

# Numbers and geometrical forms as an intercultural 'language'

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## Abstract

As a generalization it can be said that numbers are used in two different modes: 1) for calculating, 2) symbolically. In studying different branches of sciences one comes to the conclusion that numbers as symbols, in most cases, are connected to the same values. Interestingly the same values show up in the myths of all cultures. A similar connection can be made with geometrical forms.

In archaeology one finds a strong correlation between a preference of square or round shapes of houses and rooms on the one hand and cultures based on violence or cooperation on the other side. This leads to the idea that in a certain way, geometrical symbols can work as an inter-cultural language. Some artists might use this "language of forms and numbers" consciously, but to the majority of the people it is used more on an unconscious level.

The composition of the symbols (in two or three dimensions) follow an inter-cultural "grammar", reproduced in a way similar to language. In myths and in religious rites, basic numeric and geometric symbols show up as configurations of action or events. Often they are used on a meta level, defining a dimension of 'deeper' meaning.

It can be shown that the same values show up in modern sciences and can be found in architecture too. An excellent example to support this statement is to be found in the art and architecture in Buddhism or Taoism.

Archaeological research in England, Ireland, Malta, Sardinia, North Africa, the Middle East, or in the area of the American pre-Columbian cultures, supports the contention that this theory holds under international comparison.

**Keywords:** numbers as symbols, geometrical symbols, "unconscious language", intercultural grammar, architecture, myths, religious rites, international comparison.

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## Introduction

Numbers and geometrical forms accompany us at every second in our daily live. Their connection with values is primarily a product of direct experience. Later, by recursive action, it becomes a guiding line for human behavior. Thus numbers, geometrical forms and their associated names are extended and used as metaphors and symbols in the sense of the PROTOTYPE theory, as SCHEMATA or as STEREOTYPES. In the case of geometry, a high density of meaning and value can be achieved because in 2- and 3-dimensional representations, overlapping forms allow a very complex storage of information, much denser as any system of writing is able to achieve.

For lack of space, this paper is limited to the most basic forms. Another limit will be the comparison in the use of numbers and geometrical forms in Asian cultures as opposed to the use of these entities in modern sciences. In order to demonstrate a widespread intercultural use of the proposed values, some examples from countries outside Asia are included.

## Numbers and Forms communicate Social Values

In those societies oriented in a materialistic and patriarchal direction, where greed for material goods are positively promoted and where the control of objects by male persons is a dominant aspect of social life, there is a high probability that a preference for buildings with 90 degree angles and straight walls will be manifest. Dominant males hold on to the paradigm of total separation (an example: the subject/object discussion) and isolation. A typical feature of such cultures are "winning games" in sports, politics,

relationships, religions and economies. In catering to the greed of construction companies, short gain becomes more important than quality of human life or durability of the buildings.

If politicians force hierarchical order onto a culture, round shapes are dismissed, because the circumference has equal distance to the center for each point, and equal rights for all is just what the controlling influences do not want. Square and rectangular shapes are preferred, smooth surfaces without decor, because these forms communicate the social value of independence and they are easier to control. Thus the number 4 shows up more often. Relations like Pi ( $\pi$ ), which symbolizes a circle and carries the message of cooperation and equal rights for everyone, are not found.. In China the public dominance of male persons reflected itself in the development of the writing system which became more and more rectangular. So, as an inner logic, even the symbol for 'round' became square:



The first symbol means 'opening', 'mouth' or 'talk'; the second means 'an official'. Together they become the symbol for 'round' and 'circular'. "*( ) the function of the writing system as a mean to control and educating the people in moral was not domination from the beginning. Rather it is the result of a slow growing bureaucratism and a consequence of the influence of Confucianism during the time of Han. Because in the beginning the writing system was mainly used for sacral and magical functions and was used to communicate with ancestors and spirits;*" (1)

The connection of the value "independence" and "separation" with the rectangular shape can be experienced even by cultures living in forests. In case an observer sees a falling tree s/he will realize that only plants in line with the tree will be damaged, but no one in a 90 degree angle to it.

In cultures with an orientation towards spiritual development and cooperation it is likely that a belief-system will be found where a higher being created itself in many forms. Thus every part of the universe down to every atom is part of ALL-THERE-IS. In such a society more round shapes will occur along with more variation of a theme, less uniformity, and considerable inter-correlation between different parts of the construction.. Every point on the circumference has the same distance to the center. For this reason the circle (sphere) is seen as a symbol for cooperation. Today, in case some politicians unite at a table to talk about cooperation and peace, no square table is allowed, it must be round.

People build their houses, temples and monuments according to their belief systems, and contrary to what one might first assume, the outcome depends very little to the assumed actual need. Religions with a major concentration on death construct temples that look more like grave tombs. Christian temples constitute examples of this outlook. Religions that are more life-oriented build open temples with a strong connection to nature or they do not use a stone building at all because for them all of nature is holy instead a limited aggregation of stones.

Societies based on coercion and violence avoid round shapes. They prefer rectangles, long halls or long tables to create distance and a head seat for one person only.

The delusion of control over everything eliminates decorations. A good example is found in modern banks, insurances and military buildings where all such details are found together: square buildings with square windows, the least amount of variation and the maximum amount of uniformity. The outcry for stability is prevalent.

Societies based on cooperation and peace on the other hand, have a preference for round forms like ovals, circles, spirals and egg shape. One of the best examples for this in the Mediterranean area are the temples at Malta: Xemxija, Mgarr Ta Hagra, Kordin III, Mnajdra, Ggantija, Tarxien, Kordin III and Hagar Qim, or the Pre-Nuraghe sites in Sardegna, have all exclusively oval walls with lots of variations.

This let an investigating scientist to make a remark which is typical for modern western science: "*The constructors of the temples avoided to build rooms with corners and rectangles, but why?*"(2). The right question should be, why do modern cultures avoid round shapes? There is no place in nature where one can find similar forms like the houses in the suburbs of modern cities which are "punched out" as though the result of serial production. Rectangular corners have the highest disadvantage in construction static, the

least strength and the highest possibility of failure and collapse. Therefore there must be psychological reasons that the worst form in housing static's is used in constructing the largest number of houses.

Because most men saw their capacity for cooperation as a female quality and winning as a male attribute, they avoided to construct round buildings. In his personal wars, Pope Bonifaz VIII destroyed all round temples of the christian goddess Maria.

The symbolic nature of the circle is exhibited today in relation to power in political language. If the goal is cooperation then the participants have to sit on a round table .(3) This would not happen if there was not a mutual agreed belief system which says that distinct geometries have certain values imposed upon them.

Cultures that can be said to be "more spiritually-orientated" believe in an empowering force behind nature and the universe. They teach that matter has no existence in itself but is a manifestation of a 'higher' unseen force.

### Cultural acquiring of PROTOTYPES and METAPHORS

#### **in case of basic geometrical forms and space orientation**

Geometrical forms might demonstrate symmetry to the eye, but for the brain it is different. Primary socialization forms children before they can produce arguments for the proposed "truths" that later become stereotyped forms in the sense of the theory concerning PROTOTYPES and METAPHORS.

Later, the children do not see the world as it is any more, but as they respond to the images they are confronted with by the society. The construction of a theory and the associated interpretation in science is heavily influenced by STEREOTYPES acquired in daily life. In this case a PROTOTYPE of a square (SQUARE) or a circle (CIRCLE) enters with certain values. Idioms like "SQUAREHEAD" (in German: Quadratschädel) go to the center of the meaning pointing to an egocentric person. Then we have a RIGHT angle being "right". If there is RIGHT & WRONG and RIGHT & LEFT then LEFT must be WRONG like a LEFThanded compliment. Scientists don't like CIRCULAR arguments, they prefer a SQUARE deal by a SQUARE shooter telling you a story that SQUARES with the facts. One does not SQUARE an account like a ROUNDER. To ROUND off three decimal places makes numbers less EXACT. And, don't forget: the circumference of a CIRCLE can never exactly be determined, because any calculation attempting to do so must only use the approximate value of Pi!

### **Basics about Time and Space**

To understand the following correlation of physical geometry and social values of geometrical forms, some comments about the connection of time and space are needed.

In mathematics numbers are constructed according to a well known algorithm with the 5 axioms of Peano. Space dimensions in physics are also constructed out of algorithms. Time may be taken to be a more basic unit than space, because space is a derivative of time. Time is also discrete. *"Usually we think about space and time as continual or at least dense,"* says Bertrand Russel and he continues *"But that is mainly a prejudice. Quantum physics shows the fact - independent if it is right or wrong - that physics never can come up with a proof for continuity. The opposite might be possible. Our human senses are not fine enough to distinguish between a continuous move and a fast discrete sequence of events."*<(4)

Using the results of Quantum-Geo-Metro-Dynamics (QGMD) as a basis, it makes sense to use quantum changes of objects as a basis for the following working definition of "time".

**"time": shall be the gap in between the appearance of an object**

**and the exchange by another.**

From this definition of discrete time, space dimensions can be deducted, as EINSTEIN showed in his paper published 1905. The models used in this case are taken mainly from projective GAUSSIAN geometry. Euclid's space is too specific to be used for a general procedure.

**Symbols of "ZERO". Physical and social values.**

In modern western cosmology the initial object is an 'unconfigured' energy field. This postulate results in a language problem since science does not supply a term for this concept that is easy understandable. Old myths talk about it as 'the primeval world'. Tibetan philosophy knows this basic foundation of the universe as the "zero-level" and there it includes three types of time and space:

- 1.) abstract cosmic time / space;
- 2.) moments in infinite time / places in infinite space
- 3.) duration, continuance of time and space

On the zero-level, the concept of the universe developed itself in the world egg with permanent eddies of the milk ocean.<sup>(5)</sup> Modern science uses a similar concept if one takes the proposal of J.A.Wheeler as an example. Here, an unconfigured energy field requires a certain intensity of energy waves in phase, to allow the 'condensation' of material objects. In the case of a phase shift, the object disappears. A popular name could be the so called "vacuum", an entity that is far from being empty as one might think. As many thousands of experiments demonstrate, such a vacuum is a very active energy field. The density is almost unbelievable: it is about  $10^{95}$  g/cm<sup>3</sup>. If one compares this with the density of the core of an atom that is  $10^{14}$  g/cm<sup>3</sup>, it becomes clear that the objects we call "solid" are much less dense than a cloud in the sky is for us. (6)

The Buddhist Patriarch Hui Neng teaches about the "vacuum": "*Learned Audience, when you hear me talk about the Void, do not fall into the idea of vacuity... the illimitable Void of the universe is capable of holding myriads of things of various shape and form, such as the sun, the moon, stars, mountains, rivers, worlds, springs, rivulets, bushes, woods, good men, bad men, dharmas pertaining to goodness or badness, deva planes, hells, great oceans, and all the mountains of the Mahameru. Space takes in all these, and so does the voidness of our nature.*"(7)

### The EGG symbol: initial asymmetry

In physics, in an otherwise equally distributed quantum field, any point of energy concentration marks an asymmetry, which is symbolized by the Tibetans, the Egyptians and about 80 more cultures (8) as an egg.

One may suppose that if a building like a temple is supposed to represent the development of the universe as a whole, then a start will be made with a single element, usually with a circle, an oval or an egg. A slightly asymmetrical form like an egg is preferred because it is a better symbol for the capacity of creation.

This is because it may be supposed that total symmetry, in an absolute sense, would never permit anything to happen. It can be readily shown that in a universe with discrete energy elements total symmetry is impossible and would in any case be a contradiction to "discreteness". (9) In practice, where an object appears symmetrical it is usually due a question of scaling. Close inspection will reveal deviations.

In Europe one finds examples for the egg-shape in ritual buildings in Pre-Nuraghe sites in Sardegna, for instance: Monte Cannas, Brobudi, S'Ortu, Monte Nai, S.Maria, (Muravera) and many others.

The Papyrus of Nu says on sheet 5: „*Hail, thou Sycamore tree of the goddess Nut. Give me of the [water and of the] air which is in thee. I embrace that throne which is in Unu, and I keep guard over the Egg of Nekek-ur.*"

And on sheet 12: "*I am the Egg which is in Kenken-ur [the Great Cackler] and I watch and guard that mighty thing which hath come into being*Ó. The Papyrus of Nebseni writes: "*[Horus] spread air over the Divine Soul in its Egg in its day*".

The Sycamore-tree is a symbol for the goddess Nut. The roots represent the development on a material level, the stem and the branches symbolize a development to non-material goals. Nut is the 'mother' of Osiris (Other symbols for her are the "night sky" and the "north wind"). She stands for the universe as a unit enclosing all manifestations, the material, mental, spiritual ones and even the gods. The Turin Papyrus Bl. XXX says: "*Homage to you O ye gods who dwell in Amentet! Homage to you, O ye gods who dwell within Nut*". The place 'Amentet' is also named 'Tenait' which means 'Circle of light'.

The egg-shape as a symbol for the primeval energy form of the 'universe' is also a logical construct on a mathematical level.

1. A theoretical 'perfect' equal distribution could never have allowed any change and development at all.
2. Energy manifested in quantas must have an unequal distribution due to the influence of inner laws.

(10)

### **"ONE": intercultural symbol for "unit".**

To constitute the first dimension of an energy point, energy waves have to be in phase. Here we do not talk about the mathematical 'point', but a point according to the preceding time-definition, the smallest quantum of discrete energy, the Heisenberg quantum  $h/2p$ . Every object is build up by a multitude of such units. The fact that every object in the universe consists of discrete energy units is of particular importance for analyzing archeological geometry on a higher level. Only in this way is it possible to obtain access to compare coded knowledge in proportions and angles with the results of modern science. Thus "one" appears in science also as a completed  $360^\circ$  rotation or as wavelengths.

An example from daily life involves the production of points on a TV screen. The screen consists of single discrete pixels. To produce one single point on the screen, a certain amount of energy must be activated after a specific time-unit elapses. This activation has to be in phase with each adjacent point in order that a specific area can come into existence, thus space is discrete by this model. Richard Feynman commented on the basis for this interpretation as follows:

*"On the other hand, I believe that the theory that space is continuous is wrong, because we get these infinities and other difficulties, and we are left with questions on what determines the size of all the particle. I rather suspect that the simple ideas of geometry, extended down into infinitely small space, are wrong."* .(11)

### **"TWO": intercultural symbol for self-inspection.**

In science, to produce a line  $x$ , the algorithm for establishing one point must be repeated with an additional "phase" dimension. This second phase is independent from the first one. In this case time  $t$  will be multiplied with a constant  $k$  to produce equal units and with a factor  $\hat{O}(-1) = i$ , providing a guarantee of independence. In geometry one uses  $90^\circ$  angles to represent independence.

$$x = t \times k \times i$$

Exchanging the constant  $k$  with  $c$  produces the formula of Einstein-Minkowski for the construction of higher dimensions:  $t \times c \times i$ . One can understand the relation of 'point', 'point-existence' and 'line' by recourse to a simple experiment. To do this, take a paper and draw lines on it in any form. Take a second piece of paper and cut a small slit in the middle. Then cover the drawing with the second piece of paper and move the slit over the lines. What may be seen as the result of this procedure are points moving from right to left and vice versa. The dimension supporting the lines has been exchanged by a space where points move in time. A space-like context available to introspection on a higher dimension, to yield the same content, requires the addition of time on a lower dimension time. A line is defined by 2 points and 1 connection.

In myths the "2" is mostly valued with introspection, reflection or meditation. Sometimes it shows up in personifications of twin gods or gods splitting themselves in half. One manifestation remains in the background or retreats from action.

### **"THREE": the number of the gods.**

Repeating the above algorithm with a line produces a plane. At least two points are required to define a line. A plane requires 3 points for definition. Using a general approach with Gaussian space, 3 points are the minimum and the maximum required to define a plane if there is to be independence among the connections between points and this results in representation of a regular triangle. Such an object has 3 corners, 3 sides and 1 area. Science holds that the minimum number of interacting forces between particles

is 3 like  $p - \textcircled{R} n + p \textcircled{R} p -$ , then: "asymmetry needs a minimum of three symbols to be coded" (12) and considerations arising from social anthropology show that nearly all cultures and tribes of the world connect their goddesses and gods with the number 3 or a triangle. Sometimes the '3' is connected with other numbers and symbols as in '1000' which stands for  $10 \times 10 \times 10 = 10^3$ , or it is hidden like in  $1^1 2^2 3^3 = 1 \times 4 \times 27 = 108$ . (13) In Buddhism the number 108 is found at temple doors, in Sutras or with rosary chains. In general, the power numbers are a symbol representing the level of the gods and the base level represents the human area. In the context of myths Mercury is often considered as the "mailman" of the gods carrying messages to others. The associated astronomical path as seen from the earth looks like two triangles wrapped together. (14).

#### FOUR, SQUARE and TETRAHEDRON:

##### symbol for space, matter and existance on earth.

As a next step the mathematical algorithm produces out of the two dimensional area (2-D) an object called 'space', to be more explicit 3-D-space. As before, the minimum and maximum number of independent points required is 4. An object called a 'tetrahedron' is obtained with 4 corners, 6 connecting lines, 4 areas and 1 space element. If the ascertained coefficients are written together, the form of development follows the pattern that may be derived according to the formula of Pascal. This pattern follows the binominal expansion and is often called 'Pascal's Triangle'. The procedure for the development of the values is well known, the sum of two adjacent numbers gives the value of the one below and the sides are all 1's.

If "4" in myth and religion is used symbolically it means inner or outer "space", events or action in space, or it concerns material objects.

From China it is known that the square is associated with the earth and YIN. (15) Some square moon altars have been depressed or quarried into the ground while the altars for the sun have been elevated. The Chinese language used as a symbol for the 'moon-altar' (1.), a combination of the signs 'square' (left) and 'mound' (right). It is a special altar where sacrifices were offered to Earth on the summer solstice. There is a remarkable similarity between the altar sign and the symbol for '5' as it is shown in (2)

(1.) 方丘 (2) 五 (3) 日月

The combination of the symbols 'sun' (left) and 'moon' (right) in the second group means 'the times' (3).

Four points define a tetrahedron. Space and appearances in space have been connected with the number 4 in nearly all cultures. Spheres in an orientation following the form of a tetrahedron have, from prehistoric times (1500 BC) been found cut into stone in Scotland and examples can be seen at the City Museum of Dundee. Examples from Egypt are located in the British Museum among the Egyptian antiquities.

The '4' is used not only for representing 'space' but also for the material appearance of humans in space. Many myths tell about the development of man in 4 steps with increasing density and (decreasing happiness).

In chemistry row 4 of the periodic table contains iron. Astronomy knows that this element acts as a kind of 'attractor' in the chemical development of stars. Elements lower than iron release energy in atomic fusion, those above consume energy. In effect, all elements have iron as a kind of chemical attractor for the processes involving atomic fusion. Mixtures of iron with other elements from group 4 result in very hard and flexible alloys (titanium, vanadium, chrome).

In short we are arrived at 5 time dimensions:

|                    |  |
|--------------------|--|
| 1. time dimension: | general change (see time definition).                      |
| 2. time dimension: | changes of 1.) are in phase: a point comes into existence. |
| 3. time dimension: | changes of 2.) are in phase: point produces a line         |
|                    |  |

|                    |   |
|--------------------|---|
| 4. time dimension: | changes of 3.) are in phase: line produces an area. |
| 5. time dimension: | changes of 4.) are in phase: area produces space.   |

If one hears about "*the four directions of space*" one thinks immediately about the directions east, north, west and south. But this is illogical, because in this way no space is defined but a two-dimensional plane. What is lacking is height. This leads to only three "directions" : up-down, right-left and front-back. To get to the number 4 it makes much more sense to accept the explanation that 4 points are necessary to define three-dimensional space: the zero-point, one point for the x-axis, one for y and one for z. Maybe that was known already by ancient scientists and just forgotten or omitted and taken for granted over the millennia, as it was forgotten that the earth is round. In a General-Gaussian-Space these four points define a basic tetrahedron. Seen from above a tetrahedron grid with one side triangle parallel to the ground looks exactly the same as a square with two diagonals.

A tetrahedron plays a central role in the development of particles, atoms and molecules. The number 4 shows up also in the most common of the elements found in the universe (Helium, with 4 particles, 2 neutrons and 2 protons), the element for life structures (Carbon C<sub>12</sub> with cube like molecules structures) and the most frequent element on the planet earth, iron (4<sup>th</sup> row in the periodic table of elements in chemistry). The only stable three-dimensional shape for 4 spherical objects is a tetrahedron. It can be demonstrated that the development of 3-D-spheres follows a fractal tetrahedron pattern with numbers equal to the electron shells in elements.

### FIVE, PENTAGON, SPEED, GROWTH and LIFE

The rule governing the construction of a higher dimensions can be continued from four points, symbolizing space to the next derivative of space by time, usually named "speed". In biology where the changes are modest the term "growth" is used. "Speed" is defined by the relation of the difference in space (D x) divided by the difference in time (D t). The speed of an object is independent of space and time so it requires a new dimension.

In general-Gaussian-space 5 independent points need a 4 dimensional space, because in the 3-D space every 5<sup>th</sup> point can be expressed by parts of the x-, y- and z-axis. The new feature which is revealed is called "speed" or in biology "growth". On a social level and in intercultural communication the figure five or the pentagon is also used as a symbol for 'life'.

The planet Venus viewed from the Earth shows with the retrograde loops in an 8-year cycle a five-folded pattern. (16) This too is a reason why the planet carries the name 'Venus' since "5" is a life-bearing symbol. Living objects have a distinct feature, which sets them apart from non-living systems. Living systems are capable of self-reproduction. For this reason, if the five is used as a symbol for life, the root of five is sometimes added to symbolize this quality ( $\text{Ö } 5 \times \text{Ö } 5 = 5$ ). (17)

The number five plays a main role in Buddhist teachings. In most cases it is connected with the symbolism of life-bringer, life-sustainer or life-destroyer. The highest Adi-Buddha divides itself by meditation into 5 Dhyana Buddhas (Manushi-Buddhas) with their emanations of 5 Bodhisattvas. In Tibet 5 kings (Dam-can) are saints. The story tells from 5 brothers coming from northern Mongolia. When Krishna was 5 years old he won a fight against the snake demon Kale. Brahma has 5 faces. The Mongolian life-protecting god Beg-ge carries on his head 5-fold crown with skulls.

五 × 吾

The connection of '5' with 'life' becomes very explicit in Chinese language: The first symbol means 'five', the second one is an ancient form of 'five'; if you turn it 45° it becomes the sign for '10' and means also 'complete'. The third one, a combination of 'five' with 'opening' or 'talk' becomes the sign for 'I', as in 'I am'.

1. May Day

2. 5 relationships

12. 5 poisonous creatures (snakes, toads, lizards, scorpions, centipedes)

13. 5 atmospheric influences

- |   |   |
|---|---|
| 3. 5 flavors  | 14. 5 clawed dragon   |
| 4. 5 elements (earth, wood, fire, metal, water)                                     | 15. 5 blessings   |
| 5. 5 sacred mountains (seat for holy spirits and gods)                              | 16. the city of the 5 rams (from the story of 5 immortals who rode into the city on 5 rams, which were turned into stone) |
| 6. 5 emperors (T'ai Hao, Yen Ti, Huang Ti, Shao Hao, Chuan Hsü)                     | 17. 5 viscera (heart - fire, lungs - metal, liver - wood, kidneys - water, stomach - earth)                               |
| 7. 5 planetary gods   | 18. 5 thieves (joy, anger, pleasure, grief, lust)   |
| 8. 5 constant virtues (benevolence, righteousness, propriety, knowledge, sincerity) | 19. 5 gods of wealth  |
| 9. 5 races united in the Chinese Republic   | 20. 5 attributes of a human being (perception, consciousness, action, form, knowledge)                                    |
| 10. the dragon-boat festival the 5th of the 5th lunar month                         |   |
| 11. 5 principles of administrative authority  |   |

The constant use of 'five' in connection with 'life' is demonstrated in the list above. For all of these items in the Chinese language the "five"-symbol is used.

"10" in Buddhist teachings and in science:

**an intercultural symbol for "completion".**

If the concepts of Egypt, India and modern science are compared, many parallel thoughts will emerge and one could conclude that the universe has to have at least 10 dimensions to show all the features one is used to experience. Interestingly this is exactly that what modern science says and it goes conform with ancient Buddhist teachings as it is demonstrated below:

# *"Endowed with the sevenfold gem, trained in the three training's, These great heroes follow on, fear and dread overcome. Endowed with the factors, great beings concentrated, indeed they are best in the world".* (18)

# *"The theory in fashion today is a variance of the ten dimensional theory"* (19)

# *"Although, O Sugata, nowhere in the ten directions do you see any suffering, yet you preach compassion for all beings"* (20)

# *"The later theories work only if space has 9 and space-time has 10 dimensions.... It seems somehow mysterious that there remain only four out of ten dimensions whereas six 'roll up'. Why six? Yes indeed, we don't understand this."* (21)

# *"A Bodhisattva, a great being, considers the world with its ten directions, in every direction, extending everywhere. He considers the world systems, quite immeasurable, quite beyond reckoning, quite measureless, quite inconceivable, infinite and boundless."* (22)

# *"Here we have exotic mathematics that curls the eyebrows of some of the best mathematicians in the world. They talk about ten dimensions: nine space and one time dimension."* (23)

# *"By the saviors who are masters of the ten stages, ....When this had been said, the Lord Avalokita, smiling all over, surveyed all the ten regions with eyes that radiated friendliness."* (24)

# *"You see, in the clearest version the Superstring Theory is expressed in ten dimensions."* (25)

# *"Whatever you see, that is it, in front, behind, in all the ten directions."* (26)

# " *In the early phase of the universe it might have been a time where a scientist - if he would have existed then, that is obviously not the case - would have seen all nine space dimensions plus the time dimension.*" (27)

# " *It is the Truly-so, the Transcendent Sphere, where there is neither He nor I. For swift converse with this sphere use the concept "Not Two"; In the "Not Two" are no separate things, yet all things are included. The wise throughout the Ten Quarters have had access to this Primeval Truth; For it is not a thing with extension in Time or Space; A moment and an eon for it are one.*" (28)

## Noter

- 1) Schmidt-Glinzer, Helwig. 1990. Geschichte der chinesischen Literatur; Scherz, München, p. 22
- 2) Zammit, Themistocles. 1995. Die prähistorischen Tempel von Malta und Gozo, Union, Malta
- 3) See also: Welti, Alfred. 1981. Der Stuhl ist nicht allein zum Sitzen da. Einst war er als Thron den Göttern und Herrschern vorbehalten. in: ART, 2/1981:46-51
- 4) Russel, Bertrand. 1967. Einführung in die mathematische Philosophie. Emil Vollmer Verlag, Wiesbaden, p.157
- 5) P. Cyrill con Korvin-Krasinski. 1953. Tibetische Medizinphilosophie ; Origo, Zürich
- 6) Wheeler, John Archibald. 1965. Einsteins Vision. Springer, Berlin, New York, p.47-48
- 7) The Sutra of HUI NENG; Buddhist Society, London, 1966:26
- 8) see: Baumann, Hermann. 1986 (1955). das doppelte Geschlecht. Dietrich Reimer, Berlin
- 9) see: Russel, Bertrand, 1967. Einführung in die mathematische Philosophie; Emil Vollmer Verlag, Wiesbaden, p. 119
- 10) see: Nicolis, G. 7 Prigogine, I. 1983. Self-Organization in Non-Equilibrium Systems; Wiley, New York,  
Glansdorff, P. 7 Prigogine, I. 1971. Thermodynamics of Structure, Stability and Fluctuations; Wiley
- 11) Feynman, Richard. 1965. The character of physical law. Cox&Wyman, London; p. 166-167
- 12) Gregogire, Nicolis / Prigogine, Ilya. 1987. Die Erforschung des Komplexen. Piper, München, page.255
- 13) Another interesting note:  $13+23+33 = (1+2+3)2$
- 14) Critchlow, Keith, 1979. Time stands still. New Light on Megalithic Science. Gordon Fraser, London, page 160
- 15) Williams, C. A. S. 1941. Outline of chinese symbolism and art motives. Dover Publ. New York, p.278, in: Krupp, E. C. 1986. The cosmic temples of old Beijing; World Archaeoastronomy, Cambridge, p. 72
- 16) The connection of the 8 with Venus you'll find with the Sumers too where a star with 8 beams was the symbol of Ishtar with the home planet Venus.(Sitchin Zecharia, 1989. Der zwölfte Planet; Knaur, München, p 259
- 17) A note:  $(1+2+3+4+5)2 = 13+23+33+43+53$
- 18) Samyutta-nikaya III 83-84. The mentioned "10 powers of a Tathagata" you'll find at Majjhima-nikaya I, 69-71
- 19) Schwarz, John, in: Davies, Paul / Brown, Julian, R. 1989. Superstrings dtv, München
- 20) Sikshasamuccaya 259-261 (Pitrputrasamagama)
- 21) Green, Michel. in: Davies, Paul / Brown, Julian, R. 1989; Superstrings dtv, München, p 137, 155;
- 22) Ashtasahasrika VI, 135
- 23) Lederman, Leon. 1993. The god particle If the Universe is the Answer, What is the Question?; Houghton Mifflin New York, p. 364
- 24) Aryatarabhattacharjanamashtottarasatakastotra, 20, 22
- 25) Salam, Abdus; in: Davies, Paul / Brown, Julian, R. 1989. Superstrings dtv, München, p. 207
- 26) Saraha's Treasury of Songs, Dohakosha, 28
- 27) Weinberg, Steven. in: Davies, Paul / Brown, Julian, R. 1989 Superstrings dtv, München, p. 250.
- 28) Takakusu XLVIII, 376.

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