yarrow stalks is round and spiritual. The nature of
the hexagrams is square and wise. (1950:316)

Spiritual force is represented by the round shape, while earthly matter is presented by the square shape. This idea is also illustrated in *Ho T'u*, the Yellow River Map.³ The 5 white dots at the centre of the diagram represent the heavenly spirit. The spirit is bounded by the 2 rows of 5 black dots above and below, representing the earthly things, facing each other and forming a square. The square, which stands for matter, is wise, because of the heavenly spirit, perceived as manifest in all earthly things. Thus the square form of Chinese writing implies the all-embracing nature of the characters, like that of the earth. It represents the reproduction of the natural world. This unique characteristic of the Chinese writing system seems to benefit an inquiring mind in exploring the very nature of rapidly changing physical reality.

³ See the diagram *Ho T'u*, or Yellow River Map, in Appendix 3.



The pictographs of the Chinese writing system derive the 'letters' of Chinese from common objects or creatures. Chinese mythology assigns the invention of writing to Ts'ang Chieh.⁴ 'It is said that he got his ideas from observing animals' footprints and birds' claw marks on the sand as well as other natural phenomena' (Wang 1993:V). The Chinese derive their writing from an intimate observation of nature. For example, by observing the characteristic of running water which always flows downward, and by understanding this unique characteristic of water as a natural law, the Chinese create the character *fa* 法, which means law and method. This Chinese character is simply a combination of two characters: 水, water, and 去, go, indicating the going or running of water. The combination of the concrete and the abstract, from the abstract imagination to the concrete form in writing, clearly shows the principles of yin and yang as the foundation of Chinese thinking.

A Mind Map might perhaps serve to alleviate the strangeness of the pictographs of the Chinese writing system to speakers of other languages. T. Buzan & B. Buzan advocate the Mind Map as an approach to learning making use of patterns or pictures. This approach involves the use of lines, pictures and words branching out under certain categories in a non-linear way. In *The Mind Map Book*, Buzan & Buzan (1993:59) refer to the Mind Map as 'an expression of Radiant Thinking' and state that 'understanding the radiant nature of reality gives an insight, not only into the nature of understanding but also the nature of misunderstanding, and consequently helps us to avoid many of the emotional and logical traps that bedevil our attempts to communicate' (1993:69). A realization of understanding and misunderstanding is crucial in radiant thinking, as the yin/yang relationship is inevitable in generating and rejuvenating all earthly things. Buzan & Buzan (1993:57) define radiant thinking in this way:

Radiant Thinking (from 'to radiate', meaning 'to spread or move in directions, or from a given centre') refers to associative thought processes that proceed from or connect to a central point. The other meanings of 'radiant' are also relevant: 'shining brightly', 'the look of bright eyes beaming with joy and hope' and 'the focal point of a meteoric shower' – similar to the 'burst of thought'.

The Chinese writing system appears as a vehicle of radiant thinking and as a note-taking of the natural world. The radiant nature of reality is shown in the ideographic

⁴ A historiographer of the legendary Yellow Emperor.



Chinese characters which always radiate from a central image to express the non-linear nature of the physical world. The richness of the pictorial images in the Chinese language is able to affect and influence its audience. Its pictographs can perhaps be identified with the Mind Map for embodying its characteristics. By using the Array typing method, the structure of the ideographic Chinese characters is illustrated by a Mind Map in Appendix 6 of this study. In the Array, Chinese characters are divided into ten categories according to the first line or the major form of each character: horizontal, anti-clockwise, vertical, intersection, clockwise, dot, lid, mustache, stroke and square. The keyboard of the computer is divided into three rows that each contains ten keys. The central row is the main part where each key represents a category, then it extends to combine with other lines to form more characters spreading to the upper and lower rows. The central row is from 'A' to ';', the upper row is from 'Q' to 'P', and the lower from 'Z' to '/'. According to Array, a maximum of 4 keys is used to attain any Chinese character. The thirty keys, which represent thirty crucial forms of the characters, produce all ideographic Chinese characters. Interestingly, the number 30 is the total sum of the earthly numbers in the *Ho T'u*, the Yellow River Map. The idea of number and measure is appreciated in the *I Ching*. The 'Image' of the hexagram *Chieh/Limitation* notes that

... the superior man
Creates number and measure,
And examines the nature of virtue and correct conduct.
(1950:232 & 696)

The authors of the *I Ching* believe that there is a definite design into which everything fits with harmony within the cosmic whole. If one knows how to meet fate according to this definite pattern, one would be sure to find the right guidance in taking action. The holy sages make use of calculable numbers to form the sixty-four hexagrams in order to express the pattern of nature, while scientists make use of mathematical models to express their findings. In the Western tradition mathematics is considered as a science with absolute validity. Scientists attempt to put what they have observed about the natural world into numbers. They attempt to simplify human experiences into formulas, but Nietzsche argues that we cannot reduce all phenomena to the human level with mathematics and formulas, stating that 'our world of experience is only a qualitative world, that consequently logic and applied logic (such as mathematics) are among the artifices of the ordering, overwhelming, simplifying,



abbreviating power called life, and are thus something practical and useful, because life-preserving, but for that very reason not in the least something “true” (*WLN* 6 [14]). His view of mathematics opens our mind to the wonder of numbers in the *I Ching*.

2.3. The wonder of the numbers

In that [the *I Ching*] serves for exploring the laws of number and thus for knowing the future, it is called revelation. In that it serves to infuse an organic coherence into the changes, it is called the work. (1950:300)

The *I Ching* is based on the thought that the future ‘develops in accordance with the fixed laws, according to calculable numbers. If these numbers are known, future events can be calculated with perfect certainty’ (1950:300). The numbers can be regarded as an expression of the laws of nature, by which to know our fate in our changing, uncertain and transient existence. The fixed laws, however, work within a context of living and changing trends. ‘In addition to [the] rigid world of number, there are living trends. Things develop, consolidate in a given direction, grow rigid, then decline; a change sets in, coherence is established once more, and the world is one again’ (1950:300). All earthly things change eternally in the process of growth and decay, but their transformations can be calculated and thus one can take appropriate action in changing situations and conditions.

According to the *I Ching*, one might attain knowledge of this eternal changing process by means of the sixty-four hexagrams. One manipulates yarrow stalks to gain knowledge of the hexagram characterizing the moment.⁵ 50 yarrow stalks are used to consult one’s destiny. An oracle is obtained by repeating the procedure of gathering together and dividing these stalks. Finally a hexagram is formed. The sixty-four hexagrams reveal the world of yin which is immutable, yet the secret of Tao in the world of yang is ‘to keep the changes in motion in such a manner that no stasis occurs and an unbroken coherence is maintained’ (1950:300). Maintaining a coherent harmony in the interplay between the world of immutable yin and the world of mutable yang is the expression of Tao. Thus, Chapter 42 of the *Tao Te Ching* says:

⁵ See p. 12-13 for obtaining a hexagram by means of the yarrow-stalk oracle or coin oracle.



The Tao begot one.
One begot two.
Two begot three.
And three begot the ten thousand things.

The ten thousand things carry yin and embrace yang.
They achieve harmony by combining these forces.
(Lao Tzu 1972:42)

In the *I Ching*, the holy sages apply the principles of yin and yang to attain numerical values, so that future events can be known by means of calculable numbers. In ‘Ta Chuan/The great Treatise’, it is said:

Heaven is one, earth is two; heaven is three, earth four; heaven is five, earth six; heaven is seven, earth eight; heaven is nine, earth ten. (1950:308)

This indicates that the odd numbers 1, 3, 5, 7, 9 are assigned to the world of heaven, while the even numbers 2, 4, 6, 8, 10 are assigned to the world of earth. The numbers of heaven and earth, odd and even, express the principles of yin and yang, which produce a hexagram in the process of manipulating the 50 yarrow stalks.

D. F. Hook (1975:32) states that ‘odd numbers are positive and considered sacred, i.e. three representing the trinity, five the number of change, seven the perfect number.’ The number 1 in the *I Ching* represents ‘the Creative \equiv , the unbroken line of yang, symbolizing singleness, union, success. As the father aspect of the trinity of the Godhead, it symbolizes power, male, goodness, success and heaven’ (Hook 1975:108). The odd numbers are positive because when we attempt to divide them into equal parts, the number 1 is left standing unaffected between the groups of equal parts, as illustrated in these numerical forms:

$$3 = 1 + \mathbf{1} + 1 \qquad 5 = 2 + \mathbf{1} + 2 \qquad 7 = 3 + \mathbf{1} + 3 \qquad 9 = 4 + \mathbf{1} + 4$$

The yin/yang relationship is revealed in terms of numbers also in the *Ho T’u*, the Yellow River Map, and the *Lo Shu*, the Writing from the River Lo.⁶ Both diagrams illustrate the yin/yang relationship which generates changes and transformation. In the ‘Ta Chuan/The Great Treatise’, the comment on the diagram *Ho T’u* reads:

⁶ See the diagram *Lo Shu*, or the Writing from the River Lo, in Appendix 5.

There are five heavenly numbers. There are also five earthly numbers. When they are distributed among the five places, each finds its complement. The sum of the heavenly numbers is twenty-five, that of the earthly numbers is thirty. The sum total of heavenly numbers and earthly numbers is fifty-five. It is this which completes the changes and transformations and sets demons and gods in movement. (1950:310)

The words ‘demons’ and ‘gods’ refer to the underlying forces of change and transformation in the cosmic dance. The earthly numbers in black dots and the heavenly numbers in white dots on the diagram signify the principles of yin and yang. Their numerological relationship as described in the passage might be summed up in Table 2 below:

Table 2: The implication of numbers

	Numbers of heaven	Numbers of earth	Total
Numerological relationship	1	2	3
	3	4	7
	5	6	11
	7	8	15
	<u>9</u>	<u>10</u>	<u>19</u>
	25	30	55
Addition of compound number	$2 + 5 = 7$	$3 + 0 = 3$	$5 + 5 = 10$ $1 + 0 = 1$
Multiplication of compound number	$2 \times 5 = 10$	$3 \times 0 = 0$	$5 \times 5 = 25$
Addition	$25 + 30 = 55$; $7 + 3 = 10$; $10 + 0 = 10$		
Subtraction	$30 - 25 = 5$		
Division by 5	$25 \div 5 = 5$ ($2 + 3 = 5$) $30 \div 5 = 6$ ($2 \times 3 = 6$)		

The 5 heavenly numbers and the 5 earthly numbers imply that the principles of yin and yang are always at work in the eternal cosmic changing process. The heavenly numbers plus the earthly numbers equal 55. When we multiply with the number 55, being five and five, we arrive at the number 25, which is also the total of the 5 heavenly numbers and the number 5, the number of change, multiplied by itself. It seems to imply that the number 25, as the spiritual force, remains unchanged in the interplay with earthly matter. The total of the earthly numbers is 30, which represents the kaleidoscopic, changing earthly matter. In the Array typing method, the total of thirty keys on the keyboard can generate all the ideographic Chinese characters. ‘If the number of changes is increased to the utmost, they determine all images on earth’



(1950:314). Perhaps, this might be interpreted in the following numerological relationship:

$$5 \quad \times \quad 3 \quad \times \quad 2 \quad = \quad 30$$

no. of change x no. of heaven x no. of earth = all earthly things

The number 3 is a heavenly number, which represents the three basic powers — the Tao of heaven, the Tao of earth and the Tao of man — in the trigrams. The number 2 is an earthly number. In the ‘Shuo Kua/Discussion of Trigrams’, it is noted that the holy sages in ancient times ‘combined these three fundamental powers and doubled them; therefore in the Book of Changes a sign is always formed by six lines’ (1950:264). As $3 \times 2 = 6$, each hexagram seems to be an expression of the yin/yang relationship also in this respect. Mysteriously, $1 + 2 + 3 = 6$ and $1 \times 2 \times 3 = 6$, and each hexagram is made of six lines to symbolize multifarious evolving events and conditions.

The Yellow River Map demonstrates the development out of even and odd numbers of the ‘five stages of change’, known as ‘*wu hsing*’ or ‘elements’. Their relationships might be summarized in Table 3 below:

Table 3: The relationship of the five stages of change

Elements	Places	Sprung from heaven	Complemented by earth	Yin/Yang relationship	
		Odd nos.	Even nos.	Addition	Subtraction
Water	North	1	6	7	5
Fire	South	7	2	9	5
Wood	East	3	8	11	5
Metal	West	9	4	13	5
Earth	Middle	5	10	15	5

The last two columns of Table 3 assert the yin/yang relationship in numerological terms. An odd number plus an even number always equals an odd number. When subtraction is made in all five stages, the number 5 is the only outcome. The numerical forms of addition and subtraction represent the phenomena of increase and decrease, or growth and decay, which are simply complementary aspects of the same reality revealed in the eternal cosmic changing process. The numerical forms reveal the yin/yang relationship. The implication seems to be that the power of heaven,



which remains unchanged in itself, might generate or transform all earthly things in the phenomenal world. When the five heavenly numbers and the five earthly numbers ‘are distributed among the five places, each finds its complement’ (1950:310). This diagram clearly pictures the complementary aspect of the natural world, as for the holy sages the five elements make up the whole universe. The idea that the number 5 is the number of change is noted in ‘Shuo Kua/Dicussion of the Trigrams’ in this way:

To heaven [the holy sages] assigned the number three and to earth the number two; from these they computed the other numbers. (1950:262)

The yin/yang relationship, revealed in heaven and earth, can be expressed in terms of numerical form as follows:

$$\begin{array}{rclclcl}
 3 & + & 2 & = & 5 \\
 \text{no. of heaven} & + & \text{no. of earth} & = & \text{no. of change} \\
 \text{change: yang (heaven)} & + & \text{yin (earth)} & = & \text{(Tao) changelessness}
 \end{array}$$

These numerical forms express the interplay of dark and bright, or positive and negative, forces. The number 5, the number of change, brings about all phenomenal changes in the universe. The yin/yang relationship can also be shown in terms of the conversion value of the number 5, because 5 converts even numbers into odd numbers, i.e. yin to yang, and vice versa. Hook (1975:22) illustrates this idea mathematically:

$$\begin{array}{rcl}
 \text{odd} & \text{even} & \\
 1 + 5 = 6 & & \text{even} \quad \text{odd} \\
 & & 2 + 5 = 7 \\
 3 + 5 = 8 & & 4 + 5 = 9
 \end{array}$$

In the *Ho T’u*, the Yellow River Map and the *Lo Shu*, the Writing from the River Lo, the number 5, represented by five white dots, occupies the centre of the diagrams. Hook (1975:32-33) discusses this presentation of the number 5 in the diagrams:

In the centre is the odd number five, positive, good, and therefore white. It is, of course, the number of change and controls the entire pattern entering the negative force and separating it into two halves, that is, dividing ten into two separate fives. This illustrates that though the positive five is capable of changing the negative force, i.e. splitting it asunder, it never changes its own nature, whereas the two negative fives, which represent the material existence, cannot be further split and therefore have not the power of change within themselves, having had the intervention of the positive in order to bring them to their present state.



The number 5 is the number of change itself, which brings about changes in all earthly things, but itself remains unchanged. The unchanged nature of the number of change is also noted by new physics.

The physicist Mitchell Feigenbaum uses an equation to calculate the ratio of convergence, $y = r(x - x^2)$, which is also used by high school students in geometry to graph a parabola. He repeats this simple calculation endlessly as a feedback loop. This means that the output of one calculation is fed back as input for the next. His concern is to see whether there is a scaling pattern inside the equation, because 'the presence of geometric convergence suggests that something, somewhere, is repeating itself on different scales' (Glick 1987:172). He knows that geometric convergence means that something in this equation is scaling. 'In an apparently unruly system, scaling meant that some quality was being preserved while everything else changed' (Glick 1987:172). He believes that some regularity lies beneath the turbulent surface of the equation. Finally, he comes up with a number to three decimal places, 4.669. He computes another equation, a trigonometric function, $x_{t+1} = r \sin \pi x_t$, and arrives at the same number 4.669. Although the two equations seem so different in form and meaning, they lead to the same result. He tries a variety of functions that all produce the same number, to five decimal places 4.66920 and as far as 4.6692016090 (Glick 1987:173-174).

Feigenbaum's discovery of universality, which involves the identical behaviour of different systems, might seem shocking to many of us. In arithmetic, we can count five and higher fractions as units and disregard the rest, so that Feigenbaum's constant, the number 4.669 or 4.6692016090, can be written as the number 5. This confirms the revelation of the *I Ching*. Glick employs a parable to stress the significance of Feigenbaum's discovery: A prehistoric zoologist investigates relationships involving the sizes of animals. He builds a scale and weighs the bears and snakes. He finds out that every snake and every bear weighs the same amount. 'They all weigh 4.6692016090. Clearly *weight* is not what he supposed. The whole concept requires rethinking' (Glick 1987:174). Scientists and philosophers have so far presupposed a concept of 'truth', but the universality of the number 5 shows that truth, or any fixed point, lies within eternal change. This is also the implication and inspiration of the number 5 in the *I Ching*. The idea that change itself remains unchanged is recognized by Nietzsche: 'In a world of becoming in which everything



is conditional, the assumption of the unconditional, of substance, of being, of a thing, etc., can only be error' (*WLN* 35 [51]). Perhaps, the number 5 can be regarded as an expression of Nietzsche's 'world of becoming'. His critique of false assumption and error is in accordance with the inspiration of the *I Ching*.

Hook (1975:33-34) indicates that the River Lo diagram 'deals primarily with thought and spiritual existence,' while the Yellow River Map 'deals primarily with the senses and the physical manifestation of the States of Change.' Both diagrams illustrate the five States of Change. In the Yellow River Map, earth is the only State of Change to be separated into two halves which face each other across the diagram. As the black five plus five of Earth add up to ten, the number 10 is the number of earth. Hook (1975:34) notes that

because five is the number of change, the earth can be divided by it into two separate fives (two being the number of yin) which when added up together make ten. As ten, therefore, the earth is capable of being divided. When it is undivided it is complete, this is why ten is the number of completion. Heaven, on the other hand, is indivisible.

In the Yellow River Map the total of heavenly and earthly numbers is 55. The number 55 is written as 5 and 5 and thus numerologically signifies 10, which numerologically consisting of 1 and 0, signifies one. The number 10 appears only in the Yellow River Map and not in the River Lo diagram. In the River Lo, the actual number of ten cannot be seen, yet it is present in the numerological relationship. This relationship of the numbers 1 and 0 is: $1 + 0 = 1$. The numbers 10, 1, and 0, appear to be three different numbers, yet they are simply different expressions of the same reality, the oneness of the Tao, which is described by Chuang Tzu (1996:97) in this way:

At the great Origin there was nothing, nothing, no name.

The One arose from it; there was One without form.

....

Being of the One is to be ultimately formless, and this formlessness is vast.

The unseen is embodied in the seen. Thus the seen/unseen as one implies the same reality. This basic oneness of the universe is recognized by the early Chinese thinkers and now also asserted by quantum physicists. Zukav (1979:48) indicates that the 'philosophical implication of quantum mechanics is that all of the things in our universe (including us) that appear to exist independently are actually parts of one all-



encompassing organic pattern, and that no parts of that pattern are ever really separate from it or from each other.’ Table 4 below is an attempt to sum up the yin/yang relationship of the River Lo diagram in a numerological way:

Table 4: The River Lo relationship

Yin/Yang relationship	Direction of movement	Numerological relationship	
		Without no. 5	With no. 5
Positive white dots	+	1 + 9 = 10	1 + 5 + 9 = 15
Number of heaven		3 + 7 = 10	3 + 5 + 7 = 15
Negative black dots	X	2 + 8 = 10	2 + 5 + 8 = 15
Number of earth		4 + 6 = 10	4 + 5 + 6 = 15

Table 4 sums up the implications of the Yellow River Map in terms of arithmetical calculation. The numbers add up to 15 in the earth section. In the *Lo Shu*, the Writing from the River Lo, ‘the numbers add up to fifteen whether they be read horizontally, vertically or diagonally, which is a well-known Chinese puzzle’ (Hook 1975:116-117). This Chinese puzzle is expressed as follows:

$$\begin{array}{ccc}
 4 & 9 & 2 \\
 3 & 5 & 7 \\
 8 & 1 & 6
 \end{array}$$

This presents an arithmetic game which embodies the wonder of nature. The number 5, which occupies the centre of the pattern, is the ineluctable control factor, because the number 5 remains in the centre as one of the components of 15. There is another significant aspect to the number 15. Each hexagram consists of six lines; the number 15 numerologically adds up to 6. The number 15 seems to represent the finite forces which bring forth the eternal infinite transformation within the natural world and the sixty-four hexagrams, consisting of six lines each, are considered as a representation of the world. Furthermore, in the hexagrams ‘the individual lines are movable and changeable (their basic numbers are nine and six), in order to give information and to settle doubts pertaining to particular situations’ (1950:317). The number 9 plus the number 6 equal 15, which seems to represent the maximum state of interplay among



all earthly things. In short, the number 15 seems to stand as symbol of the countless manifestations and interplay of all earthly things.

If 5 is subtracted from the eternal number 15, then the outcome is 10, which is the number of earth. This means that if the change factor is not applied, then all earthly things remain unchanged. However, change — the yin/yang relationship — is always at work in the natural world, as the number 5 is at the centre of the two diagrams, the River Lo and the Yellow River. In the Yellow River Map the outcome of the subtractions is always 5, as presented in Table 3. Thus the number 5 represents change as a decisive and inevitable factor in creation and transformation. The relationship of these numbers is also shown in the Yellow River Map. The number 5, the number of heaven and change, is in the centre of the diagram, and the earthly number 10 is divided into two halves, facing each other in the square with the number 5 inside. The inside 5 plus the outside 10 equal 15. The numbers 15, 10 and 5 seem to represent different qualities of nature. Furthermore, the numbers 10, 1, and 0 can be described in Nietzsche’s words as ‘a play of forces and force-waves simultaneously one and “many”’, ‘shooting out from the simplest into the most multifarious, from the stillest, coldest, most rigid into the most fiery, wild, self-contradictory, and then coming home from abundance to simplicity’ (*WLN* 38 [12]). The two numbers, 10 and 15, which are different numbers but the same reality, appear to be an expression of the changeless and changing aspects of nature.

In the *I Ching* the phenomena of change and non-change are inevitable in the natural world. While the number 5 is the number of change, the number 9 is the number of non-change, because heaven is unchangeable. It is because, numerologically, ‘no matter to what number nine is added, the figure remains unaltered’ (Hook 1975:59). When this statement is illustrated in an arithmetical form, it can be expressed as follows:

1 + 9 = 10	10: 1 + 0 = 1
2 + 9 = 11	11: 1 + 1 = 2
3 + 9 = 12	12: 1 + 2 = 3
...	...
...	...
...	...
9 + 9 = 18	18: 1 + 8 = 9



The number 5, the number of change, and 9, the number of non-change illustrate the yin/yang relationship which is the major idea in the *I Ching*. Nietzsche regards ‘both truth and untruth constantly proved to be useful’ (GS 344) and thus neither aspect can be ignored. His conception of truth/untruth seems to accord with the yin/yang relationship as the character of existence. Thus he criticizes the faith of classical science concerning the ‘unconditional will to truth’:

What do you know in advance of the character of existence to be able to decide whether the greater advantage is on the side of the unconditionally mistrustful or of the unconditionally trusting? But if both should be required, much trust *as well as* much mistrust, from where would science then be permitted to take its unconditional faith or conviction on which it rests, that truth is more important than any other thing, including every other conviction? (GS 344)

The authors of the *I Ching* champion the providence of numbers and using calculable numbers in consulting the oracle for one’s fate. They develop a system of symbols to express the dynamic patterns which are constantly formed and dissolved in the cosmic flow of the Tao. One of the important themes of the journey into calculus is an attempt to find patterns to help us better describe the world. Although mathematics is far more than just a study of numbers, it generally begins with a study of the real number system.⁷ We can make use of our mathematical skills in solving real-world problems. Nietzsche, however, states that ‘without a constant falsification of the world by means of numbers, man could not live’ (BGE 4). He rejects mathematics as revealing order or ultimate knowledge: ‘Let us introduce the refinement and rigor of mathematics into all sciences as far as this is at all possible, not in the faith that this will lead us to know things but in order to *determine* our human relation to things. Mathematics is merely the means for general and ultimate knowledge and ultimate knowledge of man’ (GS 246). As we have no choice but to perceive everything as humans, mathematics enables us to arbitrate our human relationship to things. This is also an aspect of exploring the hexagrams of the *I Ching*. As C. G. Jung (1962:143) says in this regard:

⁷ Four groups of numbers together form the real number system: (1) Natural numbers (or counting numbers) 1, 2, 3 ... ; (2) Whole numbers (discrete numbers) – 3, – 2, – 1, 0, 1, 2, 3 ... ; (3) Rational numbers (fractions) $\frac{1}{3}$, $\frac{15}{20}$, $\frac{3}{19}$, ... ; (4). Irrational numbers π ($\frac{22}{7}$, approximately).



One is dealing with the relationship of events, not only analogous to astrology, but even essentially related to it. The moment of birth corresponds to the stalks that are thrown, the constellation to the hexagram, and the astrological interpretation arising from the constellation corresponds to the text allocated to the hexagram.

The hexagrams of the *I Ching* reveal a ‘relationship of events’ that one has to deal with under particular circumstances in reality. However, according to Nietzsche, man himself is reality, so his main concern is how to create oneself to become what one is. He rejects the will to truth and states that ‘mendaciousness at any price monopolizes the word “truth” for its perspective’ (*EH Destiny 5*). He considers truth as a lie that removes man from reality. Thus Zarathustra wants a type of man who ‘conceives reality *as it is*, being strong enough to do so’ (*EH Destiny 5*). Nietzsche emphasizes that this type of man ‘is reality itself and exemplifies all that is terrible and questionable in it — *only in that way can man attain greatness*’ (*EH Destiny 5*). The early Chinese thinkers do not claim to follow absolute truth, but rather observe and follow cosmic principles and patterns as guidance to the Tao. Mencius (1970:187) says that

it is difficult for water to come up to the expectation of someone who has seen the Sea, and it is difficult for words to come up to the expectation of someone who has studied under a sage. There is a way to judge water. Watch for its ripples. When the sun and moon shine, the light shows up the least crack that will admit it. Flowing water is such that it does not go further forward until it has filled all the hollows. A gentleman, in his pursuit of the Way, does not get there unless he achieves a beautiful pattern.

The belief in cosmic order that can be known by means of numbers and that man has to follow in everyday life as a moral order is deeply implanted in the Chinese sensibility. The belief that man has to follow order seems a divergence between Nietzsche’s philosophy and the *I Ching*. Nietzsche calls himself ‘the first immoralist’ and ‘the annihilator [of morality] *par excellence*’ (*EH Destiny 2*). Zarathustra declares: ‘Nothing is true, all is permitted’ (*Z IV The Shadow*). In fact, the main motive for Nietzsche’s shocking strategy with regard to morality is ‘the consequences for *ourselves*’ to be ‘like a new and scarcely describable kind of light, happiness, relief, exhilaration, encouragement, dawn’ (*GS 343*). This is implied in his idea of the *Übermensch* which I will discuss in the following chapter. Both Nietzsche’s philosophy and the *I Ching* are concerned with the development of humanity in the



rapidly changing world, yet they apply different strategies towards this achievement. The relationship between man and nature always remains one of the crucial themes in the *I Ching*.

2.4. The same rhythms of microcosm and macrocosm

It is the great virtue of heaven and earth to bestow life. It is the great treasure of the holy sage to stand in the right place.

How does one safeguard this place? Through men. (1950:328)

The idea of the operation of natural laws in both the macrocosm and the microcosm is emphasized in the *I Ching*. The connection between the three powers, heaven, earth and man, is expressed in the epigraph quoted above. As the virtue of heaven and earth is to bestow life, the holy sage is guided by the same natural laws. Cosmic principles guide man to take action and to harmonize his social relationships. Heaven and earth are the macrocosm and man comes to resemble heaven and earth in that he is a microcosm. In the traditional Chinese mind, since the laws of heaven and earth are reproduced in the *I Ching*, man is provided with the means of shaping his own nature in order to realize his innate potentialities for good. For example, the doubling of the trigram Ch'ien, The Creative, in the first hexagram *Ch'ien/The Creative* gives the impression of powerful and ceaselessly repeated movement. It can serve as a model to urge man to draw strength from within himself, like the sun moving with untiring power. Thus the 'Image' of this hexagram says:

The movement of heaven is full of power.

Thus the superior man makes himself strong and untiring. (1950:6 &373).

The virtue of heaven and earth is illustrated by the first and second hexagrams, *Ch'ien/The Creative* and *K'un/The Receptive*. While the hexagram *Ch'ien/The Creative* consists of six firm yang lines, the hexagram *K'un/The Receptive* is made of six yielding yin lines. This is clearly an expression of the principles of yin and yang, the fundamental cosmic principles. The yin/yang relationship, which brings forth creative processes in the natural world, is confirmed by recent developments in science as well. According to complexity theory, creativeness emerges 'at the *edge of chaos*. This occurs between total chaos and complete order, in the area in between'



(Antonites 1997:9). Creativeness emerges where chaos and order meet in dynamic systems. The study of chaotic dynamics reveals that the disorderly behaviour of simple systems represents a creative process.

Apart from relativity and quantum mechanics, Chaos becomes the twentieth century's third great revolution in the physical sciences. The first Chaos conference was held in the summer of 1977, in Como in Italy. The Theory of Complexity and Chaos is one of the youngest paradigms in science. The words chaos and complexity are used interchangeably. Sometimes it is referred to as Chaos theory and sometimes as Complexity theory. Although chaos as disorder has a negative connotation in the causal-deterministic world view, Chaos has become shorthand for a fast-growing movement that reshapes the framework of scientific development. In *Chaos: Making a New Science*, J. Gleick (1987:3) states that 'where chaos begins, classical science stops.' Chaos represents a moving away from the classical mechanical, causal model of explanation in science. Classical causal mechanical science generally ignore chaotic or unpredictable phenomena, regarding these phenomena as negligible and assuming that they would eventually be explained by causal linear models of explanation. Scientists look for the properties of objects or systems that remain constant, while they ignore non-linearity. While linearity involves processes taking place periodically and proportionally to one another, non-linearity refers to processes taking place non-periodically and disproportionately to one another. In this sense, linear systems have a crucial modular merit in that their constituent parts can be added up, and thus be solved, while generally, non-linear systems can never be added up nor solved. Thus, in classical science, which deals with linear relationships in systems, the irregular side of nature, the discontinuous and the unstable, is disregarded. However, in Chaos or complexity theory, unpredictable or unstable phenomena are considered important as well.

The early Chinese thinkers glorify the Tao which comprises both the stable and the unstable, the regular and the irregular, as 'the Way makes [things] all into one. Their dividedness is their completeness; their completeness is their impairment. No thing is either complete or impaired, but all are made into one again. Only the man of far-reaching vision knows how to make them into one' (1968:41). Thus the authors of the *I Ching* attempt to present a complete image of heaven and earth, a microcosm of all possible relationships, in order to allow readers to calculate movements within

every situation represented by these relationships. Heaven and earth provide the archetypal image to be imitated. In the ‘Ta Chuan/The Great Treatise’, it is said:

Heaven creates divine things; the holy sage takes them as models. Heaven and earth change and transform; the holy sage imitates them. In the heavens hang images that reveal good fortune and misfortune; the holy sage reproduces these. The Yellow River brought forth a map and the Lo River brought forth a writing; the holy men took these as models. (1950:320)

The passage accounts for the parallel between the processes in the macrocosm and the works of the holy sages. The divine things created by heaven and earth are apparently the natural phenomena that the holy sages reproduce in the eight trigrams. The character of changes in the lines represents the transformations manifesting themselves in the alternation of day and night and of the four seasons. ‘The signs in the heavens meaning good fortune and misfortune are the sun, moon, and stars, together with comets, eclipses, and the like. They are reproduced in the appended judgments on good fortune and misfortune’ (1950:320). The appended judgments interpret natural phenomena, so that good fortune and misfortune are determined and one is able to take appropriate action according to the situation.

In the *I Ching*, Part I begins with the hexagrams *Ch’ien/The Creative* and *K’un/The Receptive*, while Part II begins with the hexagrams *Hsien/Influence (Wooing)* and *Hêng/Duration*. The parallel between the macrocosm and the microcosm is illustrated. The hexagrams *Ch’ien/The Creative* and *K’un/The Receptive* signify heaven and earth, standing for the foundations of all that exists. The hexagrams *Hsien/Influence (Wooing)* and *Hêng/Duration* signify courtship and marriage, representing the foundations of all social relationships.

As the hexagram *Hsien/Influence (Wooing)* consists of the upper trigram *Tui*, which is the youngest daughter, and the lower trigram *Kên*, the youngest son, the weak element is above and the strong below.⁸ The masculine lowers himself to the feminine and he thus shows consideration for her. The two forces attract each other, and thus they unite in marriage. ‘Thus the universal mutual attraction between the sexes is represented. In courtship, the masculine principle must seize the initiative and place itself below the feminine principle’ (1950:122). In the ‘Judgment’ of the hexagram, it is said:

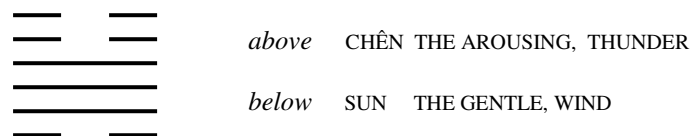
⁸ Another discussion of the hexagram *Hsien/Influence (Wooing)* is found on p.73-74.

INFLUENCE. Success.
Perseverance furthers.
To take a maiden to wife brings good fortune.
(1950:122 & 541)

In the microcosm, the union of the opposite sexes is expressed in marriage, which brings about human offspring. In the macrocosm, as the ‘Commentary on the Decision’ of this hexagram says: ‘Heaven and earth stimulate each other, and all things take shape and come into being.’ This hexagram asserts the union of the opposite sexes as having influence, and the following hexagram shows the union as an enduring condition. This is ‘The Sequence’ of the hexagram *Hêng/Duration*:

The way of husband and wife must not be other than long-lasting. Hence there follows the hexagram of DURATION. Duration means long-lasting.
(1950:545)

The hexagram *Hêng/Duration* is the inverse of the hexagram *Hsien/Influence (Wooing)*. In marriage, the union of the two opposite sexes ‘the husband is the directing and moving force outside, while the wife, inside, is gentle and submissive’ (1950:126). Their relationship is apparent in the two trigrams:



The upper trigram *Chên*, ‘The Arousing’, is the eldest son and the lower trigram *Sun*, ‘The Gentle’, is the eldest daughter. The strong masculine power is above, while the weak feminine is below. This presents the enduring condition in the natural world. The two images of duration, thunder and wind, are paired natural phenomena, as the thunder is carried by the wind. Thus the ‘Commentary on the Decision’ notes:

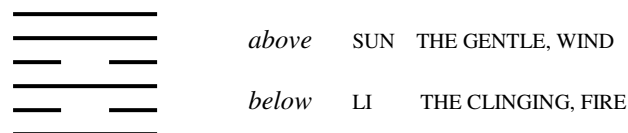
DURATION means that which lasts long. The strong is above, the weak below; thunder and wind work together.

Gentle and in motion. The strong and the weak all correspond: this signifies duration.

‘Success. No blame. Perseverance furthers’: this means lasting perseverance in one’s course. The course of heaven and earth is enduring and long and never ends. (1950:546)

The passage indicates that the strong and the weak work hand in hand. The attribute of the trigram *Chên* is movement and that of trigram *Sun* is gentleness. Movement together with gentleness endures and brings about success. The conditions which are required for duration are achieved in perseverance in a right course, as in the eternal dance of heaven and earth. This implies ‘continuity in change. This is the secret of the eternity of the universe’ (1950:547). The movement of heaven and the motionlessness of earth is the manifestation of the principles of yin and yang. This appears to be the rhythm of all happening. The yin/yang relationship operates with relation to both macrocosm and microcosm.

While the first and second hexagrams *Ch’ien/The Creative* and *K’un/The Receptive* reveal the laws of heaven and earth, the hexagram *Chia Jên/The Family [The Clan]* represents the laws operating within the family. The relationship within the family is expressed in terms of the hexagram:



The upper trigram of the hexagram is *Sun*, ‘The Gentle’, and the lower trigram is *Li*, ‘The Clinging’. The image of the former is wind, which means ‘influence’, and that of the latter is fire, which means ‘clarity’. ‘Accordingly the hexagram points to the outgoing influence that emanates from inner clarity’ (1950:569). The symbol of wind created by fire implies the influence that extends to outside from within the family. The upper strong line represents the father and the lowest stands for the son. The fifth strong line represents the husband, and the second yielding line stands for the wife. Alternatively, the third and fifth strong lines represent the brothers, and the second and fourth yielding lines stand for their wives. In this sense all the individual lines of the hexagram express the appropriate connections and relationships within the family through which order could be maintained. Each individual line stands in its proper place except the top line, which is a strong line. This exception clearly shows the strong leadership that should come from the head of the family, the father. Thus the hexagram *Chia Jên/The Family* ‘shows the laws operative within the household that, transferred to outside life, keep the state and the world in order’ (1950:143). This order is emphasized in the ‘Commentary on the Decision’:



THE FAMILY. The correct place of the woman is within; the correct place of the man is without. That man and woman have their proper places is the greatest concept in nature.

Among the members of the family there are strict rulers; these are the parents. When the father is in truth a father and the son a son, when the elder brother is an elder brother and the younger brother a younger brother, the husband a husband and the wife a wife, then the house is on the right way.

When the house is set in order, the world is established in a firm course. (1950:570)

The relationship between husband and wife is the foundation of the family. The place of the wife is the second line, as the ruler of the lower trigram, and that of the husband is the fifth line, the ruler of the upper trigram. Both husband and wife stand in their proper positions respectively, within and without. 'These positions of man and woman correspond with the relative positions of heaven and earth, hence this is called the greatest concept in nature (literally, heaven and earth)' (1950:570). This means husband and wife take their proper positions and are thus in accord with the great laws of nature. Within the family the parents represent strong authority. If each member of the family is able to fulfil their role according to their proper position, then the family is in order.

Three of the five social relationships are seen within the family: that 'between father and son, which is the relation of love, that between husband and wife, which is the relation of chaste conduct, and that between elder and younger brother, which is the relation of correctness' (1950:144). The Confucians extend the idea further, from family to society. 'The loving reverence of the son is then carried over to the prince in the form of faithfulness to duty; the affection and correctness of behavior existing between the two brothers are extended to a friend in the form of loyalty, and to a person of superior rank in the form of deference' (1950:144). The Confucians believe that if the family is in order, all the social relationships of mankind would be in order. This is the idea that Confucius's ideal of the Great Society is based on. *Chung Yung, The Mean-in-Action*, contains this idea:

There are five things which concern everybody in the Great Society ... To explain, the relationship between sovereign and subject, between father and son, between husband and wife, between elder and younger brother, and the equal intercourse of friend and friend, these five relationships concern everybody in the Great Society. (1942:120)



According to the Confucian school, 'the family is society in embryo; it is the native soil on which performance of moral duty is made easy through natural affection, so that within a small circle a basis of moral practice is created, and this is later widened to include human relationships in general' (1950:144). Order within the family is able to make a great impact on the community and thus brings forth order in societies and nations and in the whole world, otherwise misfortune and destruction occur.

Such a notion about the natural order seems to be universal, as is apparent from Shakespeare's tragedy *King Lear*. As the natural order rules moral and social order, the fact that the play begins with King Lear's unnatural behaviour towards his children suggests that the natural order is disturbed, and thus disaster follows. Shakespeare (1975:977) describes this destruction in the dialogue of Gloucester:

These late eclipses in the sun and moon portend no good to us: though the wisdom of nature can reason it thus and thus, yet nature finds itself scourged by the sequent effects: love cools, friendship falls off, brothers divide: in cities, mutinies; in countries, discord; in palaces, treason; and the bond cracked 'twixt son and father. This villain of mine comes under the prediction; there's son against father: the king falls from bias of nature; there's father against child. We have seen the best of our time; machinations, hollowness, treachery, and all ruinous disorders, follow us disquietly to our graves.

King Lear's tragedy is a result of his own fault. In order to be reassured of his children's love towards him, Lear sets a love-test for his three daughters. In the parent-child relationship the father and child should experience mutual love. By confusing his roles as father and king, Lear does not behave naturally as a father, whose authority functions on the basis of love, but as a king, whose authority functions on the foundation of power. The spiritual quality of love immeasurable, without boundary, is not to be expressed in material terms. Lear is angry about Cordelia's honest answer, but he appreciates the other two daughters' purposeful flattery. As a result, he makes an ill judgement in banishing his beloved daughter, Cordelia, and in dividing his kingdom between his two ingrate daughters, Goneril and Regan. Gloucester points to Lear's fault in declaring that when 'the king falls from bias of nature; there's father against child.' This indicates that the natural order of family life and of the kingdom is disrupted by Lear's inappropriate act, which brings forth chaos and destruction to his family, kingdom and himself. At the end of the play,



the greed for power and the pursuit of self-interest do not lead to success but rather to self-destruction.

The *I Ching* provides its readers with a means to avoid destruction and misfortune, and to achieve good fortune. Although this book describes change, it also champions orderly social relationships for maintaining order in family and in society. It conveys the idea that if each individual carries out their duty according to their proper position, as shown in the attributes of heaven and earth, then the order of family and society would be maintained. This brings about good fortune and avoids misfortune. The authors of the *I Ching* make an effort to reveal the laws of nature in terms of numbers and symbols, and in the appended judgments they show the greatest appreciation and gratitude towards the whole universe. In this way, man is able to cultivate himself in the pursuit of the Tao. Mencius (1970:182) explains this connection between the microcosmic and macrocosmic level:

For a man to give full realization to his heart is for him to understand his own nature, and a man who knows his own nature will know Heaven. By retaining his heart and nurturing his nature he is serving Heaven. Whether he is going to die young or to live to a ripe old age makes no difference to his steadfastness of purpose. It is through awaiting whatever is to befall him with a perfected character that he stands firm on his proper destiny.

The ancient Chinese thinkers regard the phenomena of life and death as simply part of the natural order that they are not afraid of. They believe that man has to follow these laws of nature and adapt to them in order to lead a better life. A great man is capable of setting his mind on high principles. 'To be moral. That is all,' Mencius (1970:189) says. Thus the traditional Chinese mind advocates a moral way of living by following the Tao, one's own fate. This is the Tao of man.

Nietzsche, too, asserts the connection between the microcosm and macrocosm, as he notes: '*This world is the will to power – and nothing besides!* And you yourselves too are this will to power – and nothing besides!' (WLN 38 [12]) His description of the Will to Power pictures change as a storming and flooding sea in which the eternal cosmic movement of forces is manifest. This image, however, suggests chaos rather than order. Apparently, moral order is not to be established in such a storming ocean. Nietzsche speaks of his '*Dionysian* world of eternal self-creating, of eternal self-destroying, this mystery world of dual delights, this my beyond good and evil' (WLN 38[12]). His mysterious Dionysian world reveals the

yin/yang relationship in self-creating and self-destroying, but contains no moral measure, being *beyond good and evil*. Solomon (2003:12) suggests: ‘instead of telling us what is wrong and why, suppose we were to think of ethics as first of all reminding us how to live and live well, and to do this while facing up to all the misfortunes and absurdities of life.’ Nietzsche is simply interested in the end result of mankind as the dancer, rather than in abstract ideas, such as truth or morality. Perhaps Zukav’s (1979:88) comment on the Wu Li Masters can be used to describe Nietzsche’s hope of the emergence of the highest type of man in the future: ‘The Wu Li Masters know that “science” and “religion” are only dances, and that those who follow them are dancers. The dancers may claim to follow “truth” or claim to seek “reality,” but the Wu Li Masters know better. They know that the true love of all dancers is dancing’.⁹ According to Nietzsche, in order to attain greatness the highest type of man has to become who he is, saying yes to life even when it is terrible and questionable (*EH* Destiny 4). Thus he says: ‘My humanity is a constant self-overcoming’ (*EH* Wise 8).

Nietzsche champions the Dionysian artist, or *Übermensch*, who ‘goes beyond beauty and yet ... does not seek truth’ (*DWV* 3). He advocates being an artist rather than a moralist in life. Thus he longs for ‘a philosophical physician’ who dares to accept the proposition that ‘what was at stake in all philosophising hitherto was not at all “truth” but something else — let us say, health, future, growth, power, life’ (*GS P* 2). He believes that in the great philosopher ‘there is nothing whatever that is impersonal; and above all, his morality bears decided and decisive witness to *who he is*’ (*BGE* 6). Nietzsche considers certain ‘big’ words describing moral values as harmful to life: “Virtue,” “duty,” the “good in itself,” the good which is impersonal and universally valid [are] chimeras and expressions of decline, of the final exhaustion of life, of the Chinese phase of Königsberg’ (*A* 11). His vision of morality, which is to ‘become what one is’, diverges from the Western metaphysical tradition and also from the Chinese vision. Nietzsche attacks Kant as a ‘moralist’ (*A* 11) by

⁹ ‘Wu Li’ refers to physics and implies ‘patterns of organic energy’, ‘wu’ meaning ‘matter’ or ‘energy’ here. Zukav (1979:7) defines a master as a person who ‘teaches essence. When the essence is perceived, he teaches what is necessary to expand the perception.’ Zukav regards Albert Einstein as a Wu Li master. ‘Master’ can also refer to a scientist. Zukav distinguishes between scientists and technicians. The former deals with the unknown, seeking to know the true nature of physical reality, while the latter deals with the known, applying known techniques and principles to his job. (Zukav 1979:6-9)



referring to him as representing ‘the Chinese phase of Königsberg,’ expressing his critique of Chinese stagnation. He notes that

to demand that all should become ‘good human beings,’ herd animals, blue-eyed, benevolent, ‘beautiful souls’ ... would deprive existence of its *great* character and would castrate man and reduce them to the level of desiccated Chinese stagnation. — *And this has been attempted! — Precisely this has been called morality.* (EH Destiny 4)

Nietzsche’s critique of morality as castrating and reducing man to ‘the level of desiccated Chinese stagnation’ explicitly indicates the difference between his viewpoint and that of Chinese philosophy with reference to morality. He disparages the moral concepts ‘good’ and ‘benevolent’, which are highly appreciated in Chinese philosophy. Mencius (1970:189) answers Prince Tien’s question concerning the business of a Gentleman, saying that ‘to dwell in benevolence and to follow rightness constitute the sum total of the business of a great man.’ Accordingly, a great man maintains inner balance and harmony among various forces within and without, but at the same time he acts with benevolence and rightness towards other people. The Chinese vision of a great man seems to be present in Zukav’s (1979:41) picture of the great physicists: ‘Wu Li Masters perceive in both ways, the rational and the irrational, the assertive and the receptive, the masculine and the feminine. They reject neither one nor the other. They only dance.’ In fact, they realize the nature of the world as summed up in the *Vajra Prajnaparamita Sutra*, also known as the *Diamond Sutra*:

All phenomena are like
A dream, an illusion, a bubble and a shadow,
Like dew and lightning.
Thus should you meditate upon them.

The three metaphors of bubble, dew and lightning illustrate the briefness of existence, and the others, dream, illusion and shadow, allude to the fact that every appearance is simply deception. An example from the *Surangama Sutra* might perhaps throw some light on the implication of these metaphors: an ignorant man ‘overlooks on the great ocean but grasps at a floating bubble and regards it as the whole body of water in its immense expanse’ (2005:58). The metaphors of the *Diamond Sutra* suggest the empty nature of all things which is apparent in Nietzsche’s philosophy.



The *I Ching* and Nietzsche's philosophy both recognize impermanence as inevitable. While the authors of the *I Ching* emphasize self-cultivation, devoting oneself to the pursuit of the Tao, Nietzsche's doctrine of the *Übermensch* envisions a free spirit who seeks his life's task in creating itself, to become what it is. Its meaningful activities in this world of flux become art in terms of the will to power, because it involves the shaping of its world, giving it meaning and value. The ability of the dancer to keep on dancing happily in an eternally changing natural world will be discussed in the following chapter.