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Energy in Form

*Essay on Coherences between Geomorphology, Human Mind and Stone-
Sculptor's Effort*

DLA dissertation

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IMAGE 1: KLIEVER OBELISK (2003), ANRÖCHTER STONE, H: 7.50 M,
ANRÖCHTE/KLIEVE, GERMANY

"Öfters wenn ich alleine war, setzte ich mich auf ihn hin und begann ein Gedankenspiel das etwa so lautete:

Ich sitze auf diesem Stein

ich bin oben

und er ist unten.

Der Stein könnte aber auch sagen

"ich" und denken

ich liege hier auf diesem Hang

und er sitzt auf mir.

Dann erhebt sich die Frage

bin ich der, der auf dem Stein sitzt

oder bin ich der Stein auf dem er sitzt?

Diese Frage verwirrte mich jeweils und ich erhob mich zweifelnd an mir selber und darüber grübelnd,

wer jetzt was sei.

Das blieb unklar und meine Unsicherheit war begleitet vom Gefühl einer merkwürdigen und faszinierenden Dunkelheit." ¹

¹ According to C. G. Jung as cited in Rüdiger Sünner (2011): *NACHTMEERFAHRTEN, eine Reise in die Psychologie von C. G. Jung*. Carl Gustav Jung talks in his childhood memories about an intimate relation to a large stone close to his parents' house.

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PROLOGUE

Some sculptures are known to have an enormous direct immediacy when seen, so that the beholder feels thunderstruck. This strong sentiment would seem to be a matter of mind. Probably the emotion is triggered by a certain insight, but an attempt to explain this usually proves far more difficult than the ease of experiencing the insight. Verbal language is apparently insufficient to describe the pictorial imaginary. We are however equipped with several cognitive senses and we have also developed a number of ways to express ourselves. Despite the limitations of speech I hope to reach an adequate theory about the impact of sculpture on the development of the human mind. To this end, we ought to consider the long history of sculpture. I am convinced that even the small sculptures, almost 40,000 years old, which were recently discovered by archeologists in some caves in southern Germany, played a significant role in the evolution of mind. I believe that a part of the Paleolithic experience is still literally perceptible when we are directly moved by a sculpture nowadays.

Certainly, everybody who ever reflects on how the world is constituted in terms of one's individual perception faces the problem that one newly opened door to understanding reveals several other closed doors. This might be a common problem, but even Isaac Newton, a good example of a scientific authority who successfully used his pictorial thinking, found an expression for it: "Knowledge is a drop, and lack of knowledge is an ocean." It seems knowledge always encounters chaos. As an artist I feel in a way predestined to consider the image of the world on my individual perception, which then finds potentially a mirrored expression through my work as a sculptor. This essay is an attempt to introduce order - in the same way the work of a stone-carving sculptor could be interpreted as a regulating principle. Through my efforts, from a disorderly broken stone an orderly form will arise. While giving form to the stone, however, I also encounter a lot of questions whose answers generate new quests; and so one can say that an "energetic complex" arises. It seems that here, too, the entropic principle applies, since a degree of inclination will always feed progress, from outside to inside and vice versa; as we know the entropic principle is a thermodynamic property and is the engine of progress. So, while shaping forms and giving them order it appears to me that the chaos is expanding around me. With regard to the entropic principle I want to develop a thesis about my artistic way of thinking, taking into consideration the material stone as a geomorphologic product and the human idea as a product of the human

mind. So the title "Energy in Form" could also be "Matter and Mind", but I prefer the energetic postulation. I see the potency of sculpture finds expression as an energetic form and with reference to this I shall explain the emotional experience of being thunderstruck when facing a distinguished sculpture.

Art and science have the same roots of origin; nevertheless the former has the freedom of subjectivity, whilst the latter seems to fear it. The challenge for a stone-carving artist nowadays is to create an excellent sculpture which touches the intuitive faculties of the beholder and an immediate part of real life. This has been the challenge since the very early beginning of stone carving from the Paleolithic era until today. Considering the long history of sculpture, the major part of stone sculpture production took place in a more or less pre-scientific ambience. An artistic theory however does not necessarily have to change to be scientifically objective; at least I propose this in my case. My thesis is rooted in my practical, intuitive and subjective stone-carving work, which is essentially traditional, ever though nowadays we may use modern electric and pneumatic machines. In consequence, this is a defense of the Stone Age phenomenon of sculpture, including its psychological impact, and in this way it is of considerable scientific merit.

The human being seems to have a need to evaluate and to count - to put things into order - and that is why we seek an answer to the eternal question: What came first, the chicken or the egg? This question applies in diverse fields; I tackle it in conjunction with Stone Age human artifacts which we consider today as the earliest human artworks. In my understanding these old-time artworks are the antecessors and therefore they build up a constituent part of art history. In our current appreciation of art we can talk about an interlacing or a synchrony within the "Chicken-Egg Problem", since out of matter may arise an idea, or an idea may become materialized into an artwork. In my view there is no ascending order, matter can bear an idea and vice versa. In my experience as a stone-sculptor the material often gives rise to the idea for a sculpture and then, while carving, new ideas come into my mind, thus also here I can see an energetic complex which will be one aspect amongst others deserving consideration in my thesis.

I regard myself also as a successor of the "Stone Age artist", who as an initial spark, presumably inspired by the natural forms of pebbles resembling a mammoth for example, created primal figurative artifacts. For me as a sculptor the work with the material stone is a constant source of new ideas and forms. The interlacing and synchrony of matter and idea in interconnection with my physical and intellectual stone-carving work is my challenge. That is

why I see the necessity to reflect on themes like matter and its origin (geology) in connection with an establishment of my theory about the origin of my personal art-perception.

Today, our theoretical rationality is the reason for our high development. To my point of view theory needs practice, thus practice is the basis of theory. For me it is like that. Often I do not know what was first – the idea or the stone. In the reality of my stone-carving "daily grind" I have experienced many times that the theoretical rationalization of my work follows its practical application.

The Christian call "In the beginning was the Word ..." ² implies that the word came first. In my understanding the "Word" here has an equal significance to the laws of nature. But then again what was first, the force, the mass or the acceleration? Gravity is an essential force and factor of the universe and our early ancestors somehow were familiar with the fact that force is equal mass by acceleration ³. In the event, their hunting success was dependent on this law of nature even when they were not conscious about it. Assuming that the early Homo sapiens wanted to hunt down a huge mammoth, they had to be clever since the mass and force of this animal was a multiple of a man's. Consequently, they developed projectiles like spears and their discovery was that they could reach an enormous force by accelerating a small piece of mass – the spear. Certainly a hunted down mammoth provided a strong feeling of success and supported the whole tribe with nourishment for the next days. Now, man found rest at the fireplace. Probably here, out of bones, ivory or pebbles, the "artist" carved small figures like mammoths, bulls or lions and since man apparently has a need to believe in a metaphysical world, these small sculptures became idols – helpers for the next hunt for example.

I assume that Stone Age man understood that the small stone, or piece of bone, already bore the idea of the sculpture – the pictured animal, be it that the original form already resembled an animal, or be it that the bone was of a mammoth, thus the idea of the mammoth was obvious. In this sense I can see within the small statue of a mammoth from a cave in South Germany (*Vogelherd-Höhle*) a counterpart to my bull-shaped sculptures for example.

² Gospel according to John 1:1

³ Isaac Newton, classical mechanics, $F = m \cdot a$



IMAGE 2: ROTES BULLE (2006), ROSSO LAGUNA, H: 25 CM



IMAGE 3: MAMMOTH, 35,000 YEARS OLD, VOGELHERD-HÖHLE, GERMANY

However, the force of an accelerated mass - the spear - and the spiritual force of an idol are totally different items of course. One important difference is that a spiritual force is not in fact measurable by physical laws, and hence cannot be seriously compared with physical forces. I do not want to exclude the possibility that one day it may be possible to verify this by experiment, since scientific research is continuously advancing, whereby previously unimaginable things are becoming visible. But a spiritual energy so far is the subject of mind and belief. Even though we are convinced of the potential of human ability to rationalize, our behavior to a considerable extent is dominated by irrationality - perhaps irrationality even rules. I do not intend to solve this problem, since it is a part of an ongoing unsolved philosophical discussion of epistemology.⁴ My knowledge in terms of epistemology is far too frugal, but while working on stones sometimes I have experienced revealing moments of understanding. Hence, I aim to investigate these personal moments within my thesis. For me it is obvious that the emotional experience when facing an artwork is based on archetypal know-how which we gathered during our phylogeny. This is a very long time, where a distinction between rationality and irrationality simply did not exist.

In a previous clause I mentioned already the Christian religion. My opinion concerning this matter is that religions, as well as arts, are human principles. My hypothesis is: The "archaic man" – mankind in times of the "Urmythos"⁵ – did not distinguish between

⁴ David Papineau: *The Evolution of Knowledge*

<http://www.kcl.ac.uk/ip/davidpapineau/Staff/Papineau/OnlinePapers/evoknow.html> (date: 08.23.2011)

⁵ Robert von Ranke-Graves (1960): *Griechische Mythologie – Quellen und Deutung*. The hypothesis of Robert von Ranke-Graves is that man before understanding the coherence of sexual relation and pregnancy believed in the mystery of maternity hence, this was the period of the "Real Mythos" or what he calls "Urmythos". In consequence Ranke-Graves says the stories which we know as Greek mythology and

the real and the metaphysical world. He naturally understood it as a unit. Through observance of the natural phenomena of one's environment the idea of a metaphysical force was inevitable. The various results of this idea amongst others were carved idols and narrations. In this way man through thousands of years, albeit unconsciously, developed a mythological basic concept. In the common perception of today mythology rather has the reputation of a collection of superstitious stories. But I think, by denying a mythological basic concept, we cannot really understand art and religion in coherence with social systems.

Many of my works bear a reference to mythological themes, like the one in Bingen on the Rhine. When I talked to friends there, suggesting that we all should offer sacrifices to "Poseidon" when the flood of the river was getting dangerously high, I was actually astonished by myself. Bingen is a town in Germany not far from the famous *Loreley* and on the bank of the river Rhine. In 2008 I was a participant of a sculpture symposium⁶ there, where I made a spiral-shaped sculpture. It is placed at the junction of two rivers, where the Nahe and the Rhine meet, and is named *Poseidon*. The horizontal form of a powerful spiral, made of a limestone bearing marine fossils, could be interpreted as a wave. Within a second the wave could become either huge and destructive, or calm like a lagoon. The form depicts the capriciousness of the element water. The astonishment I mentioned before reveals my impression that irrationalism again dominates rationalism. It seems that we want to believe in the power of a sculpture, even when it is irrational. In the end the sculpture merely is a piece of stone; why should it help in an act of prayer? Hence our concept about this complex is obviously comparable to that of a Stone Age man who carved idols.

others are a collection of political-religious motivated anecdotes. Many of these anecdotes became mixed with real mythos, transformed in mythological language and carrying messages of real happenings.

⁶ SKULPTUREN BEI 529 BINGEN AM RHEIN (2008). Gerda & Kuno Pieroth Stiftung, Bingen



IMAGE 4: POSEIDON (2008), ANRÖCHTER STONE, H: 1.3 M, BINGEN ON THE RHINE, GERMANY

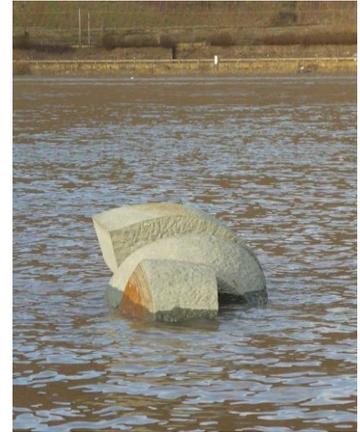


IMAGE 5: FLOOD, JANUARY 2011

Furthermore, and again regarding the entropic principle, it might be that rationality and irrationality are the two factors of human mind which compete for dominance; therefore an eternal progress is provided and entropy is evident. In a figurative sense, the principle is an unbalanced and changeable see-saw which tends alternately to one side and then to the other. In this way I understand the human process as an effect on the energetic complex – rationality generates irrationality and vice versa. Concerning epistemology what I say here is very hypothetical, but to me it seems quite plausible.

So what creates an energetic form? Is it just our intellectual background in connection with our emotional perception? In my opinion it is the coherence of these, but of course it is also the sculpture itself. In view of the form of a sculpture I claim an importance for the authenticity of material, shape and surface. When these three factors fit together, the sculpture is a strong and energetic form. When we try to see a strong sculpture independently from the corresponding surroundings we could place it for example in an empty white room. It may possibly happen that the sculpture then completes and apprehends the whole space. And so, to turn a room into a vivid and energetic charged space, it possibly needs nothing more than just one small sculpture. This I experienced once when I moved into a new flat. The first thing that I put into our new, empty living room was my sculpture *Artemis*. The effect was sensational for me and after that I did not want to change anything. Since it was supposed to be our family's living room, *Artemis* had to share the space with other things. *Artemis* is still a good sculpture, but the energy emanating from the sculpture in the empty white room was an experience of pure beauty. The white room logically is an idealistic space which in the normal course of life is to be found only in art galleries or museums. I guess at home the sensation

could diminish, in time, since it is a biological feature of sensual perception that it lessens with time. So the white room is good for the museum, but in everyday life the sculpture has to compete with all the parallel sensations created by its surroundings.

In consequence the energy regarding a sculpture is a matter of sensual perception, but how to literally extract the emanated energy from the sculpture, without regarding the ambience-dependent emotions? My desire is to investigate the energy in form - so let us also try to see only the sculpture; even when it is nothing more than a fictive approach, since our mind unavoidably combines thoughts and emotions. What is important in the meaning of a powerful form? In my approach I want to focus on whether the "making-of" is responsible for a potential emanation of energy.

In the following, even though I clearly distinguish chapters, my instant methodic creates actually a continuous interlacing of different issues such as Stone Age, mythology, geology, evolution of mind..., my ambition is to detect an order in the chaos. So in a way the chapter "material" involves also my different methods, and how I look at the supposed energy. I want to begin with the material; which does not mean that the material inevitably builds the beginning of my thought-chain. Sometimes I just have an image (idea) in my mind which makes me then search for the right stone (material). There is no fixed ascending order in terms of material emerging from the idea or vice versa. The main chapters of my thesis - material, idea and form - stand for my approach to look if the energy indeed comes from one of the topics only, as for example the geological material stone. But is it rather the artists' making of - due to the used sculptors' vocabulary - which is responsible, or rather, is it the physical and psychological approach of the beholder, who inevitably combines the cognitive experience of a sculpture with a metaphorical thought pattern. I think that a mixture of all of these is responsible for the apparent energetic experience. Although the structure of my text distinguishes between material, idea and form, each of the three chapters always involves the other two and so the material chapter is also a compilation of my personal thoughts regarding the energy-in-form metaphor.

1 MATERIAL

My preferred material to work with is stone but even within this limitation the choice still is huge, since there are hundreds of geologically different stones. The message of a distinguished stone or the associations emanating from the stone, over the years has become more and more essential for my work. The chapter's title implies that the material stone is essential which is true, but with regard to the energy in the form it is theoretically necessary to collect some more significant evidence. Finally, the creation of a stone-sculpture is a matter of an individual conscious effort. I will therefore go into aspects of this effort, although I have mentioned some in the prologue already. The stones in all their materialistic aspects will be the main focus within the chapter "Stone – formed by dynamic process" as well as in my explanations regarding the "making of" stone-sculptures.

*"In modern terminology, geologists recognize three basic groups: first **igneous rocks**, which form by freezing of molten rock, second **sedimentary rocks**, which form either by cementing together of fragments broken off preexisting rocks or by the precipitation of mineral crystals out of water solutions at or near the Earth's surface and third **metamorphic rocks**, which form when preexisting rocks change into new rocks in response to a change in pressure and temperature conditions, and/or as a result of squashing, stretching, or shear, which means that it does not require melting. Each of the three groups contains many different individual rock types, distinguished from one another by physical characteristics such as grain size, composition, texture and layering."*⁷

This short and precise description of *Stephen Marshak* seems to me like a naturalistic poem and thereby it is a wonderful abstract about the fundamental nature of stones. The poem-like impression reveals my difficulties due to focusing merely on the sculpture without any regard for ambience-dependent emotions. It shows to me the immediate coherence of stone and idea. An igneous stone like granite is of plutonic origin, thus millions of years ago the material built a hot magma chamber. The more time the pluton had to cool down, the bigger its grains grew. When I choose granite, I want to see that the origin of the material

⁷ Stephen Marshak (2005): *Earth – Portrait of a Planet* (p. 134)

finds in some way its expression in the form. In comparison a fine grained crystalline and sometimes slightly transparent marble is quite soft of course; it is metamorphic just as the totally different, and again very hard, gneiss. A limestone may bear even fossils, or different colors and faults, which are interpretable as records of stressful geologic times. The material stone is a frozen narration about their long history, which I try to respect in my choice of the raw material, when I am looking for a stone.

The geomorphologic product stone, which becomes forced by the dynamic of the globe to change its form and structure, while in the process becoming rock again even when in the meantime it had consisted merely of mud, sand or even ashes, is an example of morphologic continuum. Hence, in the geological scale, the phenomenon is rather the stability of the morphologic process, than the durability of stone. In this sense I consider stone-carving as a conscious act within an ever ongoing metamorphosis. In the strict sense carving stones, finally, is an erosive procedure. A sculpture is in fact a man-made manifestation which seems to resist the leveling force of erosion, but this is just a moment of reality. Another reality of stone is that it bears also the memento of decline.

Once upon a time when I was traveling again, I followed ancient traces in Greece and came face to face with the famous *Charioteer of Delphi*. Before I had known the sculpture only through photos in books, but now tears came to my eyes. Usually fables and tales start similarly to this, but why should I not mention a personal experience here almost at the beginning of my essay? After all, an artist's work evokes touching effects like fantasy and illusion, or even more, revelation. However, emotional experiences when facing particular sculptures like the one in Delphi will be part of my considerations, in order to verify a supposed energy within the sculpture. The term sculpture here stands for the complex of form, material and idea. For a beholder who becomes touched by a sculpture the well known phrase, "the soul of art" may spring to mind. The soul as an old fashioned term is a metaphoric feature of art and shall be my focus, but rather as a synonym of energy. A metaphor in a way is an analogy between objects and ideas and since it is quite difficult to express something like an idea in comprehensible words, we use depicting metaphors. Even something like an idea actually can be a clear image in the mind, as long as one does not try to explain it in words.

The Charioteer of Delphi is a bronze, which seems to be in contrast to my subject "stone", but my emotions were because of the excellence of the sculpture. I have seen comparably brilliant stone-sculptures which impressed me as much, however the statue in Delphi, being so famous, was a real surprise for me, far better than I had expected.

Whether or not it is possible to prove the existence of a supposed energy within art, it must not necessarily mean that a negative proof has failed. A failure can also appear to be of scientific significance. How to verify the subject of art, if possible by measuring and somehow quantifying? Men like to quantify! It seems to be a basic need and it is an essential approach and feature of scientific work. Quantification at a simple stage was initiated by our forefathers, who for some reason integrated the days to the phases of the moon for example. In ancient times the first calendars were invented during the Paleolithic era. We have continued measuring and counting the world around us, from the smallest to biggest. On the way men have discovered that space and time is relative and so on. Since weighing is a method to quantify, we know the weight of stone, even of the moon, and we have learned how to calculate the force of a certain mass in conjunction with its acceleration. But sometimes the need to measure has led to bizarre approaches. Around 100 years ago the physician *Dr. Duncan McDougall* published his finding in the journal *American Medicine* that the human soul has a mass of 21 grams.⁸ Many people are convinced that the soul somehow leaves the body during the moment of death. Nevertheless, the results of Mr. McDougall are generally held to be of no scientific merit.

Quite often it is said that certain sculptures do have a soul, which is worth a closer look and thereby leads us to several questions: What, a soul within a dead material? If there is a soul, is it measurable by weighing? How to explain a soul or spirit of an excellent sculpture scientifically? At the inauguration of a sculpture in public, the artist is always asked about the weight of the original block of stone and the weight of the finished sculpture. He can notice something like astonishment in the audiences' perception, when he mentions that the block was 25 tons, or so. This is just a measurable aspect or parameter, explaining something about the "making of", but does not directly satisfy my ambition to quantify, or better, to explain the various properties accounting for the value of art and "soul" within a sculpture. Obviously quantification features on the list of basic human needs.

What about art? Is art considered to be on that list too? I say yes! By all means, art is a reported feature of Paleolithic culture, up to this day. There is a continuum in this certain human feature, which has an essential impact on our consciousness. Even more the interaction of society and art is a key indicator of our consciousness. My supposition is that the emerging phenomenon of what we today call "art" and "religion" in prehistorically times, around 40,000

⁸ According to *American Medicine*: March 11, 1907, Vol. II, 240-243 as cited by [http://en.wikipedia.org/wiki/Duncan_MacDougall_\(doctor\)](http://en.wikipedia.org/wiki/Duncan_MacDougall_(doctor)) (09.09.2011)

years ago, triggered the so called "Big Jump" of humanity. The human species is an evolutionary one, just as any other species on this globe, but the ability for self reflection makes the difference a unique feature. I suppose the ability to reflect on the personal situation occurred at that time.

Once again McDougall, while being convinced that a human soul has a mass, was equally convinced that animals do not have any soul, because at the moment of death or more precisely, in the seconds before and after, there was no difference of weight. I do not accept his argumentation, which points to the old and erroneous idea that man is the pinnacle of creation. Even more, that this creation has the right to state that any matter is dead. Considering stone as matter, I am not so sure about that, as I know about the continuous changes within rocks, in particular processes like metamorphosis, which are not determinable. In consequence, I do not regard stone as being a dead material and so the metamorphosis will be an issue within my thesis.

Now it seems that I confuse the two terms metaphor and metamorphism. Due to a perhaps necessary clarification, metamorphism is an essential geological feature which I always have in my mind when working with or looking at stones. As such it is a materialistic quality. This stands in contrast to my energy-in-form-idea, or soul-in-sculpture, which is a metaphor which associates idea and sculpture. The two terms will recur from time to time in my text and should thereby become sufficiently clear.

Art and religion do have a substantial intersection. Both subjects play a significant role in the evolution of human consciousness. Regarding art when I talk about energy, I could say "soul" as well. But I would like to focus on the term "energy", since it is more appropriate. "Soul" awakes too direct associations to religion, which raises again the unsolved chicken-egg problem. I suppose at the starting point of art and religion there was not the question at all of what was first. We can assume that in the Paleolithic era, the material and spiritual world simply were one and the same. Therefore, it is a typical problem of the modern world. It seems that soul and energy describe the same term; nevertheless I prefer the term energy.

Heaven forbid that in another 100 years my statement will be used in the manner I have cited McDougall. However, then I will not be here anymore but my stones will still exist. As a sculptor, working out an artist's statement, I have a license to be unorthodox. For all describable facts of art, in the end, there always remains something that is inexplicable. In the physical world moments like this are called a singularity, which is when all mathematical models fail. But in a way I want to distinguish my work from the work of scientists. Very

often I can see analogies in the scientific models. The way I use analogies might appear for scientists sometimes abstruse. However, mine is an approach that stands out with quantifying and statistical methods and my fanciful conjectures are not only my construction to understand, but might also express a typically unorthodox artistic way of thinking.

I maintain that sculpture is a medium which has endured since the very early beginnings of its production and still remains as a kind of basic need for at least some of us. This may appear idealistic, but the fact is that we can find sculptures in numerous museums around the world - the oldest ones known so far are dated around 35,000 B.C., and some even older ones probably are not discovered yet. Since those times the appearance of sculptures has been a regular feature of human society until today, when art once more seems to be considered a luxury. With this in mind, if we ask the ordinary man who is reading a book while having a cup of coffee, why he is doing so, he would probably say, because it makes him a human being! In this context I would say that art makes me a human being.

In recent years of modern art, sculpture in economical terms has suffered a recession. Since it has become very difficult not only to sell sculpture, even the image of sculpture is suffering. The concept of sculpture has to be discussed, just as every concept has to undergo discussion at times. I guess I am going to consider some of the aspects concerning a modern concept of sculpture, however rather in the sense of a side-effect.

An example of the need for this discourse would be a recent stopover in Magdeburg (Germany), where I wanted to see the famous cathedral. On the way my attention was attracted by some public sculptures close by in the green. Although they were obviously made after the Second World War, they were made, untypically, in a classical figurative manner. Coming closer, in order to read the title, I found that my impression from the distance was in fact in contradiction with the meaning. For when I looked at the bronze statue which appeared to me as the depiction of a falling man - falling like an old sack - I expected a title like "falling" or "shut down", whereas the actual title was "ascending". This moment was a disappointment for me and therefore I can imagine that sculptures like this one can easily be contra-productive and confusing for the way art is publicly perceived. What I expect from art in a public space is at least a reflection of the *zeitgeist*; maybe that is why I wanted to see the implied fall before the ascent. Finally, my visit to Magdeburg was a long time after the fall of the Berlin Wall. Probably this was my subjective interpretation and spontaneous attempt to find an explanation for this particular sculpture.

As another side effect I would hereby like to bring to light the sculptors' situation whose actual work is usually done in the anonymity of the workshop. Usually the production of art in the atelier is a kind of tightrope walk, with a safety net, since it is not yet published. Consequently, the installation of art in the public domain is the real test, without the net. Thinking of Pharaonic sculptures, which appear to have been made for eternity, we do not pay justice to the individual artist. Like any other, this former artist was a person living in the present and producing art for his own time, even though it was a requirement to build for eternity. So the individual sculptor shaped his pieces according to the prevalent means and aesthetics. Art can be produced by reflecting on the past, or the present, but it can never be sure about how it will be perceived in the future. It is the perception of art which changes as time goes by. Therefore, sculptors neither produce for eternity nor did former sculptors produce work in the duty of any Pharaoh. When working in materials like stone and bronze, these pieces may have the chance to be examined by future generations. Whether a sculpture finds favor, and thus will be protected as a valuable object of identity or not, has to be proven by history. The same reason can also lead to destruction, be it by war, revolution, vandalism or just natural erosion. What we can see today in museums around the world has been proved by history and is therefore worthy of being on display in a museum.



IMAGE 6: JO ON THE TIGHTROPE, ATELIER

There are always some artists who are smart, using their knowledge about marketing strategies. They may immediately be very successful during their own production period. Of course, the works of some few artists are traded on such exclusive levels as to become attractive for the newly rich. Today, more than ever, we are living in a material, or better-to-say, monetarily adjusted society. Concerning an economic way of thinking, which certainly is

a natural and typical human pattern, I cannot see an imperative interconnection between my issue of the energy within sculpture and its monetary value. I want to state that these extraordinarily high prices - sometimes paid for artists still alive, and amongst them some who are even very young - are an invention of modern bourgeois times, let us say of the last fifty years. In former times an artist's reputation was somehow more like that of a good skilled craftsman. That is what I am interested in. Finally, carving stone is still a manual work which demands a great deal of practice. As an example of the absolute exercise, I recall what is reported about the famous Japanese painter *Hokusai*. In the last moments before he died he said that, if he could live for five years more, he would probably become a good painter. He was 89 years old and his paintings nowadays are admired as icons of Japan. He is one of my heroes and I, like him, also see my way of working as a permanent developing on my skills.

1.1. STONE AND MAN – AN ENCOUNTER

For me as an enthusiastic sculptor the work with a piece of stone also is a kind of energy exchange. This means that I try to give some of my energy to the stone, to transfer it into a suspenseful sculpture which appears vivid and energy-breathing.

When getting in touch with certain sculptures I change myself into an aficionado, enthusiast or even freak. I can get extremely excited when I see masterpieces like the Charioteer of Delphi, or the Laocoön Group, or Pharaonic Writer Sculptures. The last ones are phenomenal abstractions of the human body in form of a cube! Who said that abstraction is an invention of modern art? This is ridiculous, please go and see ancient Egypt, but not only there it becomes clear that abstraction seems to be a human feature – actually it is stone-aged!

I could continue a list of heroes but it would get too long. Michelangelo, Bernini, Thorvaldsen, Rodin, Moore, Brancusi, Chillida and so on, the images of sculptures which come to mind when reading these names, are icons of their times. Even if there have been interpretative discussions about their works lasting for decades and many essays have been written about them, my perception of their masterpieces very often is dominated by the secrets still remaining. It might be that these secrets will never be revealed. Probably it is exactly the

inexplicable - an inability to find words, which also accounts for what makes a sculpture really full of tension and worthy of consideration as energy in form.

For a sculptor working in stone it is unavoidable that geology and the emergence of stone comes to mind, even if this is not necessarily a conscious approach. Although in my work I can see a strong correlation between the stone or rather the rock - and what I am making out of it. When I am working with boulders for example, I am quite excited about the origin of the stone. These particular stones, through the melting glaciers of the last Ice Age, were left behind in northern Germany as a kind of souvenir from Scandinavia. This is a casual statement in terms of geomorphology⁹, which is one principle sub-discipline of geology, as a scientific topic which involves landscape formation and evolution. Geomorphologic factors are sunlight, air, water and life which all permanently interact. The result of it for example is the boulder which I find on the fields in *Schleswig-Holstein*. I encounter these metamorphic stones as welcome souvenirs which traveled all the way from Scandinavia.

My effort is to respect and if I possibly can, to work out a perceivable connection between the stone and the form which I give to the stone. Indeed, I seek to feel a tension between the material and the form, and that is what I appreciate when watching a stone-sculpture.

1.2. STONE – FORMED BY DYNAMIC PROCESS

*To see the world in a grain of sand
and heaven in a wild flower.
To hold infinity in the palm of the hand
and eternity in an hour.*

William Blake (British poet, 1757-1827)

⁹ Stephen Marshak (2005): *Earth – Portrait of a Planet* (p. 5, Table 1)

The landscape where I was born and played in as a child, and whose depiction gives me a sense of homeland today, is located in southern Germany. I grew up in a low mountain range called the *Swabian Alps*; a landscape created by the sea, but in my time the sea was more than 800 km away in all directions, except to the east, where it was about 8,000 km. As a child I knew the sea only from books like *Kinder Kosmos* and TV and my uncle told me about it. He taught me that the Swabian Alps now mostly consist of limestone but actually formed the seabed in the Jurassic eon which came to an end round 145 million years ago. But where was the sea now I asked myself when I was a child? I just found stony shells here and there. To me, as a boy, this fossil record was of course very mysterious and today when I imagine a Paleolithic hunter stumbling over a fossil ammonite long ago I presume that for him it was perhaps just as mysterious. He had no book explaining that life on earth began in the Cambrian period, and that in the Cretaceous era huge dinosaurs had existed. Neither was he aware of plate tectonics and super continents like Pangaea. But I in my childhood learned already that thousands of years ago Stone Age people lived in the various caves of my home valley, thanks to my uncle *Albert*¹⁰ who was also one of the early discoverers of the archeological sites in my home town and the surroundings. That fossils played a role in the perception of Paleolithic hunters have been proven, since archeologists have discovered artifacts like hand-axes which clearly use fossils as decoration.¹¹

Today we can suppose that a Stone Age hunter used ammonite as a divine gift. Possibly he decorated the piece with other beautiful features, like bird feathers and pearls, to worship something. This behavior, we know, is a fundamental feature of human beings and possibly the origin of art, as was stated in the recent publication of the well known biologist and ethologist *Irenäus Eibl-Eibesfeldt* together with the art historian and philosopher *Christa Sütterlin*.¹² Eibl-Eibesfeldt was a fellow of well known biologist *Konrad Lorenz*, who often is regarded as the founder of ethology as a scientific discipline.

Stone is my issue here, and I would like to explain the difference between the terms stone and rock. Firstly, stone is moveable and before that it was part of a rock which is solid

¹⁰ Albert Kley (1907-2000), was the principle of the Gymnasium Geislingen (Germany), a painter (Swabian expressionists group) and respectable layman archeologist.

¹¹ Richard Rudgley (1998): *Lost Civilisations of the Stone-Age*

¹² Irenäus Eibl-Eibesfeldt and Christa Sütterlin (2007): *WELTSPRACHE KUNST – Zur Natur- und Kunstgeschichte Bildlicher Kommunikation*

like a mountain. So, a boulder as well as a quarried block of granite is a stone, since they have lost their fixed connection to their mother rock. Secondly, stones can be very old. Whilst some are around only 50 million years old, others are even billions of years old. Geological data indicates that the Earth was formed 4.57 billion years ago. My artistic curiosity becomes satisfied by the knowledge that the universe once consisted of nothing other than energy. Most astronomers have concluded that expansion did indeed begin at a specific time, with a cataclysmic explosion called the "Big Bang". According to the Big Bang theory everything which now constitutes the universe was initially packed into an infinitesimally small point. For reasons that no one fully understands, the point exploded, according to current estimates 13.7 (+/-1%) billion years ago.¹³ Nobody was present to see the Big Bang. However, numerous scientists, researchers and philosophers from around the world are discussing the inconceivable, infinitesimal small point, and what was before and what happened after the Big Bang. The small point supposedly contained all the mass of the whole contemporary universe. By applying the laws of physics, and observing the edge of the universe with large telescopes, researchers have developed a consistent model of how the universe evolved after the big explosion. Again, according to the contemporary model, the universe consisted during that first instant of existence of the entire mass of the universe of today. At that time the universe was so dense and hot (10^{28} degrees, in other words 100 000 000 000 000 000 000 000 000 degrees), that it consisted entirely of energy. Atoms could not even exist under these conditions.¹⁴ I cannot avoid dealing with this question, considering that energy is the keyword of my statement. The image of the swirling dust under the sofa getting into a fluff ball is the perfect example of my instant method. By the end, and indeed forced through the chaos of my way of thinking, hopefully the reader will be able to understand my point of view that everything is energy, also the material stone and hence of course even a sculpture. So let us return to the chaos.

By the time the universe reached an age of 3 minutes, its temperature had fallen below 1 billion degrees. This is only a 1 with 9 zeros, less than a $\frac{1}{3}$ of its original number of zeros. Its diameter had grown to about 100 billion kilometers. When the universe reached its 200 millionth birthday, which was still babyhood of the universe, it contained immense, slowly

¹³ Stephen Marshak (2005): *Earth - Portrait of a Planet* (p.19). In the following my text partly involves quotes of Marshak. I appreciated his comprehensible writing style; unfortunately I cannot quote whole chapters of his wonderful depicting texts, since it would extend my essay too much.

¹⁴ Stephen Marshak: *Earth - Portrait of a Planet* (p.20)

swirling, dark nebulae separated by vast voids of empty space.¹⁵ It is worth mentioning the scientific knowledge about the first intervals of time of our universe, because of its incredible dimensions, which force us to apply our ability for abstract thinking. Moreover, the pure description of the genesis of the universe has affinity to our various mythological histories of origin.

*People like us, who believe in physics,
know that the distinction between past,
present and future is only a stubbornly persistent illusion.*

Albert Einstein (1955)

Maybe through Einstein's words we can get a clue to the eternal dimensions we are living in. Another method to illustrate the human part in "eternity" is the following time scale. In the geological time scale, mankind barely features. Assuming our globe is 24 hours old, the erectness of the species "Homo" is only two minutes and that of "Homo sapiens" 2 seconds old.¹⁶ Bearing in mind that Homo sapiens is probably 200,000 years old this example shows in a comprehensive way the diminutive significance of the modern human being in geological terms. But on the other hand it reveals the amazing robustness and cleverness of men to occupy new living space in a very short time. Perhaps, within the next very small part of a second, mankind may even learn to save the environment? We will see. However these two seconds in terms of Homo sapiens' perception, of course is equal to the meaning of "eternity". Therefore, the aphorism "faith moves mountains" excites me, since it is a totally normal feature of mountains that they rise but also disappear and then again where was formerly an ocean is now a mountain range. One must just recall that on many mountain peaks marine fossils can be found. The fossils' report is evident; moreover, aphorisms regarding the interconnection of faith and mountains, found in various mythologies, are a typically human way of accepting or unconsciously acknowledging these unimaginable natural facts.

¹⁵ Stephen Marshak (2005): *Earth - Portrait of a Planet*

¹⁶ Wikipedia: *geological time scale*

At the next interval of the formation of the universe, the initially denser regions of nebulae began to pull in surrounding gases and, like the rich getting richer, they grew in mass and therefore increased their density, driven by the power of gravity. The initial swirling movement of gas transformed into a rotation around an axis, becoming progressively faster and faster. Stephen Marshak may forgive me for foreshortening his wonderful explanation.¹⁷ The movement of the gas atoms caused more and more collisions, which in turn caused an increase in temperature and decreasing pressure, until eventually the central ball of the accretion disk became hot enough to glow, and at this point it became a protostar. A protostar continues to grow by attracting successively more mass, thus the increasing density caused higher temperature. Under a comfortable 10 million degrees a nuclear-fusion reaction began to take place. The protostar turned into a fearsome furnace, but at the same time the first nuclear-fusion reaction happened. The body of the protostar ignited and a new true-star was born. The first generation of stars tended to be very massive, thus they burned hotter and ran out of fuel quickly. But before they ran out of fuel they died, violently exploding to form supernovae. Not long after the first generation of stars was formed, the universe began to be peppered with the first generation of supernova explosions. Marshak describes the forming of the galaxies and solar systems metaphorically as:

*"We are all made of stardust."*¹⁸

Geologists have invented a geologic time scale for the earth since its birth. The last 542 million years are the Phanerozoic eon, and all the time earlier than that is called the *Precambrian*.¹⁹ They further divide the Precambrian into three main intervals named, from oldest to youngest, the Hadean, the Archean and the Proterozoic eon. Significantly the oldest period of earth history, when no continents had formed so far, is named after the Greek *Hades*, the god of the underworld. The first 77 million years outline the Hadean eon, which would have been for someone present at that time, hell on earth. The planet was still growing, collecting and compressing matter into a dense ball generating substantial heat, and each time another meteorite collided with the earth, its kinetic energy added more heat.²⁰ The geologist Stephen Marshak prefixed his chapter about the Hadean Eon with a passage from *Dante's Inferno*:

¹⁷ Stephen Marshak, *Earth – Portrait of a Planet*

¹⁸ Stephen Marshak, *Earth – Portrait of a Planet* (p. 21)

¹⁹ Stephen Marshak, *Earth – Portrait of a Planet* (p.6)

²⁰ Stephen Marshak, *Earth – Portrait of a Planet* (p. 408)

*A viscid pitch boiled in the fosse below
and coated all the bank with gluey mire.
I saw the pitch; but I saw nothing in it
except the enormous bubbles of its boiling
Which swelled and sank, like breathing, through all the pit.*

Dante, The Inferno, Canto XXI

From the artistic point of view Dante's vision depicts the earth's adolescence in depth. I could not resist quoting Stephen Marshak's natural poem-like scientific prose, even roughly shortened, it reveals that human imagination seems to be limited, not quite able to really understand the nature of nature and also for that reason mankind simply had to develop a mythological concept.

1.3. METAMORPHISM

The Roman poet *Ovid* described in a mythological manner the ways of change of a god into a tree or an animal or even a star. Geological metamorphism could appear as mystic as well but it is a scientific fact, since we have learned that the earth features various dynamics. *James Hutton*²¹(1726-1797), the father of geology, described rocks which are extremely distorted in their structure; these are known today as metamorphic rocks. Just 50 years ago we learned to accept the theory of plate tectonic.²² From now on it was not only myth and faith which could move a mountain, the movement was a geological fact.

"Metamorphic rocks form when a preexisting rock (a protolith) undergoes changes in

²¹ Jack Repcheck (2007): *Der Mann, der die Zeit fand – James Hutton und die Entdeckung der Erdgeschichte*

²² Already in 1926 *Alfred Wegner* proposed his ideas about the continental drift which was by the majority of the experts proclaimed as absurd. In 1960 the theory came in focus again since the sea-floor magnetism indicated that Wegner was right.

*texture and/or mineral content in the solid state, in response to changes in temperature, pressure, or differential stress or in response to interaction with hydrothermal fluids. Some metamorphic rocks are non foliated (they do not have metamorphic layering) whereas others are foliated (they do have metamorphic layering). Foliation results when rock is squashed or sheared during metamorphism, causing minerals to grow or rotate into parallelism with each other. Dynamothermal (regional) metamorphism occurs during mountain building, when a region is buried deeply, and during subduction, when sea-floor sediment is carried to the base of an accretionary prism. Contact metamorphism takes place around an igneous intrusion, or pluton, caused by the heat released by the pluton."*²³

But how to interpret that metamorphism is a solid state process? What now forms the summit of a mountain, after 50 million years is likely to be found as sedimentary rock on the bottom of the sea. And after some more time it will be sheared and squashed and pushed down by subduction, thereby increasing temperature and pressure, resulting in a change in the minerals structure and content.

*"[...] a metamorphic rock becomes as different from its protolith as a butterfly is from a caterpillar."*²⁴

On its further journey the material might come in contact with a hot magma chamber (pluton) several kilometers below the surface of the earth. This pluton later on, by the uplift and weathering, becomes exposed at the surface as a granite mountain. The geologists are talking about rock cycles; of course, there are various alternative pathways. Though, when I am working with metamorphic rock, I know that it once lay many kilometers beneath the surface of the earth. The material which came close to an intrusion (fluid magma) by contact metamorphism changed into *Hornfels*. This later at the surface by weathering became a certain clay deposit, located at the ground of a granite mountain (the former hot pluton), which then again could be the raw material for porcelain. This particular clay, for porcelain mainly consists of Hornfels sediment, changes its texture with increasing temperature. At temperatures around 1,400°C just before the melting point the desired metamorphosis happens: The piece of clay which went into the oven turns into porcelain. Pottery can therefore be seen as an analogy for thermal metamorphism. This is a manmade

²³ Stephen Marshak (2005): *Earth – Portrait of a Planet* (p. 227)

²⁴ Stephen Marshak, *Earth – Portrait of a Planet*

metamorphosis, but in nature some more agents of metamorphism are relevant, as there is heat but also pressure, differential stress and hydrothermal fluids.

So in general the material I am working with is a solid state material, but which is changing permanently! The formation of metamorphic textures and minerals takes place very slowly. It may take thousands to millions of years. I cannot really watch the process, but I can develop a feeling for it, since I have had experience of many different rock types. In time, the work with stone caused me to look more closely at the matters' properties. In the rock cycles' sense I understand my journey to the inner material goods of my sculptures as a kind of recapitulation. On my journey I am working with stones which are also on a journey. That is why I really appreciate to work with stones, in particular with boulders.

The solid state process however describes that the changes in the rock that results in the formation of metamorphic mineral assemblage and/or a metamorphic foliation, in response to the former mentioned necessary agents (pressure, temperature, etc), does not require melting. The change happens in a plastic state!



IMAGE 7: REITER (2011), SYENIT (LARVIKIT, GRANITE-LIKE IGNEOUS ROCK) & BOULDER (METAMORPHIC GNEIS), H: 2.50 M

2 IDEA

While in the previous chapter my intention was to accentuate most of the possible topics concerning the raw materials, I now intend to compile idea-related concerns. Ultimately, an idea is the fundamental premise for any creative process and with regard to matter, the conditional problem emerges as full of tension. In my opinion any idea is based in a way on the material, therefore the material will undoubtedly play a distinguished role.

In terms of communication all the different languages possibly could be taken as barriers, but which obviously are permeable in terms of the universally comprehensible language of art. As I am a traveler I have seen some very different parts of the world. I have challenged the universal language of art through my own actions at more than 30 international sculpture symposia so far. This fact must be a matter of idea. I suppose that prototypes or else archetypes are the factors which support this common comprehension. Among experts our archetypes are explained as psychological structures which depend on basic human experiences, like birth, childhood and so on. These experiences are made all around the globe. In this sense an archetype is an idea but possibly it is also a structure in our brain which would be a significant physical pattern. So ultimately the idea could be seen as an offspring of matter.

The similarities and analogies which can be discovered when comparing apparently diverse religions are indeed astonishing. Also, mythologies seem to have one common source and when traveling the attentive voyager will certainly detect astonishingly similar patterns, be it in terms of artifacts, architecture or folklore. The term “archetype” describes the unconscious images of a collective memory and it seems that in terms of a collective unconscious, people all over the globe do have very similar ways of understanding. One could say that archetypes are mementos of our phylogeny saved in the collective unconscious. What we appreciate as Paleolithic rock-art today is probably the depiction of the images dreamed by our Stone Age forefathers. In this sense their dreams and visions became depicted in arts, myths and religions; by the way man developed the ability to think metaphorically. Today the power of the Stone Age archetypes is still a force which evokes ideas in terms of being part of a collective art concept. In this way I understand the archetypes to be patterns of the unconscious, which has the power to dominate or at least to influence our conscious act. Given this, it is worth asking the question whether we really are the self-willed species we

believe we are. Whatever the case, I have no problem to accept that archetypes are the eternal source of artistic ideas.

The act of visualizing a dream or a vision by creating an artifact is an attempt to transform - to make a formerly invisible image visible for other people. Paleolithic rock-art demonstrates that the human mind was already able to think metaphorically. A metaphor is a concept, formed to construct an analogy between idea and thing. In place of the dream or vision (idea) the artifact (thing/object) now stands as a metaphor. This invention was made in the Paleolithic era and is the foundation of all artistic ideas.

In terms of sculpture only, I could list many materialized ideas which are obviously offspring's of the same prototype, even if they have been made in totally distant cultures. For example I have seen a sculpture in the *National Museum of Seoul* which immediately reminded me of the famous sculpture *Thinker* by Rodin. I would categorize the Korean sculpture as a masterpiece, since the depiction of meditative concentration it achieved was for me as a beholder an immediate and overwhelming feeling. Moreover, the obvious similarity in the basic idea which probably stood at the inception of both sculptures - one was made in France and the other one in Korea - I take as the manifestation of evidentially prototypical ideas.



IMAGE 8: BRONZE SCULPTURE, SEOUL NATIONAL MUSEUM, SOUTH KOREA

2.1. *MAN – EVOLUTION OF ART*

My point of view is that one of the main reasons for the phenomenon of the continuous appearance of art is that through art we can get in touch with archetypes. As I have explained I understand archetypes as being a consequence of life. The realization of this fact directs my attention way back, once again into the history of human origin, when life style indeed was archaic. My personal way of art-perception takes art as a form of an intuitive and primordial experience of the world around me. I suppose by this art-view I am not alone and therefore I shall try to investigate in this sense if the evolution of the human mind was activated by the human interventions which are characterized by the Upper Paleolithic rock-art. Finally, there must be a common source from which these archaic forms emerged and then impressed themselves on our collective memory, at least partly.

Is the evolutionarily-formed collective memory of mankind exposed to forces analogous to geological erosion? This question implies that for the collective memory the evolutionary principle also applies. Given that it is so, mankind nonetheless suffers a loss of memory says *Immanuel Velikovsky*.²⁵ For example the individual remembrance of a natural phenomenon like a tsunami or the impact of a meteorite, which usually means a disaster for the individual, becomes eroded by unconscious defense mechanisms characterized by a refusal to acknowledge painful realities. To further illustrate my apparently strange comparison, an impact crater becomes eroded by time and thus is only visible through geophysical approaches, since deeper layers of geological strata reveal the impact physically, as a reminiscence. In analogy mankind changes the remembrance of the impact into a mythological story, which is certainly not featured by the short-term memory (at the surface). I can imagine that here a cross-social process of repression is in the background. As in the case of the meteorite, the point of origin of the mythological story is not visible anymore. My guess is that deeper layers of the memory, possibly the brain stem, saved it. These memories could have changed into a kind of instinct, hence could be even handed over by heredity. The appearance of similar mythologies independently on different continents is a fact, as well as people around the globe who reveal a similar pattern of behavior. When walking in the bush

²⁵ Immanuel Velikovsky (2008): revised published by Julia White: *Menscheit im Gedächtnisschwund*. Original title (1982): *Mankind in Amnesia*

for example a moving little branch can trigger fear, since we may suspect a terrible poisonous snake behind the movement. This might be an instinctual reaction, since this behavior pattern is probably saved in the brain stem, which was already developed by our ancestors of the animal kingdom, but I am not really sure about the impact of heredity here. Certainly, brain researchers can locate the part of brain which sets off the alarm bells. However, what I want to state here is that big changes, in the far past of human society were accompanied or caused by miserable trouble and stress.²⁶ Changes turned into mythology or religion, were triggered by impacts of meteorites, tsunamis or disastrous war battles and similar other catastrophes. Samples are numerous, like the genesis of the forefathers of the *Olympic Godheads*, numerous stories about floods around the world, or the seven plagues of Egypt. It seems that stressful changes made men believe in a transcendent power. The outcome was the origin of myth and religion, and therefore also of art of course.

A belief in transcendental power is a fertile ground for a heliocentric point of view. In our time we should surely know better, since a heliocentric view considers all the beautiful stars merely as a decoration of the night sky. Of course, we do know better, even though it seems that we do not want to see the reality, since it could mean that our existence is rather random and probably just mortal. We still have not yet realized that our solar system contains some nine planets, some moons, but also millions of meteorites. Our solar system is one out of billions that constitute the Milky Way, a galaxy which is located in one inconsiderable corner of the universe, consisting of billions of galaxies. Who cares in a universe like this about one planet out of trillions and where these planets are gaining gravity by collecting meteorites?

Modern science has revealed our fortunate but accidental existence. Moreover, the functionality of cosmic or deep sea systems has been more fully elaborated than the functionality of what is inside our head - the human mind. Neuroscience is still at the beginning. In a way I am glad about this, since it is a big challenge and one on which to ponder. I suggest that mythology is a mechanism of the human mind, and thus of scientific merit also in terms of neuroscience.

The former mentioned Immanuel Velikovsky was for some time a "persona non grata", since other scientists claimed his scientific methods were inadequate. The

²⁶ Not only Velikovsky, also Sir Fred Hoyle (astrophysicist) argues that disastrous natural phenomena are significant, concerning the origin of religion. Fred Hoyle (1997): *Kosmische Katastrophen und der Ursprung der Religion*. Original title (1993): *The Origin of the Universe and the Origin of Religion*

psychoanalyst died in 1979. In general, his theories have been vigorously rejected or ignored by the academic community. Nevertheless, his books often sold well and gained an enthusiastic support in lay circles, often fuelled by claims of the unfair treatment of Velikovsky by orthodox academia.²⁷ Recently some of his theories have attracted attention again. In the foreword of his book with the original title *Mankind in Amnesia*²⁸, which was republished and revised in Germany (2008), and is considered as his most important text, it is stated that the demands and methodology of science nowadays more than ever require objectivity and therefore subjective factors become eliminated.²⁹ Although scientists are human beings, they tend to be objective and consequently they lack an awareness of their own subjectivity, in particular in their own way of thinking and feeling. In other words, the orthodox academic community is sometimes partly blind, since it does not want to come suspiciously close to subjectivity. In contrast the artists' typically subjective way of thinking and feeling is the basis of artistic work, thus I infer that subjectivity is also the core of my method.

I think psychoanalysis did not terminate after Freud and Jung. Velikovsky is one amongst others who continued and developed an approach at the point where Freud apparently got stuck with the idea that neuroses have their source in a traumatic experience in childhood. Instead, Velikovsky claimed disastrous experiences that happened thousands of years ago as a source for periodic neurotic patterns of behavior. He agrees with Freud that the typical amnesia is to cover the trauma, but here he goes ahead and develops the idea that the collective memory, instead of suffering a total amnesia, develops mythologies. I guess that is why we still cling to a heliocentric perception. Even more, since we enjoy a beautiful sunset, by believing that the sun is actually setting, we even hold a geocentric view. We are a romantic and subjective species – we admire sunsets, but as well as this we enjoy metaphors and art!

Thanks to the enormous capacity and fantasy of scientists, we are in our days able to travel in outer space, visiting the moon and soon maybe even mars, and we are able to find solutions for some more mysteries. Human fantasy can be a force and is a significant,

²⁷ Wikipedia: Immanuel Velikovsky

²⁸ Published postmortem in 1982

²⁹ According to Immanuel Velikovsky as cited by Julia White (2008): *Menscheit im Gedächtnisschwund*. Foreword of Julia White (p. 9)

distinguished feature of the human species. Our forefathers in the caves of Lascaux (France) had fantasy as well and were able to let their mind wander. Even the *Mousterian*³⁰ Neanderthal man apparently buried his fellows, sometimes even amongst some oblations which supposedly, similar to later civilizations, should help for the next part of their "life". Through fantasy we can get to another world, thereby we can have feelings, which we cannot explain rationally. The accomplishment of imagination is a feature of the human being, and is absolutely necessary for the scientist in these days as well as it was for the shaman of Lascaux, or possibly the Neanderthal man. We may assume that our ancestors 35,000 years ago must have had the capability to develop thoughts which went above the normal course of life. Perhaps they were even better than modern man, to let their minds wander to the other invisible worlds. The awesome report of their animal life in numerous caves, not only in the valley of Dordogne (France), testifies to a very high ability for abstraction, which features their fantasy and enormous imaginativeness. Even though the men of the "Old Stone Age" could not record their myths, we may suppose that their histories or tales fragmentarily survived in the recorded mythologies of subsequent cultures. This is my personal guesswork, which is based on a gut feeling. What we can state for sure, is that myths are not invented instantly.

Considering the Stone Age parietal and mobile art works, so far it remains guesswork, in what sense the Paleolithic man really appreciated it? Could it be that Lascaux or Altamira meant to them something similar to what the *Biennale* in Venice or *Documenta* in Kassel means to us, or was it rather a place for prayer? We cannot be sure about it, but in this sense I estimate the work of *David Lewis-Williams*³¹ as very plausible, also since he did not hesitate to research a great deal of specifications about the matter. His hypothetical idea is that the spiritual world and the material world was prime for Cro-Magnon, which is nothing really new, but he suggests that in the moment when Cro-Magnon descended into a cave, it was like going into the inwards of the prime spiritual-material world and in the minute of scratching or drawing a depiction of an animal, it was like being this animal. Lewis-Williams refers to various specifications of anthropologists who experienced shamanistic rituals. These kinds of rituals imply altered state experiences which are often caused by rhythm, dance and drugs of

³⁰ Mousterian is a name given by archeologists to a style of predominantly flint tools associated primarily with *Homo neanderthalensis* and dating to the Middle Paleolithic.

³¹ David Lewis-Williams is Professor Emeritus in the Rock Art Research Institute, University of Witwatersrand, Johannesburg, South Africa

course. Whoever has danced to the base rhythm at a techno party, nonstop a whole Saturday night has possibly experienced a feeling which was like being one and prime with the whole world. Well, the Cro-Magnon in the cave felt oneself as being one and prime with an ibex for example. Lewis-Williams clearly explains that we have to see the Paleolithic Rock Art in terms of shamanism. Today a descent into the depths of a cave still remains a borderline experience for us; we can even use electric torches. However, the Paleolithic shaman, who used lamps as well, became one with the spirit-ibex or bull in the moment of creation, therefore I would like to emphasize what an artist experiences in the moment of creation – a kind of shift of identity towards the object of creation. In this sense the contemporary artist who interprets the art as a form of intuitive primary perception of the world, can be seen in relation to the shaman of Lascaux, since the "secret of the making of" in both cases is merely a real act to accomplish something. This particular "something" is of that matter which the shaman/artist actually is prepared for.

Lewis-Williams distinguishes even a "fundamental metaphor" in the use of light. It is archeological evidence that lamps were found in the rock art caves in France, Spain and Germany.

*"In these instances, the sought-after animal was not simply "discovered" in the convolutions of the rock. It was created by human intervention and interaction between two elements, light and darkness. Leaving the world of light and entering the dark, subterranean realm, the image-maker, or makers carried a lamp or torch. The flickering flame was something that questers had to master and which, the evidence suggests, they used for further revelations. An important reciprocity is implied by these images born of light and shadow. On the one hand, the creator of the image holds it in his or her power: a movement of the light source can cause the image (...)."*³²

It was human intervention to bring light in the darkness and thereby to reveal the former invisible spirits of the nether world. I think the whole act can be seen as the fundamental metaphor for the Big Jump into the Upper Paleolithic Culture and even for human civilization in general. In consequence of this thought, actually the creation of art is

³² David Lewis-Williams (2002): *The Mind In The Cave* (p. 221) "... lamps were an invention of Homo sapiens"

possibly not as mysterious as we assume - it was in the past and it is today merely a human act. The species *Homo sapiens* is featured by the metaphor of a man who brings light in the darkness. The artist of today, whose sought-after is the flash of revelation indeed can be seen as the lonesome person in search of a kind of borderline experience like a descent into the darkness and depths of a cave. In this sense the art is to create something which indicates the likelihood of nearness to some borderline experiences. Hence the artist must be prepared in the figurative sense to simulate "shamanistic altered state rituals" which does not necessarily mean that artists must use drugs or must dance into a trance. On the other hand, a beholder of the art piece at best comprehends, thus figuratively can follow the descent into the "artists' cave". I think this is what the viewer then might describe as an archaic or primordial experience.

*"Whenever we recognize a certain color, form, or melody we feel comfortable, because we need to get along in the world, to exist and survive. Each single human being has a kind of indigenous sense of delight and perceiving art can be like an overdose."*³³

Regarding the quotation of the neuroscientist *Vilayanur Ramachandran*, I would go to such lengths to say that the beholder of art not only recognizes a certain form; moreover, one even participates or identifies with the art piece which then can be experienced like an overdose. What was it, when I got tears in my eyes in front of the charioteer of Delphi? Did I get an overdose of delight? Did I get in touch with an archetype? Moments of delight when perceiving art are often paraphrased as being an archaic experience. What I saw in the statue in Delphi was a young man who was captured by the artist in the fraction of a second before the horserace starts. The young man represented seems to be convinced that doubtless he and his four horses are going to cross the target line as the winners. Despite the apparently simple shape, the sculpture reveals all the power, force and tension, which makes an indubitable winner. And I, who contemplated the sculpture, got an overdose of the represented invincibility. It was a good feeling, a gut feeling, and I can see a direct relation between forms and emotions. I conclude that, the closer a form brings the art observer to being in touch with archetypically images, the more emotions are touched. I further suppose that the sculptor who shaped the charioteer, in the act of working shifted his identity into the object of creation.

³³ *Neurons that shaped civilization* (11/2009); Speech of Vilayanur Ramachandran (Neuroscientist) http://www.ted.com/talks/vs_ramachandran_the_neurons_that_shaped_civilization.html (09.11.2011)

Probably that is why the sculpture is a real masterpiece. In terms of psychology my archetypically experience was probably a model or symbol which associated an invincible personality.

The contents of the personal unconscious can be seen as an emotional complex, whereas the contents of a collective unconscious would thus be archetypes. The twentieth century is considered as the turn into modernity. The recognition of psychoanalysis by Sigmund Freud, C. G. Jung and others played a significant role in this era. The problem of their theory is that the archetypes seem to be considered as being preexistent which means, that they have existed always since mankind arose. But the question suggests itself, how did the archetypes get into the unconscious? Archetypes are experiences repeated as upon others: birth, puberty or death are thus phylogenetically relevant experiences. In this sense I quote Sigmund Freud:

*"Ein Teil der kulturellen Erwerbungen hat gewiss einen Niederschlag im Es zurückgelassen, vieles, was das Über-Ich bringt, wird ein Widerhall im Es wecken; manches was das Kind neu erlebt, wird eine verstärkte Wirkung erfahren, weil es uraltes phylogenetisches Erleben wiederholt."*³⁴

The problem of archetypes on the one hand seems complicated, but on the other hand archetypes may simply have existed ever since Homo sapiens naturally had a phylogeny. However, the symbolic content may undergo slightly adaptations, due to a considerable change of lifestyle.

In terms of slightly adaptations I want to emphasize the phenomenon that today it is not unusual to read even in literary or scientific magazines, about the character of the civilized human being, who is nonetheless still partly a Cro-Magnon. To find more evidence one should simply go downtown at Saturday night - many Cro-Magnon people are around then, male as well as female. I have no problem and no doubt about this finding, that we sometimes still show evidently primitive behavior patterns, also entitled as animalistic. As any other species we are an evolutionary one, however in the long run some instincts have got lost, whilst other ones are still human property. For example it is known that some animals escape before the finest seismic instruments recognize the first little rumble of a coming earthquake.

³⁴ Sigmund Freud (1991): *Gesammelte Werke* (Book 17, p. 67)

In conjunction with this I understand the report that thousands of people died in the Tsunami of 2004 in the Indian Ocean, whereas the indigenous people of the *Andaman Island* mostly survived. They knew that they had to go to higher places when they saw the water pulling back. Obviously some information which is called instinct and was probably caused by fear, made them go to a safer place.

As it appears today, the time of our ancestors, who lived just five generations ago, is like eternally long gone. So what does it mean for us, to be considered as partly Cro-Magnon? We already feel much more sophisticated than our grandfathers who lived in the times of feudalism. Our generation takes democracy as given, probably due to the lack of an imaginative grasp of different societal systems. For *Westerners* feudalism is long gone, just as the times of the Inquisition, or the Roman Empire and so on. But the history of *Homo sapiens* is much longer what has been documented since the early highly-developed civilizations who built the first considerable settlements and temples. This means that compared with the whole of human history, the time when people built temples until today is a very short period. Therefore, one could say that we are still partly Cro-Magnon. I remember very well my visit to the archeological museum of *Les Eyzies-de-Tayac*, in the valley of Dordogne in southwest France. The valley is famous for the caves which were used by our prehistoric ancestors. One of the caves is called Cro-Magnon. It was in 1868 when the geologist *Louis Lartet* found in this particular cave five human skeletons approximately 30,000 years old, three men, one woman and a baby. This was the moment when these five skeletons were the first individuals regarded to be of the Cro-Magnon culture. So a cave gave its name to the early human civilization which is distinguished by its sudden and astonishing development of artifacts.

The accepted theory is that *Homo sapiens* emigrated from Africa through the Middle East, and then spread in different directions to slowly cross all over Eurasia. Around 40,000 years ago some tribes wandered along rivers like the Danube to reach hunting grounds in Middle and Western Europe. I am still astonished about the leaps in time, in view of the prehistoric discoveries known to date. The ones from the Swabian Alps are, up to now, considered to be the oldest findings of *Homo sapiens* in the wide-ranging surrounds, 38 - 32,000 years old, while the ones around Dordogne and Altamira are much younger, 19 - 13,000 years old. In the meantime we have archeological reports of other now quite famous places and further considerable traces of human culture in these environments. It seems that

the nomadic hunters were quite active in their search for the necessary conditions to survive. Being still a glacial period, most probably the dynamic climate was the force to chase these people from southern Germany to southern France and northern Spain. However, the data indicates a history of around 40.000 years of Homo sapiens in Europe. This means that $\frac{7}{8}$ of Homo sapiens time in Europe was in prehistoric or, otherwise, Paleolithic time. These are our long roots and, if we consider the evolutionary principle, they are even longer.

The *Musée National de Préhistoire* in Les Eyzies in my opinion is of great importance for the whole of humankind, because of one particular show room. There is a long wall, probably more than ten meters, displaying the development of human artifacts all the way through human time. The wall shows in comparable horizontal lines the change of climate, as well of flora and fauna, in consequence the human nutrition and anatomy and further parallels the development of human artifacts through more than two million years. It is a period of time when different human species, other than Neanderthals and Homo sapiens moved around. The particular evidence of the showcase wall is that from the time when the first stone axes were invented, about 2.6 million years ago, a very slow development of tool technique took place. Such a long period of permanent changeable environment, more than two million years, shows almost no change in human skills, and then all of a sudden an amazing improvement of all kinds of artifacts is displayed. Equipment for hunting and fishing, as well as for domestic utensils and jewelry were discovered in different parts of Middle and Western Europe. This seemingly spontaneous sophistication is pictured accurately by *Jared Diamond* in the *Big Jump Ahead*³⁵. It is the time when Homo sapiens appeared in Europe, today called the Cro-Magnon Period, and in some way eliminated Neanderthal man. It was the change of Middle Paleolithic to Upper Paleolithic, when cultural techniques quasi exploded, leading to the Cro-Magnon tribes spreading out. I am sure that no alien creature was teaching them, or that a sudden heavenly spark motivated them to invent all kinds of new tools. But still it is a little miracle that remains and discussion continues. I agree with the approach of *Jared Diamond* who states in his book *Guns, Germs, and Steel: The Fates of Human Societies* (1997) that it was the newly developed language which caused the Big Jump. Also *Richard Dawkins*, another evolutionary biologist suggests that even though the human brains have had an appropriate size for a long time, language was developed in a relative short period at the

³⁵ According to *Jared Diamond* (1998): *Arm und Reich – Die Schicksale menschlicher Gesellschaften*, as cited in *Richard Dawkins* (2008): *Geschichten vom Ursprung des Lebens* (p.61)

change to Upper Paleolithic.³⁶ Accordingly skills were passed on, not only through imitation, but also by the enormously enhanced possibilities of speech. There is no evidence yet, since there is no anatomical feature to be found in the fossil record. But even without scientific evidence, an anatomical hardware in form of a fossil, I suppose it is quite safe to state that Cro-Magnon man was capable of speech and consequently able to exchange ideas and thoughts.

In contrast, the history of written language is easier to survey, since we have many archeological findings, mostly carved in stone, like hieroglyphs and other kinds of scripture. But these are documents of another quite big adjustment in human culture. It was the time when men already had domesticated animals and plants, and consequently had changed lifestyle from that of the nomadic hunter and gatherer to become slowly domesticated themselves and to build the first settlements. This development slowly began at the time when the interglacial in which we actually still live, affected a warmer climate around 12,000 years ago. The region where the first human settlements known to date were built is called the *Fertile Crescent*. The area along the two rivers Euphrates and Tigris, connected with the east coast of the Mediterranean Sea, describes the form of a crescent which thus gave its name. Some of the metropolises of the region, like Jericho or Damascus were founded in times when northern Europe was still covered by big glaciers. When the Baltic Sea was a little pond, the North Sea did not exist; hence today's Great Britain was not an island. Damascus at present proudly proclaims to have been a capital of the region without any interruption, for as long as 10,000 years. During my recent stay in Syria I heard this proclamation many times.



IMAGE 9: ADAM AND EVE (2006), BASALT, H: 1.8 M, YESEM EK BIENAL, SOUTHEAST TURKEY

³⁶ Richard Dawkins (2008): *Geschichten vom Ursprung des Lebens*

Capitals certainly were not invented by the time hunter and gatherer societies changed their lifestyle to become farmers. At that time merely small and probably very simple settlements were built. Accordingly archeologists most probably will not find concrete – in terms of stone - evidence for settlements from 12,000 years before now, although we do have the astonishing stone temples of *Göbekli Tepe*.³⁷ Settlements in that time were usually made of organic material; therefore we should not expect to find any concrete evidence. This makes all the more surprising what the German archeologist *Klaus Schmidt* discovered near to the Euphrates in southeast Turkey. It is an outstanding discovery of what is so far the oldest known monumental stone temple. Numerous upright standing stones, placed in a circular pattern were dug out, the single stones revealing a T-shape. However, the astonishing aspect is not only caused by these monumental stones, shaped on all sides and their huge number, but it is the rich relief decoration of these stones illustrating animals, such as the fox, wild boar, birds, snakes and others as well as geometric patterns carved in the steles. By the mere view of the photos of the reliefs, a connection to Lascaux rock-art is implied. This is however my own tentative idea and probably debatable.

Although script was invented only a few thousand years later, I think we can consider these beautiful reliefs from Göbekli Tepe as narrative and as more or less comprehensible messages of the people from that time. As any place of pilgrimage provides messages in form of paintings or carvings, I understand the temple of Göbekli Tepe in the same way as St. Peters Cathedral, or the sanctuary of Lourdes, which actually too is in a grotto, like the cave paintings of Cro-Magnon. The pilgrimage site with its rich pictorial ornamentation is a place for contemplation today, just as in the times of Cro-Magnon men. Further the name is interesting, since *Göbek-* is the Turkish name for belly button or belly and *Tepe* means the hill, so the name accurately describes the silhouette of the hill. The founder of these temples certainly did not speak Turkish but for me it is imaginable, that this particular hill, just because of its shape, had a similar significance to the people of that time. Hence, when the temple was built on the hill the particular site was certainly chosen because of its metaphysical meaning to the people. One can imagine what the people where looking for, namely to contact a metaphysical world. Having in mind the earlier described ritual descent

³⁷ Klaus Schmidt (2006): *Sie bauten die ersten Tempel*. Schmidt describes the powerful historical consequence at a reversal point of human civilization. It is about a discovery of the so far oldest known monumental stone temples. The excavation is still going on.

into the "womb", or cave, these new generations of Göbekli Tepe in contrast went on the top and plain air of a belly-shaped hill, which is remarkable, I suggest. So the significance of today's name might be as old as the temples, or even older, since it is a name for a geographical site, which usually does not move at the same fast pace as people do, but "moves" in terms of geological dynamics. In other words the people moved but the belly-shaped mountain stayed. Usually there is a strong reason to build a temple at a certain site; one case is when the site was already part of the spiritual life of the ancestors preceding the builders. Later on other peoples, such as the Sumerians, Hittites and Turks immigrated into this area. Why should the hill not continuously be called by a synonym of Göbekli Tepe, considering that assimilation is a feature of immigration? This is an approach which I cannot judge more deeply, since my semantic - linguistic skills are too poor. My guesswork here suggests that script has a morphological history and thus was certainly not invented at once, and not at this particular time. Nevertheless, first attempts of script-like logos and signs can be seen as the ancestors of script and finally of the modern alphabet. I should stress here again that script was certainly not invented all of a sudden, just as goats and dogs were not suddenly domesticated over night. Here only the evolutionary principle can apply. This means that the roots of script must be found in a far deeper past of human evolution. Finally geometrical patterns, which are not as yet deciphered, are known and connected to far older human endeavors. The hill Göbekli Tepe surely for the Paleolithic hunter was already a wonderful place for the hunt and the meal that followed. Perhaps hunting around that hill proved repeatedly happy and successful. The reason for the temple at this site can be seen as a reflection of the former importance of the place.

Given that the so far oldest known human-made artifact is a small piece of ochre, engraved with a geometrical pattern, it is 77,000 years old.³⁸ We can find similar linear, geometrical examples in many different places around the world and through all the Upper Paleolithic period. Such patterns imply messages which we cannot yet translate, but presumably we can take them as a kind of communication system. May it be that it is a report of what was seen by the shaman in the state of trance?³⁹ In order to make geometrical patterns, this particular human being had to be able to construct abstract thoughts. In other

³⁸ GEO kompakt Nr. 4 (2005): *Die Evolution des Menschen*. Blombos cave, South Africa

³⁹ David Lewis-Williams (2002): *The Mind In The Cave*

words, this human being was able to plan the hunting tactics for the next day, when the tribe was going to pass to the other side of the mountain - then this was abstract thinking. Therefore it was definitely necessary to communicate. Doubtless, there are different approaches to explain these artifacts. It is also conceivable that these patterns were carved as a kind of map, or potentially as calendars, or even for the people's book-keeping.

Indeed it is speculation as to the starting point of people's talk, since we have no speech or hunting policy reported, not even recorded. For me it is not necessary to find anatomical fossil evidence of what probably remains impossible, as speech needs no bones which could become a fossilized proof at best. The brain size, which is reported by the findings of skulls of *Homo sapiens*, has remained unchanged, with an average volume of 1,400 cm³, for the last 195,000 years. This is a lot of time to develop speech. So I take the artifact of the *Blombos cave* as a sufficient indicator that human beings at that time were already able to communicate also through speech - even if supposedly a very simple speech form - just as the engraving is also a very simple geometric pattern. Later on the artifacts are much more drawn-out. In my opinion this allows inferences to assume a more highly developed language as well.

I suggest all these engravings, signs, paintings and carvings, no matter if from *Blombos*, *Lascaux* or *Göbekli Tepe*, as being considerable evolutionary roots of script. My presumption is that the ability of communication by script in later higher civilizations appeared relative abruptly, while the ability for pictorial communication was already for many thousands of years a long and ongoing substantial part of human spiritual life.

As a parallel from the contemporary art world, I see the communication between artists from different parts of the world, joining together at an international sculpture symposium for a couple of weeks, sometimes as a recapitulation of the development of speech. Following the fall of Babylon, we are here once again talking Babylonian, which is the metaphor of using different languages at the same time. But thanks to our enormous artistic skills, not only in making sculptures, also in abstract pictorial comprehension - may it be in body language or in artistic performance - we understand each other and enjoy this kind of communication without using a common fluently spoken language. Here we sometimes can discover the beauty of abstraction and an amazingly rich philosophy, just by simple three-word-sentences. In other words and in contrast to modern philosophic discussions, we can see that sometimes a rich philosophy is possible even by using a very rudimentary speech.

Getting back to the Upper Paleolithic tribes, I am sure that they developed their specific language by the benefit of the already rich and sophisticated ability of pictorial communication. Considering the painting of Lascaux as art, in consequence the term language of art is universal, thus it is at least as old as the paintings or the miniature sculptures of the Swabian Alps. In this sense the language of art is not only cross-cultural, it is even cross-time.

The earlier-mentioned small piece of ochre with the geometrical engravings must be seen in the long chain of developing language and possibly in relation with the Big Jump, even if it was made long before in South Africa and also far away from the other findings in Europe. Generally the findings of artifacts may imply that we still have not found other missing links fitting in this chain. I consider the ochre-artifact as a piece which bears a message, and again the cultural development at the turn from Middle- to Upper Paleolithic must be seen in conjunction with some innovation in the use of speech. Accordingly Richard Dawkins states:

"Vielleicht wurde mit dem »Großen Sprung« nach vorn nicht die Sprache selbst erfunden, aber er fiel möglicherweise mit einer Neuerung der »Sprachsoftware« zusammen. Vielleicht war es ein neuer Kunstgriff der Grammatik wie der Konditionalsatz, der mit einem Schlag die Möglichkeit eröffnete, Überlegungen nach dem Prinzip »was wäre, wenn« anzustellen." ⁴⁰

The emergence of conditional clauses in thought and speech makes it plausible that suddenly it was possible to communicate about matter which was beyond the field of sight. Dawkins further supposes that possibly one genius had the idea to use words as denominators for objects which are not physically present. Now it was possible to talk about the next day's mammoth hunting strategy, or the water pond on the other side of the hill. I agree with that, moreover I suggest also a converse argument to that – the object artifact became possible in place of words which cannot describe it. Consequently the typical human concept of metaphorical thinking evolved with the appearance of the first artifacts, perhaps at the same time as the conditional clause. Hence, these are physical present denominators of an idea, vision or dream, in other words metaphors.

For me the visual art pieces are the bridge to a conceptual language. In fact, I am still

⁴⁰ Richard Dawkins (2008): *Geschichten vom Ursprung des Lebens* (p. 63)

astonished about the incredibly highly skilled manner of drawing animals such as the bull, deer and mammoth, in the absolute darkness of a deep cave. Anyone who has seen these at the original site - some are even 1,000 meters or more inside a labyrinth of caves – will understand that these people must have had an enormous pictorial imaginativeness. I am glad to find support for my idea from Richard Dawkins, who in his chapter about the history of the Cro-Magnon supposed that people possibly learned to draw a buffalo before being able to give a name for a buffalo, which was not immediately visible.

One must only recall a vivid dream; usually the next morning speech is insufficient to explain it. Of course, we usually also cannot draw the dream; anyway the pictorial imagination is breathtaking and sometimes the memory stays in mind for years. Why should it have been different for our Paleolithic ancestors?

My assumption here is that the human-made rich pictorial ornamentation of cave walls and artifacts, which we have known since the turn from Middle- to Upper Paleolithic, is a cause-and-effect chain that generated an enormous sense of cognition and communication. I can imagine that the language of the people, who passed the caves of the Swabian Alps, or in France and Spain, was rather simple. The archeological excavations in the stratified deposit and gravel of these caves indicated that they were used for a couple of thousand years. The fact of the long term usage of the caves implies to me that the nomadic tribes supposedly even spoke different languages. The population at that time was so little, that we cannot really use the term population density. Thus, we can suppose that nomadic hunters occupied a certain cave regularly for some years, maybe some decades, while some years later another tribe might have used the cave. Europe in Upper Paleolithic times was a vacant place for human beings, so some of the caves certainly will have been unattended for some time. But, this is all presumption, the fact is that a few thousand individuals, who built apparently distinct little communities, survived in Europe for an almost unimaginably long period and made artifacts, even artwork which from today's view was their greatest achievement. I see the artifacts and paintings as authentic reflections of their consciousness and this is surely a "Big Jump". Finally, the ability to reflect on themselves and their environment in images was and is the big social challenge up until this day.

The findings considered to belong to the time of the Big Jump are dated to be around 40,000 years old. There is the recently found and so far outstanding first known human figure,

the so called *Venus of Hohle Fels*⁴¹, but also a lot of more figures to be seen as samples for the big change in human life. Even so *Homo neanderthalensis* existed a very long time before that in Europe, as I understand it; it is quite evident that the immigration of *Homo sapiens* accelerated the Big Jump. The caves of the Swabian Alps were mainly used 40 - 30,000 years ago. The cave of Altamira⁴² in Spain with its famous rich paintings was used from 18 - 13,000 years ago. This is the almost unimaginable long period I implied before, by the example that modern man cannot even imagine the social life of pre-industrial times. Considering these numbers it makes about 27,000 years of Upper Paleolithic culture in Europe, including Hohle Fels to Altamira, which is even not the end of Upper Paleolithic period. No matter what is lost after all this time, or what is not discovered yet, the findings are clear evidence of a highly sophisticated consciousness and capacity for reflection. There is an authenticity which is quite similar to modern thinking and beyond that I am convinced that our behavior pattern is based on our experiences gained during the Upper Paleolithic period. So we are still to a considerable extent part Cro-Magnon, and pictorial communication remains a basic need.

The *Venus of Hohle Fels* was certainly not made for us to contemplate it in our time. For us it is a matter of good fortune that we found the little sculpture and can discuss scientifically the issue from our modern point of view. The ivory carver of Hohle Fels had no idea about our culture and the discussion which his little artwork would arouse, but no doubt he did have a vision and was able to translate it into this small figure. This ability became a formative feature for the increasing demand of an evolving human civilization.

As we have seen it took a long time for the development of speech as well as for script, but finally both bloomed, probably in a relatively short space of time. The subsequent diffusion of each can be considered as enormous. One should just imagine how many different languages are spoken today and how many languages for some reason are already extinct.⁴³ Moreover, almost each little provincial area is distinguished by its own specific phonetics. In Germany some very different dialects are still used, whilst the same applies for many other countries too. Now, when I visualize some Paleolithic hunters, they may have spoken in their particular idiom, but the hunters from a different tribe who rested in the same cave many years later probably spoke differently. Nevertheless, the pictorial imagination does

⁴¹ http://en.wikipedia.org/wiki/Venus_of_Hohle_Fels (09.08.2011)

⁴² http://en.wikipedia.org/wiki/Cave_of_Altamira (09.08.2011)

⁴³ National Geographic: in 2005 worldwide 6912 spoken languages

not need speech; therefore the effect of visual understanding most likely is eminent.

Today we use computers and software and all this mostly in ignorance of the attendant manual book. The software is usually deliberately designed in a self-explanatory manner. I think it works because of our skilled comprehension of logos and signs. I suppose there is not a really big difference between our cognition and comprehension skills to those of our Paleolithic ancestors. In the last years computer skills have been distributed and evenly spread, rather like a newly developed language; and in the same way as language, they have been distributed horizontally and quickly. The only difference I assume is the enormously accelerated speed of the contemporary medium. It seems to me that the human being has always had the immediate need to communicate thoughts, imaginations, ideas, visions and dreams. Probably it was and is an existential human feature. I can see a direct line from the early cave paintings, via the invention of script, to the internet and social networks as our contemporary medium. Moreover, the enormous capacity of the internet supports a stream of images, one could get the idea that “pictures say more than words”!

2.2. *BABYLONIAN CONFUSION – OUR FATE*

"Babylonian" is a mythological based synonym for a confusion of languages. In the chapter about my tower-shaped sculptures I am going to demonstrate the still ongoing influence of the myth. Now, by considering linguistic development and the subdivision language into a vast diversity of “tongues”, it is my pleasure to pronounce pictorial language as the son and heir of that legendary, consistent verbal language which supposedly people spoke before the fall of Babylon. This postulation requires closer examination.

Following my explanation of the development of speech and its mutual interaction with visual imaginativeness, I want to furthermore underline the interdependence of the development of script. I regard all the aforementioned Paleolithic artifacts and paintings as a form of communication. Finally, the rich carvings at the stone temples of Göbekli Tepe imply to me a form of proto-writing. Later, in the same geographical area, Sumerian script was developed, which is known as a cuneiform script. Given that, as is considered by many

experts, it is the oldest known phonographic script⁴⁴, with first findings dating from 2,700 BC, initially it was not developed as a narrative communications system, but rather as a memory medium. At that time, the increasing temple administration demanded an accounting system and also a more effective writing system, so cuneiform scripts were developed for this purpose. In accordance with this, script supported the memory of the rulers, who consequently developed, amongst others, a system of control and script which could transfer messages through time and space. Apparently, growing societies simultaneously developed some kind of authoritarian systems.

I shall display on closer examination the development of script through the consideration of my main theme. My deliberations about the narrative purpose of the pictorial art already developed lead me to the assumption that the first script did not exist in abstract signs like the cuneiform script. I imagine that the first script must have contained more pictures. Let us regard the opinion of the archeologist Klaus Schmidt⁴⁵, whom I respect very much for his excellent work. At first he distinguishes in the writing systems between two forms, a pictorial-script and a speech-script. The above-mentioned cuneiform script as a phonetic script would be the Sumerian equivalent to the speech-script. As examples of pictorial-script, Egyptian hieroglyphs may come to mind, but *their* pictorial appearance in fact is a vehicle to transport a phonetic speech. One must be skilled in the proper meaning of the hieroglyphic pictures. Only adepts can communicate it. To draw a distinction, apparently hieroglyph-simulating pictograms are used today at places of international traffic, where they can be understood by anybody. The pacing little man on a green lamp, anywhere in the world, means you are allowed to cross over now. Without understanding Japanese, Greek or English, one can understand pictograms in these countries. By contrast a real script - a speech-script - allows just a phonetic transformation of signs. As an example, I could read to somebody a Hungarian text without understanding it. But if I apply the proper rules of pronunciation, the text could be understood by a Hungarian. In contrast a pictorial-script does not need a phonetic translation or speech; it can be understood just by visual cognition. In Paleolithic times we can find a lot of signs and symbols, which are called in archeologists' lingo "pictogram". In this sense Paleolithic rock art could be comprehended as a non-linguistic script which does not however convey clear message to us today. I can see a confirmation of

⁴⁴ Harald Haarmann (1990): *Universalgeschichte der Schrift*

⁴⁵ Klaus Schmidt (2006): *Sie bauten die ersten Tempel* (p. 221)

my conjecture that the rock-art of Lascaux, as well as the Swabian sculptures, bears something like a prototype of a language-free script. So my assumption is that at the time of the Big Jump at the latest, people had already developed something like a non-linguistic communication. We cannot say if it was because the language was still too simple, or that the different tribes spoke different idioms. Maybe communication through pictures, independent from language, was developed because it suggests itself as the simplest advance. At least from my point of view this seems plausible.

Regarding the reliefs of the stone temples of Göbekli Tepe, Klaus Schmidt, in summing up his thoughts about the development of script, suggested that there was a good chance that an adept contemporary Neolithic beholder would be able to understand the encoded message of the signs, symbols and reliefs. Even if the content for us remains concealed forever, the term "hieroglyph" seems adequate. He wants to distinguish the signs of Göbekli Tepe from the big family of Paleolithic pictograms. This means to me that here might be an initial point of a phonetic script. I think we are getting closer to a solution in terms of my personal quest, namely that script can be seen as an after-effect of carved reliefs, sculptures and paintings. Indeed, at the very latest in Egypt, the hieroglyphic script bloomed even into beautiful poetic narrations⁴⁶, while cuneiform script at first was merely used for administrative purposes. To sum up, script was an advancement which finally turned into the art of literature.

And why have I spoken so much about the development of speech and script? In fact, art is a medium, or a communication form which does not really need speech, but in this way art builds the base for the development of the human mind with all its astonishing abilities and accomplishments. Today it seems that we are a society which is based on speech and script, whilst art seems to be mistakenly regarded as a side product. But still, to be really touched by an art piece we do not need speech. The phenomenon of being sometimes speechless when facing art, if we consider and acknowledge that speech was most likely an after-effect of pictorial language becomes self-explanatory. So by this short look at obvious coherences of pictorial imagination and speech, I think I have made plausible my idea that the human accomplishment of communicating societies already established a visual communication through portable and parietal art in Paleolithic times. The plausibility is overwhelming for me indeed. I suggest that also Paleolithic stone carvers did their job in terms of the typical human

⁴⁶ Emma Brunner-Traut (1998): *Altägyptische Märchen – Mythen und andere volkstümliche Erzählungen*

search for orders - once carved, something in stone suggests itself as a kind of sustainable thought, vision or dream.

According to Klaus Schmidt the temples of Göbekli Tepe could be seen as a terminating keystone, which was set up at the end of a great hunting culture.⁴⁷ At the beginning of the 8th millennium B.C. the community gave up the old place of cult definitely. It seems that the monuments even became covered with boulders and pebble stones. Apparently these people buried their own past, to live from now on as farmers. Apart from the mysterious buried temples, Göbekli Tepe means to me as I mentioned before a continuum to the cave paintings in Altamira, Lascaux and Niaux (France). When I compare these cave paintings and the stone relief of Göbekli Tepe, I can imagine that they were made with a similar intention. In fact I can see analog patterns. Given that script was developed as an after-effect on the narrating Stone Age artifacts, I suggest that we regard the reliefs of Göbekli Tepe and the cave paintings as pictorial reports of the myths of that time. Hence, speech is evident at least for the whole Upper Paleolithic period. It is unlikely that they all spoke the same language, but the visual message of the artifacts transported probably understandable information and associations, similar to the ones I received when I was at the National Museum in Seoul (e.g. *Thinker* sculpture). Therefore, we should take language and script as an important cultural achievement, but we should put more emphasis on pictures as the foundation of all narrations and scripts.

2.3. ART AS STRATEGY IN TERMS OF COMPETITION

Referring to the end of the last Ice Age is in the strict sense mistaken, because in the long term we are still in an Ice Age. However, about 11,000 years ago⁴⁸ a warmer period began - a so called "interglacial" which has gone on until today. Changes in the global climate, seen in geologically terms, are also important processes for the development of

⁴⁷ Klaus Schmidt (2006): *Sie bauten die ersten Tempel* (p. 255)

⁴⁸ End of the *Weichselian glacial period* - the maximum extent of glaciations in this period was 18,000 years ago.

mankind. Additionally other natural phenomenon like floods, volcanic eruptions, earthquakes and the impact of meteorites with their disastrous effects have been very important issues for human development. The long period of human evolution has built certain behavioral patterns, which through repeated experiences and natural phenomenon or catastrophes have led people to mirror their own image: a self-reflecting species evolved. The human questions "who am I" and "why am I" are as old as the "stones", but still not ultimately solved. They imply an extreme human anxiety and were certainly not questioned first by Aristotle or Jesus. I think here, the invention of art supplied a real comfort. The self-reflecting human being created art in order not to get lost in desperation. Moreover, the material stone has had considerable impact on the development of the human mind, taking into consideration that stones were the essential raw material of the Stone Age "industry". Today, geology not only explains the consistence of the material stone, but also the dynamic of the globe; and that is why I am devoting so much energy to highlighting the correlations between geology, art and cultural development. What could the finding of a fossil ammonite probably have triggered in the fantasy of Paleolithic man; in my imagination it could be the same as what happened to me as a boy finding marine fossils at the Swabian Alp. This alone is already sufficient for me to declare stone as significant for man.

Thanks to the Darwinian Theory and all its subsequent contribution of ideas we recognize that competition is an underlying principle. Thanks to all the efforts experts have made so far, we do not know that evolution progresses at a steady pace, nor is it purposeful, except in order to ensure the survival of the species. Among other things evolution is subject to jumps forced by a sudden change of conditions in the specific biotope. Earthquakes, floods and other, even climate changing natural disasters, like meteoric impacts and volcanoes, must be seen as responsible for that. Some random mutations in a species are the fortunate ones and are able to survive. To establish a basic knowledge about the force of evolution I want to highlight some more relevant features.

It is also the species' survival which is achieved by sexual reproduction. The reason for the peacock's tail is to be found in this, as well as for the antlers of the deer. Each species has developed its own specific and quite often fantastic way to attract the other gender. The reason for this is that it is usually the male who has to attract the female. Antlers or peacock's tails are just made to expose the genetic fitness of the bearer and according to the experts, these features are allocated as an evolutionary mechanism called the "handicapped

principle".⁴⁹ It is called handicapped because sometimes these secondary sex characteristics lead to the paradox of extinction, like the *Megaloceros giganteus*, a giant Ice-age deer whose antlers spread up to five meters. Obviously these antlers were a handicap in the growing forests. But the usefulness of this tendency to develop such features was significant. Hence, some anthropologists estimate this mechanism as the basis of any human culture. Paleolithic hand axes were made for about 1.5 million years in almost the same manner. Consequently, at the beginning of the Upper Paleolithic period they had become so elaborate that we can assume a kind of aesthetic surplus which was thus the human equivalent of the antlers. The weapon characterized its bearer not only as a successful hunter, but as one who would prove a good prospective mate; its aesthetic surplus became necessary in the competition amongst the males to attract females. In other words, here is another archaic force playing a significant role. The positive benefit of this natural competition was the invention of elaborate artifacts. I maintain that throughout the competitive survival of the human species, art as the handicapped principle has been a determining factor.

Through the determination of species, forced during numerous fateful changes, Homo sapiens developed an incredible variety of cultures. These may appear so different, but all of them have in common the energy to produce an aesthetic surplus and thereby to ensure survival. Although there is an inconceivable diversity, in the end, the common denominator of all cultures is the constant impulse to create identity-sustaining features. Human culture therefore can be seen as the result of positive selection!

A further look at the principles of cultural evolution, regardless of conspicuous parallels of biological and cultural evolution, shows that there are also essential differences. The progress of culture is mostly the result of purposeful thinking, not of random mutations. Indeed, the creative thoughts of individual people can be comparatively spontaneous, like mutations. However, theoretical preoccupations seeking the solution to a problem usually dismiss less usable ideas before a solution is found. An example would be the invention of the wheel. That is why cultural evolution proceeds faster and in opposition to the biological, it happens in a somewhat purpose-orientated manner. In terms of the aforementioned development of speech, which is for the most part a cultural achievement, it is possible to draw a genealogy. In terms of a molecular clock it is possible to estimate the time of separation of language families, given that some dates of separation are historically proven.

⁴⁹ Eckard Voland and Karl Grammer (2003): *Evolutionary Aesthetics*

Accordingly, the “Proto-Indo-European group of languages” was spoken round 10,000 years ago in the area of Middle East and probably around 100,000 years ago an *Ursprache* was the source of all languages.⁵⁰ These numbers match the evolution of mankind, but I have to emphasize that amongst experts this method is still seen as controversial. The fact is that the ability of speech is a complex of genetics and imitation. I suppose it is likely that a few other cultural achievements could have been passed on through this complex. In the beginning there was no speech, whilst with time, men developed hundreds of languages and associated grammars. Speech is learned by imitation and it is said that a basic grammar system is already innate. I perceive the imitation as an audiovisual complex and thus I think it is evident that visual perception and its transformation into activity is a very old natural biological feature derived from humanity’s archaic times.

A biological example of this in fauna would be migratory birds, which change their habitat in winter times. Yet due to the dynamic climate it happens that there are a couple of mild winters. The few birds that decide to change their strategy and stay in the North might have an advantage, if they survive the winter. They spend less energy than the ones who do the long flights from north to south and back again. They benefit from the earliest flowering in springtime, in that they gain more fat reserves and have more time for breeding. Consequently, their population grows in that period, while the migrant birds slowly decline in numbers. But when there is a very hard winter in between, the migrant birds survive, while it is likely that the sedentary birds become extinct. Moreover, the species as a whole survives because of the distribution of strategies. This is called "Evolutionary Stable Strategy (ESS)" and is an accepted and constitutional part of evolution. Due to that the principle of frequency distribution of strategies stays stable!

I think human cultural evolution which positively supported the development of tools and all kind of other artifacts, but perhaps also the extinction of Neanderthal man, has to be seen in the light of ESS. Even if our genome shows little parts of Neanderthal which nevertheless would confirm the theory, for some reason *Homo neanderthalensis* encountered difficulties leading to extinction, whilst *Homo sapiens* survived. To highlight the importance of imitation in terms of cultural evolution, one more very simple but depicting example shall be mentioned. The renowned neuroscientist Vilayanur Ramachandran⁵¹ claims that the sudden

⁵⁰ Hermann Linder (2005) *Biologie* (p.509)

⁵¹ http://www.ted.com/talks/vs_ramachandran_the_neurons_that_shaped_civilization.html (09.08.2011)

emergence of a sophisticated "mirror neuron system" allowed people to emulate and imitate their action. So a new discovery could be passed horizontally across the population.

*"... This made the evolution suddenly Lamarckian, instead of Darwinian. Darwinian evolution is slow; it takes hundreds of thousands of years. A polar bear, to evolve a coat, will take thousands of generations, maybe 100,000 years. A human being, a child, can watch its parents kill another polar bear, and skin it and put the skin on its body, fur on the body, and learn it in one step. What the polar bear took 100,000 years to learn, it can learn in five minutes, maybe 10 minutes. And then once it has learned this, it spreads in geometric proportion across a population. This is the basis. The imitation of complex skills is what we call culture and is the basis of civilization. ..."*⁵²

In the context of Ramachandran's example I believe art is also a strategy in terms of competition.

2.4. ENTROPY IN COHERENCE TO SCULPTURE

To give a definition of my energetic postulation of sculpture I want to put a focus on the terminus entropy, which stands for conversion and is essential to describe thermodynamic processes. It says that heat is randomly given energy on atoms and molecules, and it flows from hot to cold. The opposite direction is impossible; it would be as if water would paradoxically flow up a hill.⁵³ This is a main clause of thermodynamics, expressed in my informal words. It describes the behavior of particles in the molecular scale - the faster the particles move, the higher is the temperature and the slower, the colder it is. Accordingly energy flows from hot to cold and thereby the scientifically experiments show a natural tendency to an increasing disorder. To transfer this to my personal creation process of a stone-sculpture it could mean that I put a lot of energy, physically but also mentally into the shape

⁵² *Neurons that shaped civilization* (11/2009); Speech of Vilayanur Ramachandran

⁵³ http://en.wikipedia.org/wiki/Thermodynamics#Laws_of_thermodynamics (09.08.2011)

of the stone and thereby the artifact apparently becomes charged with energy - even if it is perhaps only imaginary energy.

Certainly it is adventurous to apply the thermodynamic principle to cognitive experiences in creating sculpture; but since I suppose that the energetic experience of sculpture is not just a psychological phenomenon, I suggest looking at physical law which describes facts at the borderline between the material and immaterial world. The second law of thermodynamics has not been proven; even though it is an empirical fact and has been a fundamental law of classical physics for more than 100 years.

*"Heat cannot spontaneously flow from a colder location to a hotter location."*⁵⁴

The entropic principle is also a matter of order and disorder and its effect is due to a tendency to disorder. I have already implied that the artists' work with the material stone could be seen as a regulative principle. Therefore, the approach to establish order by shaping a stone has an inevitable effect, material and immaterial, on the balance of order and disorder.

I understand art, in terms of its impact on the human mind, as fluent like water. Hence, the cognitive experience of art can be overwhelming like a waterfall, or slowly finding its expected way like the water does in a vast plain, it can even evaporate like fog. In this sense the power of art simply always applies and finds its way, as does the water. In this logic the artistic idea which is a feature of the human mind could be also challenged, as much as if it were based on physical laws. The conversion of artistic subjects seems to be a continuum, like the circle of the energetic status of water. The repeated appearance of equivalent artistic topics, and in consequence the repeated appearance of archetypes, can be seen in this spirit.

As a sculptor I charge a stone with my energy by shaping it. As soon as the sculpture is finished it remains as a subject to erosive leveling, which means that the stone will slowly change its orderly structure into a disorder of some sediment deposit, yet for a significant period, in human time scale, it will seem to resist this inevitable process. It is probably the eternal strength stone seems to emanate that is the reason why stone-sculpture has a particular importance for mankind. In this sense a stone-sculpture has a symbolic effect, comparable to the fascination which diamonds or gold have on us.

Entropy is indeed a very complex theory and it would lead simply too far away from this essay's main theme to discuss it more in detail. On the one hand a sculpture is a man-

⁵⁴ Second law of thermodynamics

made manifestation which mirrors the human mind and thereby seems to resist its own flattening down to insignificance (disorder), but on the other side the material stone carries in itself an implicit reminder of decline and transformation, since stone is the narration of geomorphology.

Although we can accept that man is capable of creating order out of disorder, this implies that on the other hand art as basic human concept involve a tendency to disorder. Art might be understood as the counterpart of science which would create disorder. One could suggest that the modern art concept has changed, due to the social expectations that art today also has the freedom to provoke confusion and disorder. In terms of a modern art concept, art has to be seen as an item corresponding to and reflecting on science and life in general. My expectation would be a mutual fertilization between art and science, and that is why I propose a risky hypothesis. In this sense I dare the scientific experts to prove that black is white, that is to say, that the term “Energy in Form” is just an idea without any materialistic aspect.

2.5. METAPHOR – PICTORIAL TRANSFER AND SAMPLES OF MINE

The development of my own characteristic working style was strongly influenced during my student’s time by the yearly working stays in a quarry together with my former academic advisor *Jan Koblasa*. With my well trained skills as a stone mason, I held a juvenile conviction of my own invincibility. As a result, I was rather obsessed by the idea that I could make anything possible, in terms of shaping stones. Therefore, my only ambition was the achievement of apparently impossible artistic forms. Seen from today’s viewpoint, these achievements resulted in my gaining experience about the boundaries of the material stone, which was important for my further development. The first time I worked in the core of a quarry I was immediately impressed by the rough beauty of the quarried blocks. The gorgeous outer shape and surface impressed upon me to "damage" these stones as little as possible. Instead my attempt was to shape the inside of the matter through little rectangular openings on the surface. Due to my desire not to destroy the outer shape, I shifted my effort into the inside of the stone. The results were stele which reminded me of stone-aged temples. Many years later, when I visited Cappadocia in Turkey for the first time, it was like climbing inside the

sculptures which I had made 10 years before, during my first working stay in the quarry in *Anröchte* (Germany); but as the inexperienced student I was back then, I did not know about these old Anatolian settlements. *Göreme* is one of those villages in Cappadocia and is a UNESCO world heritage. The name means: You do not see me. The early Christians often had to hide themselves; therefore, they cultivated this astonishing kind of living inside the rocks.

Back to my first experience in the quarry, I perhaps intuitively felt ashamed because I realized my insignificance in the face of the freshly quarried stones, while standing on a geological stratum dating back around 90 million years. In the light of the power of the stones I hid my self-centered attitude and worked therefore inside the stone. This is my interpretation of today when looking back and it is layman's psychology of course, however, it is a model to explain my intuitive behavior pattern. In any case the decision to work inside the stones was because of a spontaneous gut feeling demanded me to do so. In the following year I detected a kind of coming out, by shaping my first ladders. Figuratively I came out of the inside, by integrating the inner and the outer shape. My ambition was still the shaping of penetrative forms but by a less searching and hiding purpose. The shapes became clearly visible as ladders. In the third year in the quarry, when I erected my first monumental stone-ladder, it was actually a clear confession which said: Here am I, a sculptor who has a statement on the



IMAGE 10: LADDER INTO HEAVEN (1994),
ANRÖCHTER STONE, H: 3.4 M

basis of stone-sculpture!

The next step was my discovery of the phenomenon of the universal form of spirals. A part of this effort might be owed to my socialization in catholic southern Germany, where my tendency to mannerisms is probably rooted in a still widespread baroque image. I tried to concentrate my focus on the core of the forms. As a result I twisted the ladders into spirals, but while respecting the essence of each stone which I worked with. In that time I also spent one semester in Carrara and through the huge variety of stone-sculpture samples in different stones which I saw there, it became obvious to me that the surface must fit to the stone.



IMAGE 11: TANGO (1997), MARBLE, H: 35 CM

In Carrara the spiral form was more a side-issue; the main topic was the idea to make a form which was based on the topic "tower". When I arrived in the "Mecca of stone-sculptors" I had a quite clear project in mind. The story of this idea was that before starting for Carrara I tried to figure out what kind of sculpture I could do, considering that thousands of sculptures had already been made by plenty of sculptors who were there before me. My idea was reminiscence of the fact that Italy in former times was a country of towers. The Tuscany village *San Gimignano* is a famous example of the power of a typically human idea. In mediaeval times families competed as to who held the power, and as symbols they erected a lot of towers. Whoever built the biggest tower was the strongest of course. Today in San Gimignano there remain still 15 of former 72 tower houses. Bologna, Florence and many other Italian towns in the late Middle Ages demonstrated a skyline quite comparable to Manhattan, of course in terms of mediaeval architectural capacities. Learning this as I prepared myself for my stay in Italy, the tower-issue became fascinating to me. The obvious

human characteristic to rise up into the vertical seems to be also reflected in the nature of my imagination. I constructed, out of four ladders, my first tower and then I put some towers together just like a mountain crystal. With a few sketches of my idea I traveled to Carrara. After some days, while I was already working on some of my ideas in the famous studio of *Carlo Nicoli*, I came back home after work and my Italian neighbors gathered on the street and pointed up to the evening sky. On that day I had not started to work on my tower-shaped sculpture yet. When I realized the reason for my neighbors gathering, because the comet *Hale-Bopp* was vibrantly visible there, I immediately knew how to shape the sculpture: namely in the form of a star on two legs. The bright tail of the comet led me to the asymmetric shape of the star, hence two of the ten towers became longer and the sculpture seemed to pace purposively. A few years later a banking house purchased the sculpture and its image became the logo of their real estate department then. I think these bankers were both courageous and humorous to use the image of a sculpture which I created as the metaphor of a past culture and a comet. I wonder if a metaphorical circular fashion was probably the unconscious trigger to turn it into an excellent sculpture.

This short story about one of my sculptures which was originally named *Una Stella in Gamba* shows my intellectual purpose, but it also provides an insight into my intuitive decision processes. By looking back on my time as a sculptor I can distinguish many kinds of artistic decisions similar to this one. What is still astonishing to me is the way in which the purposive thinking integrates the non-purposive ideas. How many times do I really something without any purpose? For example, just because my neighbors watch the sky, I do it as well and at the same time an unconscious link creates the clear solution to a problem which I had been considering for weeks. I think one cannot really train the capacity to link the conscious and unconscious minds. The answer probably lies in the fact that one must only allow processes which are actually one important source of my artistic development. By allowing these unconscious processes it is likely that a kind of "training" is given, due to the awareness gained. I shall carefully consider if unconscious-integrating processes can be associated with a vibrant perception of sculptures. Perhaps it is a kind of electrifying impulse, which instructs the mind's filter not to sort out a particular idea. Exciting sculptures of mine have always been existent as electrifying ideas before their realization.

2.6. TOWERS

My first monumental tower-sculpture I created as a participant of my first international sculpture symposium in *Cavaion di Veronese* in 1998. I was asked to send a model of my idea in advance. When I arrived in the little Italian town very close to Verona, I discovered right in the historical centre a tower house which could have been the ideal of my intention. I think I created a prototype of a tower and the real tower house is a mediaeval reminiscence of the same prototype. Less than two years later I was invited to my second international sculpture symposium, to Aswan in Egypt. At the upper Nile region traditionally Nubians live and Aswan is the place of the ancient granite quarries where the Pharaonic Obelisks were manufactured. My idea for the sculpture I made there integrated the musical taste of the Nubians, who always find a reason to play the drum and dance, with the phenomenon of the obelisks. The result was a dancing obelisk. Further, the duality of the Pharaonic culture found expression in the paired order of "False Doors".



IMAGE 12: DANCING MESALAH (2000), ASWAN
GRANITE, H: 5.2 M, ASWAN, EGYPT

In Egypt I developed the concept of *KleyCity*. The symposium idea seemed to offer the opportunity to travel around the world and thereby my idea was to create tower-shaped sculptures which possibly reflect a characteristic of the country. Meanwhile *KleyCity* is

growing, in 18 countries I have worked so far, from Japan, South Korea and China to some Middle Eastern countries, Turkey, Europe and the American continent. In Brazil the tower is dancing a Samba, in Istanbul the tower seems to step on two base stones and I called it *Eurasia*. The concept works very well and the most beautiful aspect of it, personally, is that my sculptures are symbolic acts of tower houses where I am welcome back at any time. What is amazing for me is the mostly perfect fitting character of sculpture and place; even though in most cases I have never been to these places before. Usually I do not study carefully the countries' typical topics, hence my ideas are probably more influenced by the cliché which comes to mind when thinking of a country. Stereotypes have the reputation to be on the surface only but I believe a core of it is always true. Moreover, when a stereotype is transformed into a stone-sculpture it possibly reaches depths. In Dubai I tried to make the tallest tower which was possible in the midst of the available stones. I had two blocks; one was three by one by one meter and the other one was a cube of 1.2 m. On the long piece, I split off from top to base a piece in the form of a triangle, which then served as the prolongation on the top again. All together I reached a height of 6.5 m. From one viewpoint the tower has a symmetric shape and seems to scrape the sky and from the other side, the tower shows a dynamic sloping habit.



IMAGE 13: SKY-PALACE (2005), H: 6.50 M,
LIMESTONE, DUBAI, UAE



IMAGE 14: SKY-PALACE (2005)

It might be interesting to enlighten some more of the particular tower related backgrounds of all the other towers I have made so far. But the gist of the chapter is the

pictorial transfer of metaphors, hence the unconscious-integrating process which potentially associates a vibrant perception of sculptures. I would like to focus on one more sculpture belonging to KleyCity. In 2007 I was invited to a symposium which took place in the beautiful *Acadia National Park* in Maine, USA. Here the original idea of a sculpture symposium seemed to have been conserved, what I appreciated very much. The expectation was that the artist should be present and develop the idea mainly according to the stones available. The limits were feasibility and time but seven weeks were sufficient of course. I arrived in the night and the next morning I already found myself amongst the stones present, developing an idea for my sculpture. The conditions seemed to be anything other than supportive of clear thoughts - jetlag, a short night and the heat of the sun. Moments like these I have learned to accept, even to enjoy, since the mind is probably working in economic modus, therefore sometimes the ideas come out in a straightforward manner. I would never start carving on this day, since it needs one more night and a fresh new view on the image developed. By the time I was working on the sculpture, the idea which I had developed on the first day appeared as if I was conscious from the beginning about the traditional quarrying fashion of the little town where my sculpture was supposed to be placed. When the outer shape of the sculpture slowly became visible, the people told me that in the past the quarries in *Sullivan* mostly produced simple blocks for building quay walls and bridges, thus mysteriously my intention was exactly guessed by the local folks. My tower roughly was a construction out of four rectangular blocks which seemed to be arranged in a pile and in a playful manner, though worked out of one single block. The surprise was on both sides; the fellow who explained to me the typical quarrying fashion in Sullivan was astonished that I did not know it. To me it was amazing that without knowing anything, on my first day I drew something on a stone which turned out to have a strong association to the people and the town. I emphasize that I arrived in the middle of the night and the next morning I had not noticed anything, except the beauty of the national park - Atlantic coast and forest. Only in the following weeks, when I left the park and visited the villages around my focused eye then discovered here and there typical remains of the former quarried production.



IMAGE 15: SULLIVAN TOWER (2007), SULLIVAN GRANITE, H: 5.10 M, SULLIVAN, USA

The question is how does it happen that on the first morning, of all things this particular idea eliminates all the other ones? I had some more ideas which were not bad, but I do not believe really that it was a decision at random. Probably I made a decision that was supported by a practiced attentiveness for intermediate tones. This is something I have developed with experience, which in the normal course of life often becomes filtered out, but in creative moments returns into my visual imagination. I believe that I have access to this attentiveness which allows these intuitive ideas, and I fear the moment when I might possibly lose this ability. This borderland between my relatively rich experience and the fear of losing the ability to integrate unconscious orders is perhaps the ground of my creativity. Ideas which come out of this ground I usually even feel physically, since the whole body undergoes a vibrant tension. In these moments indeed I allow myself freedom and non-purpose-oriented thoughts. As in the earlier example of the star-shaped sculpture it also turns out that a mere idea is capable of activating physical occurrence in the form of electrified excitement, which then again is quite a good indicator to accept the idea and to start carving. In the course of action when a decision about the outer shape is roughly made, the working out still allows more intuitive adaptations, but the main track is ignited by the vibrant idea.

My sculpture *Sullivan Tower* is now placed in the village green along Route 1, the Atlantic highway which in that area, Down East, is rather a country road. However, the placing is beautiful. The signals I received from the people there, implying to me a significant

identification with the sculpture. I enjoyed my stay and the work with the Sullivan granite and who knows, following generations will probably decipher a prototype and a metaphor of a tower, and moreover, will associate it with the history of Sullivan. Perhaps that is it what I am really doing; I recollect prototypes of ladders, towers, knots, spirals and even of somehow figurative ones like the bulls.

One more important aspect of KleyCity became apparent at that time. Many of the visitors of the symposium sites, who had become aware that I am working on a kind of tower, immediately mentioned the *Tower of Babel*. This means that this particular myth seems to be a very powerful one. Therefore, I consider the image of a tumbling-down tower a primal fear of mankind - but at the same time the tower evokes an irrational fascination. According to the biblical account, a united humanity which spoke a single language built an ambitious tower whose summit was supposed to reach heaven. In fact, the etymology of "Babel" stands for *Gate to God* since *Bab'*, which means "gate" and "-el" is a short form of *Allah*. But Babel has also come to be interpreted as the jumbling confusion of speech. In the end, the clear statement of the myth as I understand it is that mankind, by attempting to decipher all the final secrets of nature created its own downfall, resulting even in a jumbling of all languages. According to my notes about the principle of entropy, the inevitable increasing disorder seems to find its parallel representative in this jumble of speeches. Thus, the old myth of the Tower of Babel can be understood as an analogy to the principle of entropy. Yet as mentioned, the important aspect of KleyCity which I see primarily in conjunction with international sculpture symposia, is that my "tower houses" appear as symbols of a united single language of art. Furthermore, at the opening of a symposium the artists invited from different countries usually do not know each others' languages but at the finish at least we know some words of our fellows' tongue. Even if it is only for a toast, these few words bring us together and so the idea of international sculpture symposia supports the universal language of art. Even if the idea of a single Proto-language which mankind supposedly spoke at the beginning remains a subject of eternal arguments amongst linguistic researchers, I state that art substantially has the capacity to be this single language.

In this way an excellent stone-sculpture essentially stands for a global understandability, even if modern art seems to follow the principle of increasing chaos. Anyhow, to me it is a challenge to be part of the stone-age sculpture-language.

I guess the hard working process of stone-sculpture indeed requires a certain tendency to abstraction. I would not mind if modern art would sometimes recollect its actual role to

merely represent essentials according to human nature, since I suspect that modern art is sometimes in danger of getting lost in incomprehensible and capricious elaborateness. In this contest the straightforwardness of a stone-sculpture, even an elaborate one, is invincibly powerful, which is the hopeful view of a passionate stone carver.

2.7. *POWER OF IDEA*

Nature displays innumerable examples of dynamic processes upon elements. The geology of stones demonstrates how crystals grow, but many more dynamic processes can be seen thereby. Life derived from matter and with it, the psychological phenomenon that sensation and feeling evolved. Finally, perception activated a consciousness and ego, thus inevitably creating the human mind. The crucial point for me here is that matter seems to be the fundament of mind. The acknowledgement of chemical and biological evolution is a premise of my argumentation. Matter in the last centuries was regarded merely as inanimate, for reasons which are easy to reconstruct historically. However, this attitude did not help to accept the reality of nature. From my point of view stone sculpture, from the very beginning until the present day, can be seen as a metaphor for the fact that life evolved from matter, just as the psyche did! It is fascinating to me that modern people still have difficulties to accept this thesis, whilst for the Paleolithic man it appears to have been the most natural thing in the world. A spiritual help for them was provided by the representation of a spiritual realm in stone. So the idea was in the stone, the idea was a part of the matter. Studying anthropology it seems that Paleolithic men naturally understood that they had evolved from matter. In contrast the way of thinking in historical times - since script allowed historical reports - implies a borderline between matter and life, even between human life and all the rest. Despite our historically religious-based bonds, we can now gradually understand the emergence of life scientifically; Paleolithic culture and mythology may show that unconscious imagination is a considerable force which appears to anticipate modern science. In this sense I would like to add one more specifying example which was also described by Lewis-Williams. Namely the phenomenon that we can find deep inside some caves pieces of quartz lodged in the cracks of the rock which evidently shows the

"... Shamans' belief in the supernatural essence contained in the quartz which afforded contact with the spirit world that lay behind the rock face." ⁵⁵

Obviously these pieces of quartz were put or thrown into the crack by a conscious human act. According to the experts

"... a combination of ethnohistory and physical sciences explains why quartz, shamans and vision questing were so strongly associated: triboluminescence causes quartz to glow when struck or abraded, which was believed a visible manifestation of supernatural power." ⁵⁶

Today a belief in the spiritual power of quartz is still widespread. It seems to be an accepted practice of "vision questing" to look in a crystal-quartz sphere and a current practice to maintain the idea that certain mineral-stones are good for diverse human physical and psychological conditions. Humbug or not, I guess this ineradicable belief has its roots in our Paleolithic past.

In the earlier chapters I dwelt on some evolutionary concerns in order to explain that this principle also applies for art. I have my doubts about the common acceptance that evolution is just about how biological organisms evolve; instead I suggest seeing it as an overall principle. Let us have a closer look upon how the principle of evolution of art stands in conjunction with the evolution of the human ego.

We have seen that with time human consciousness evolved; subsequently it was a distinguished feature of a further rapid development of mankind. By the force of pictorial imagination men became cultivated in a rich variety of ways. In my imagination the emerging Paleolithic hunter and gatherer, who in his environment must have been always attentive and well prepared, was apparently used to finding small pebbles which merely needed a little carved intervention to become a three dimensional image of a mammoth, bull or lion for instance. Probably this happened near the fire place, where broken pieces of bones and ivory - leftovers from previous meals - were also available. Practically the small sculptures were portable and thus, the nomads could take them along. Subsequently, the little objects became talismans, spiritual aids, idols or representatives of their metaphysical world. It seems that

⁵⁵ David Lewis-Williams (2002): *The Mind In The Cave* (p. 112 – image 10)

⁵⁶ David S. Whitley, Ronald I. Dorn, Joseph M. Simon, Robert Rechtman and Tamara K. Whitley; Cambridge Archaeological Journal (1999): *Sally's Rockshelter and the Archaeology of the Vision Quest*
<http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=6327560> (09.08.2011)

later on a parietal art was invented, obviously by taking into account, as with the previous small pebble, a naturally pre-existing relief of the stony wall deep inside a cave. Evidently by the conscious use of light the artist or shaman discovered natural rock formations which already resembled a part of a bull and he or she merely had to complete it by drawing.⁵⁷ Thereby in the shaman's reality, deep inside the nether world of a cave, one came into contact with a transcendent world. The cave wall is literally the inside of a transcendent realm and becomes the ground for the painting of an image of a real animal. I would refer back to the chapter "Man – Evolution of Art", where I mentioned the "Light-in-the-cave-metaphor" which according to David Lewis-Williams was a fundamental step in the evolution of the human mind.

I can imagine that it was actually quite easy for the attentive hunter to draw an animal, since he was used to observing the wide range and thereby to catching in one glance the silhouette of an animal. The visual perceptions of these hunters were surely very well prepared. Hence, the discovery of a partly shaped figure in the natural relief of the rock was just like the glance at a real animal in the wide range, and so the artistic completion of the animal's image was supposedly straightforward. The astonishing facility with which the drawings were executed was certainly not due to the "artist" having years of previous "artistic" training; rather it was because his pictorial imagination was simply prepared to literally depict the animals.

In the hunter's real life the animal which was hunted down had sacrificed itself to nourish the man. The anthropologist David Lewis-Williams proposed a plausible explanation that for Cro-Magnon man there was no border between reality and the transcendental realm; it was one and the same. Thousands of years later some of us might consider the rich parietal art in the caves of Lascaux and Altamira as the "Pantheon" of Cro-Magnon time, an idea which appeals to me. But as Lewis-Williams has shown, it cannot be just that simple. In this sense I propose a continuum in the development of art from the first small stone sculptures until today, by considering that Paleolithic hunters certainly had no comparable way of perceiving arts like we have today. I can even imagine that for the Cro-Magnon people it was rather not an invention of "art" due to the paintings in the cave. Perhaps it was just something totally natural which can be seen as a normative social act. The material and metaphysical worlds were united and prime, thus indivisible. In our opinion the life of hunters in glacial times does

⁵⁷ David Lewis-Williams (2002): *The Mind in the Cave* (p. 212)

not arouse paradisiacal associations; in a way, what Lewis-Williams described was man before the expulsion from paradise. The fact that for our archaic ancestor's material was strongly associated with the immaterial, the idea was the inside of the material means that matter has a crucial role in the evolutionary context of mind.

I assume that when men slowly started to separate the material from the spiritual world it came along with, man changed his way of life because of new opportunities afforded by domestication and agriculture. Portable spiritual-aids were now replaced by ground-based monumental sculptures, and the first man-made Neolithic temples seem to substitute the Paleolithic caves as places for rituals. Thus, a significant separation was initiated, whereby it seemed as if man valued the building of borders and classifications.

According to *H. v. Ditfurth*⁵⁸ I will try to look at the world from an historical-genetic perspective - the only really objective applicable one. The German neurologist explained clearly that the step to separation is the basic essence for a development of life. The autonomic nervous system, when it evolved billions of years ago, established categories like separation, identification and selection, which since then have been passed on. The result is the vegetative nervous system in the brainstem of the vertebrate. A basic necessity for the first cells, in order not to evaporate out of existence immediately in the ocean, was separation. A kind of skin which merely gives access to distinct outside factors evolved - necessary for survival but no more than that. Thus, the maxim of separation was formed, under whose regime primal cells opened the chapter of life on Earth.

I regard the painting hunter in the dark depths of the cave as if he wished to separate his mind from disturbing outside factors. Consequently, this painting was a first release, displaying a gleam of the new capacity of the modern human mind. Just as the first cells in the primordial soup allowed biological evolution, the pictures and artifacts of Paleolithic hunters allowed the evolution of the mind. We do not know yet which accidental developments will survive in future, but in retrospect we can say that a random concept of the early human mind, namely pictures and artifacts, played an essential role in the development of human consciousness. Consequently, psychological phenomena are the outcome of biological phenomena.

The art concept as we understand it today evolved as a necessity due to the conditions of life, even if it is different to the idea of our early ancestors. The Paleolithic painter neither

⁵⁸ Hoimar v. Ditfurth (1990): *Der Geist fiel nicht vom Himmel – Evolution unseres Bewußtseins*

entered the cave with the aim of creating an art gallery, nor was it his purpose to create an art concept, as we understand it today. In the words of Dittfurth the characteristic of evolution is that it can only work with material which is already available. We are not the result of a preconceived plan, but of a continuous and always subsequent correction of errors. So, what remained of the Paleolithic idea to us is the immediacy and straightforwardness of art which does not need explanation. Therefore, all kind of art concepts evolved subsequently.

The immediacy sensed when encountering art is presumably based on our rich capacity for sensitive cognition. Still the neuronal interconnection of our cognitive senses is a mystery. So a color, which is perceived through the eyes as light waves, not only has information about its blueness for example, but at the same time it is perceived as being cold or warm and even as having a tone of harmony or disharmony. The information gleaned by smelling may release colorful images, because our nervous system has developed distinct senses of cognition; moreover, the senses for the intermediate tones are linked between the faculties of seeing, feeling, hearing and more. What life in general is capable of evolving, with regard to cognitive senses and nervous systems, seems miraculous when thinking of the cognitive and hunting features of bats or snakes for instance. In terms of the human mind, we proverbially talk about a sixth sense, and I think the program for this sense is the stone aged software, which probably linked different cognitive areas in our mind. The intermediate tones are indeed perceived more unconsciously, but they are a significant feature of the human mind. So I think it is safe to state that the intermediation between the cognitive areas in our mind can be called the sixth sense. Thereby metaphorical thinking, which was the necessary flashpoint to create what we consider today as Paleolithic rock art, emerged.

The aforementioned categories of separation, identification and selection continuously created early living forms up to the featured intelligence of modern society, and these principles were passed on from the beginning of life. It seems to be a part of the cosmological concept. The human mind, which is built in collective social groups, is the response to the human necessity for progress; just as fins were the response to the need for movement in the element of water and wings as the response to air, in order to satisfy the organisms' need for progression and movement. In the evolutionary sense art, religion and science arose as terms of progress which might be perceived rather as societally important. The terminus "separation" appears to be in contrast to the typical sociological human properties, but to me it seems to be a plausible further progressive feature, since separation inevitably involves at the

same time fusion. This yields another energetic complex which possibly culminates in societal identification and contrasting classification.

Art and religion have the same roots and a long common history. Today in the fields of the arts we have developed the expression, that "there is no accounting for taste" which is actually a welcome basis for liberal argumentations and discussions open to anybody, while in the field of religion arguments rather get prevented by the expression "religious feelings shall not be insulted". Apparently both subjects again have a lot to do with separation, identification and selection. Hence, art and religion seem to be an eternally perpetuated energetic complex, being the nutrition for our consciousness as well as for the subconscious. So what is inside our head? Between the ears is the place where the outside material world meets through the perception of our senses; the immaterial, visionary and eventually pictorial imaginary world. I think man has a need to find, see and feel the metaphysical pattern inside and outside of one's mind, since mind and environment are dependent upon each other. Accordingly the environment affects mind and mind changes environment.

Today we visit art fairs by applying an art concept although we do not really know where it will lead us to. Nothing remains like it is – also the art concept has apparently changed very much, especially during the recent period of post modernism. We have seen that art is a distinctive feature of humanity. More specifically the visual perception, imagination and its reaction, has to be seen as a chain of cause and effect, which is a significant driving force of human progress. Round 40,000 years ago, during the Ice Age, man underwent the so-called "Big Jump". A little less than 30,000 years later, when the global climate became warmer, the so-called "Neolithic Revolution" took place. The people started to settle down and by this time the new urban dweller developed the first differentiated professions. Perhaps at that time already, art had begun to play an extraordinary role in human life and was no longer merely a social act of the nomadic tribes. Later on art became associated with sovereigns, who took on the role of commissioners, thus art became a symbol of power and authority or a symbol of luxury. However, art probably still did not change its innate concept, namely to awake archaic feelings and findings.

For Ice Age men the use of caves had various motivations, for example the need for protective shelters. But sometimes they entered the absolute darkness, even traveling several hundreds of meters or more to create awesome artworks. It is which still awakes my excitement. In the absolute darkness and quietness of a cave the human imagination is eminently creative because of the really extraordinary physical and psychological experience.

I am glad to have realized some descents into a few of those caves which are for human beings an absolutely strange and hostile environment.⁵⁹ In the cave one feels that we are not made to be there. I was always aware that I depended on the function of my little pocket lamp. The tour guide in Niaux at a certain point, almost one kilometer inside the slippery darkness, demanded that we switch off our torches and leave them somewhere behind. Now only her light showed us the next few steps and then also she turned off the light. A scary few seconds ensued, but this was an unforgettable experience, full of vibrant tension. Of course, next she highlighted the drawings, amazing spotlights on images of bison, horse, ibex and more. All together it was a fantastic experience but to feel the absolute darkness was extreme. In that particular moment, despite everything, my pictorial imagination was extremely productive and clear. I regret that I could not immediately sketch my ideas. My experience in the cave was a kind of recapitulation I suppose. In my situation the idea of the unity of matter and mind was conceivable for a short while. I would like to quote David Lewis-Williams here, who finished the preface of his book *The Mind in the Cave* with the words:

*"To my way of thinking, there is no greater archeological enigma than the subterranean art of Upper Paleolithic western Europe. Anyone who has crouched and crawled underground along a narrow, absolutely dark passage for more than a kilometer, slid along mud banks and waded through dark lakes and hidden rivers to be confronted, at the end of such hazardous journey, by a painting of an extinct woolly mammoth or a powerful, hunched bison will never be quite the same again. Muddied and exhausted, the explorer will be gazing at the limitless »terra incognita« of human mind."*⁶⁰

The human beings' descent into the cave interrelate the outside world with the inside, the material becomes connected to the spiritual realm. Accordingly, inside the caves Ice Age man got the impulse to become a reflective being, a reflection which is still currently to our benefit. No matter that art today is featured as luxurious, it still has the power to return us to archaic environments, at least in our imagination. The deep darkness of a cave seems to be the place where Paleolithic man for some reason had to go and exercise the perception of his inside and outside world. From today's point of view one could explain that the biological and

⁵⁹ Amongst others Niaux and Rouffignac (France) have been the most impressive and inspiring for me so far. Unfortunately I could not see the original cave in Lascaux, since it is closed to the public.

⁶⁰ David Lewis-Williams (2002): *The Mind In The Cave*

spiritual being enjoyed the womb of the cave, since it was closest to its material essence thereby.

2.8. PICTURES BEYOND PICTURE

Our imaginativeness so far is insufficient to picture a quantum leap, or what is going on inside the parts of an atomic core. What was the capacity of our imagination before Einstein and Newton, or even of Cro-Magnon? It has changed and that is the reason we are here and can now state that we are a creative species. The opinion that the first step in the development of mankind is speech might be accepted by the majority and in a way is convincing, ever since Plato the faculty of philosophy has had a strong impact on our collective perception. But as I have pointed out so far, man created a picture/artifact, which served as a medium and then later became a cult picture. The idea that the capacity of pictorial imaginary was the cause of finding words to communicate with each other (about the pictures) seems plausible to me. Today not only art historians are discussing a so called "pictorial turn", also in other fields of the humanities we can see a new interest in the image:⁶¹

*"This new interest in the picture is outlined by a seemingly paradoxical constellation. Whereas studies in culture and the history of science speak of a pictorial turn, the discourses in the arts speak of leaving the picture. However, both perspectives meet in a vanishing point: the pictures beyond the picture."*⁶²

For me the concept of a sculpture, the visible and the one beyond it, has played a significant role in the development of consciousness. Sculptures and pictures were created by visions or pictorial imaginations. This raised the need for communication, as for the ability and capacity of speech. The pace of cultural development accelerated and finally for these

⁶¹ For some time now, the picture - as hardly any other subject - its theory and history have stood in the centre of the interdisciplinary interest in cultural studies. This has led to the attempt to establish non-subject specific picture studies (under the participation of the art historians Horst Bredekamp, Hans Belting and Gottfried Boehm, but also of philosophers like Günter Abel): „An extensive study of the picture has started.“ (Boehm).

Kultur Projekte Berlin GmbH, a cultural project of Berlin: *Art as Science – Science as Art*; out of *WissensKünste II: Pictures beyond the picture*

⁶² <http://www.kunst-als-wissenschaft.de/en/news/index.html?NID=200311202> (09.08.2011)

reasons phonetic script was invented, based on a very simple abstract Sumerian cuneiform accompanied as well by the development of pictograms. In the age of computers the acceleration is still going on, but exponentially, again founded on the basis of a very simple binary-coded writing system. Today we have a visual information flow to deal with. Since we bear the genotype of our ancestors who lived in the caves of Cro-Magnon, we still have this enormous capacity for pictorial imagination, which could be a model to explain our extraordinary ability in dealing with visual information flow.

As an example of pictures' potency, an apparent snapshot of a polar bear on a single, little drifting ice floe is famous and has become already a meaningful "icon" for the community of green ecologists. In a single glance our pictorial imagination is working and creating interpretations, aspects and narrations of a huge variety. This example shows that a single glance has the capacity to inspire a whole essay and still more could be said. To me the term "pictorial turn", in addition to the claim of Belting and Boehm to develop a scientific approach to the origin of picture and their effectiveness analogue to those in linguistics, points up the energetic power of pictures and artifacts.



IMAGE 16: POLAR BEAR ON AN ICE FLOE

2.9. Separation - Identification - Selection

I want to introduce the idea that art is crucial for the survival of civilizations, otherwise we would not be here and could not research into such things. Whether evolutionary theory in terms of culture is accepted or not, it is obviously true that succeeding civilizations are usually featured by a sophisticated culture. When a civilization becomes weak or even extinct, their art is usually in some way assimilated by the successful civilization that follows. There are a number of successor civilizations who gained an advantage by assimilation. As famous examples I refer to the clash of the Greek and Roman empires and later even the so called Barbarian cultures that assimilated the Roman cultural achievements.⁶³ In terms of the Greek and Roman cultures in particular it can be called adoption instead of clash. Often in history, the successor also took over (adopted/assimilated) some parts of the cultural achievements from the inferior folks. Furthermore, borders as human made dividing lines between folks have most often also been points of exchange and purchase. An example of modern times would be the apparent adoption of a western life-style. We do not know yet how the image is going to look if China takes over the leading role in the world economy for a long term.



IMAGE 17: BOWERBIRD LOOKING FOR A WIFE



IMAGE 18: BEIJING, CHINA

Why not simply compare some human cultural achievements which doubtless serve social identity, with the astonishing effort of a bowerbird? The males of this amazing birds´

⁶³ Jutta Frings, Helga Willinghöfer (2008): *ROM UND DIE BARBAREN – Europa zur Zeit der Völkerwanderung*

species build their beautiful and elaborate show-case nests just to attract the females.⁶⁴ The prettiest nest stands for the healthiest male, thus he is the bearer of superior genes. It might be a bad comparison, but people also like to adorn themselves with labels, and as with the bowerbirds, their attractiveness seems to rise thereby. Generally the species Homo is a very successful one, considering the development of population regarding reproduction and breeding. My assumption is that Homo sapiens has survived because some individuals of this species had the advantage of a quantum more creativity than the others. The bowerbird therefore can be seen as a metaphor. Homo sapiens created apparently better tools, better hunting strategies, better artifacts and better languages than his fellow the Neanderthal man. However, geneticists recently found that Eurasian people bear a little genetic heritage of Neanderthals.

*"We show that Neanderthals shared more genetic variants with present-day humans in Eurasia than with present-day humans in sub-Saharan Africa, suggesting that gene flow from Neanderthals into the ancestors of non-Africans occurred before the divergence of Eurasian groups from each other."*⁶⁵

Nonetheless in the competition Homo sapiens, although physically smaller, were more successful. Was the encounter of Mousterian Neanderthal and of Homo sapiens the big advantage of the Eurasian tribes of Homo sapiens? It seems that the Eurasian Homo sapiens assimilated and at the same time eliminated the Neanderthal men. The Big Jump, or in other words the cultural jump, marks the change from the Middle to the Upper Paleolithic eras. Obviously, this happened in the caves of Western Europe. In my opinion the *Neanderthal Genome Project*⁶⁶ which was published by the *Max-Planck-Institute for Evolutionary Anthropology* in Leipzig, could also be interpreted in the sense that Homo sapiens took a benefit from the gene flow.

We never know what kind of archeological sensations are still waiting to be revealed, since the theories about our early human history has frequently gained new aspects and even revolutionary changes. I do not want to declare them as incontestable, but what I want to

⁶⁴ One must only google pictures of bowerbirds to understand that these birds seem to be talented as artists or architects.

⁶⁵ Max Planck Institute for Evolutionary Anthropology Leipzig; Prof. Dr. Svante Pääbo
<http://www.eva.mpg.de/neandertal/index.html> (09.08.2011)

⁶⁶ Science Magazine (issue 05/2010)
<http://www.sciencemag.org/content/328/5979/710.full.pdf?sid=b13b9799-5f47-4b04-8406-7e3f3f4dd0d2> (09.08.2011)

declare herewith is that "Art as a knowledge phenomenon" pushed mankind ahead! Indeed, I believe that the tribe who did not just eliminate their rival but partly assimilated the cultural achievements of their inferiors proved more successful. This tribe merely absorbed in a way the interesting and useful features, but denied the rest. I suppose for reasons of social identification, each tribe developed their particular features like music, dance, art and communication; let us say their particular culture. As human history is the summation of victory and death, of superior and inferior, I also believe that the inferior culture did not become totally extinct. Even if it took several generations, the relicts and artifacts, the leftovers in the gravel of the vanished culture became assimilated in the new culture and hence made the new culture richer. Although generations had already passed away, within the new culture there were certainly individuals who were intelligent enough to understand the encoded message of the old artifacts of the former culture. In this sense and due to Dittfurth's suggested basic categories to ensure life – separation, identification and selection – I use these terms in order to demonstrate their applicability for cultural evolution.

It appears that the human species developed culture for the public good. Hence the question might come up, who is part of society? The evil, the lazy, the greedy and the dishonest are also part, as well as their opposites, the altruists. This leads into the discussion of Sociobiology, which has been ongoing for decades and is supposed to find no end. Most people understand the evolutionary theory as the principle for the good of the species, but this point of view is too unilateral. It confuses the issue - mixes cause and effect. It was not the eye that invented light, nor the brain that invented thinking. We tend to see the evolution from an anthropomorphic point of view, but we have to see it from the genetic perspective. Then everything makes sense, if we see it for the genes' good. The creature reacts to the environment, so the origin of legs is the effect of the requirement to move fast on dry land. According to Dawkins' theory of the selfish gene,⁶⁷ there is a fundamental difference between the "replicator" which is the little genetic structure and which gets exactly replicated through cell division, and the "vehicle" which is mortal like a mouse, a dog or a man, thus only the body of the replicators. Also Dawkins' question is, for whose good, for instance, was the eye developed? The only acceptable answer in his point of view is that it was for the good of the replicator, who was and is responsible for the development. It is an abstract way of thinking in particular for persons like me, who are used to believing in the individual freewill. All our characteristics and ways of thinking lead to the point where the individual seems to feel

⁶⁷ Richard Dawkins (2007): *Das egoistische Gen*

eminent and particular or even like the focus of the world. But if the majority thinks like this, our characteristics and properties will drive us to mutual collision, as we have witnessed in numerous clashes of societies. Probably there are strategies behind, which keep the process running. I would suggest the earlier mentioned stabilizing frequency distribution of strategies (ESS) as a point of relevance here.

How to integrate art as ESS? Art is known as visionary, even regarded as divine. Art describes archetypes which form a collective memory of repeated experiences and which supposedly find repetitions in the future. So archetypes are past as well as prospective experiences and in this way art may appear as visionary. Hence, art can also be seen as an advantage for the benefit of our genes. It seems like the egg produces the chicken to produce a new egg. Our patterns of behavior are developed as stabilizing strategies to ensure the evolution. I like to recall the example of migratory birds. But what happens about our individual freewill? The individual organism "human being" is a mortal vehicle. Art, much like the evolution of the eye, was developed for the good of the "selfish" genes. My belief is that art is a basic need which is possible to explain in scientific terms.

Back to the sculptor who has given form to something this was before merely a pebble. He or she had the fantasy to extrapolate a form out of a simple matter. Out of matter and psyche arose an energetic form (complex), in other words, an idea became visibly manifest. In a greater context, out of the nothingness arose chemical evolution, later matter created life, and then with the evolution of mind, our biological ancestors formed spiritually significant objects. The single human being closed the cycle by creating something out of nothingness. Where previously there merely was a pebble, through shaping, a little stony mammoth occurred. In this way all following sculptors found work for the next 40,000 years. The techniques improved, finally producing sculptures which appear deceptively life-like. But apart from such reality-copying sculptures, a stone-sculpture in general is still a matter of a stone and an illusion.

In consequence, the well-known artist *Eduardo Chillida*,⁶⁸ as one of the youngest great heroes in the field of sculpture, speaks about a visual energy. For him the image of a figure is reduced to a line. The volume of the figure turns into emptiness (or space). In this sense the evolutionary succession continues, because at the latest when the little stony mammoth was created, mankind entered into a metaphysical dimension. Thus, art appeared absolutely

⁶⁸ Kosme de Barañano (1998): *CHILLIDA 1948 - 1998*

natural and is an inseparable human feature, even when it is simply a human idea. The different art styles are individual decision and social phenomenon, but in any case art is a human principle.

Following the portable idols like the mammoth there then came painted cave-temples like Lascaux, and the creation of Göbekli Tepe, the Karnak Temple, the Greek Pantheon and the Acropolis, the Kaaba of Mecca, the Hagia Sophia and St. Peter's Basilica and so on, all of them mystical places. Considering these mystical places nowadays, so many words are needed to explain. The sculpture *Elogio del Horizonte*, created by Chillida, needs very few words of explanation as far as I am concerned. In a great gesture the artist makes metaphysical energy visible, and thus physically tangible. A location like that appears to me neither earthly nor heavenly, it is intermediate. A grave, concrete structure is placed in the grounds there, enough matter to build a highway bridge; before Chillida, here was nothingness, only a wide horizon. His sculpture now is the perceptible transcription of an idea, cast in concrete. Here, without words, matter becomes mind and the mystical becomes a real experience. For me the sculpture, built in 1990, is the provisional other end of my causal chain. Why provisional? Because evolution goes on and on! Chillida's effort seems to me the perfect translation into modern terms of that which the painter of Lascaux achieved. The sensitive observer of this sculpture does not need a speech to comprehend the place's magic, just as the fellow of the cave-painter most likely did not need explanations.



IMAGE 19: ELOGIO DEL HORIZONTE (1990), EDUARDO CHILIDA, GIJON, SPAIN

3 Form

Material and idea establish the foundation of any sculptural form, whose morphological processes are necessary to create sculptures. In a traditional morphological sense, all forms could possibly go back to one single prototype. In this context, a well-known approach was the attempt of *Goethe*⁶⁹ to infer one single prototype from the appearance of all forms of plants. Today this idea is considered as a kind of an early step towards the evolutionary principle and in historical terms, became classified as "idealistic morphology".

In analogy to genetics, the sculpture of Chillida for example could be seen as the "phenotype" of the little stony mammoth. This might appear hypothetical, however, the outline of sculptures may have changed through the ages, but apparently the metaphysical concept has still remained. To me it seems that the history of sculpture in a way demonstrates the theory of recapitulation which in biological terms is well expressed as "ontogeny recapitulates phylogeny".

*"This is a hypothesis that in the development from embryo to its mature form, organisms go through stages resembling or representing successive stages in the evolution of their remote ancestors. With different formulations, such ideas have been applied to several fields, including biology, anthropology and education theory. In biology, there are several examples of embryonic stages showing features of ancestral organisms, but a strong formulation of the concept has been discredited."*⁷⁰

So far, from an anthropological point of view I can see the hypothesis as considerable, while from my own experience I can even confirm that I exercise the development of forms again and again. Apparently, simply as a recapitulation of the forms' phylogeny, I finally come to my individual solutions. No matter if it is within my own artistic daily work, or during my whole education as a practicing and studying sculptor. In the changing working process, forms very often resemble other or earlier forms, but finished forms sometimes also resemble "embryonic" stages of other forms. The concept of sculpture, universally seen, with its continuous repetitions of issues (prototypes) seems to be also shaped by the "eternal" recapitulation of forms - and also of ideas. Obviously, mankind has passed down something

⁶⁹ [http://de.wikipedia.org/wiki/Morphologie_\(Biologie\)](http://de.wikipedia.org/wiki/Morphologie_(Biologie)) (09.08.2011)

⁷⁰ http://en.wikipedia.org/wiki/Recapitulation_theory (09.08.2011)

like a canon of forms and ideas which in the language of genetics correspondingly would be the phenotype. Nevertheless, for the individual sculptor it is important to shape the authentic personal content.

Where is my position in the line-up? Considering sculpture, my idea is to create metaphorical and symbolic forms which positively bear a visible vivid tension and power, which could be that the sculpture itself appears to be breathing, or it might be breathtaking for the beholder. For example a bull-shaped sculpture, since the Paleolithic beginning of stone carving, has been repeatedly shaped. On the one hand it represents a real animal, on the other hand, when executed excellently, it represents the ideal which combines the metaphors associated with the real power of a bull. In this sense the bull-shape represents the idea of power. Regarding this, my position must be the ambition to repeat the form in the sense of the idea of "power". If this were not my ambition, the result would be good for some *Disney park* only.

In the process through all the ages of art, we have developed the highest mastery in carving figures, but it appears that in the twentieth century we came back to remembering the power of simple and geometrical forms. It looks as if the principle of recapitulation again puts emphasis on the metaphorical power of simple forms, instead of ambitious realistic images. In our modern society artists have again become a kind of shamans, producing pictures for the soul by the use of simple forms. In scientific times our world is still mysterious, albeit less than in the past. In those days a solution for the inexplicable was found in religion, which was above any disbelief. Today, in place of religious dogma we are looking for a substitute. According to C.G. Jung, art develops pictures for the soul. In my point of view, soul is an abstract concept and difficult to define, but I agree that pictures find their easiest access to the soul in abstract basic patterns. The enlightened man turns away from dogmatic religiosity to find unconscious archetypical content instead. As such we are thousands of perceptive years away from the creator of the little mammoth and at the same time very close to him. The fact that art is developing pictures for the soul is still unchanged, essentially. Hence, we may appreciate, without needing to understand fully, that art generated imagination. Referring to Jung again, nothing in the world has significance, as long there is nobody who can explain it, thus man explains because he does not understand. In conclusion an excellent sculpture does not actually need any explanation.

A sculpture becomes part of real life in the moment when our daily, ordinary imaginativeness penetrates through the aspect of a sculpture to get in touch with the

experiences saved in the subconscious. I suppose in that moment we, in particular our imaginativeness, make a loop back to the time when we actually made the archaic experience. It is the time when our so called primitive ancestors did not make a distinction between a material and spiritual world. In fact, we do not make a real loop back, but I think our subconscious still has the capacity to provide us with the feeling that there is no borderline between reality and imagination. I believe these moments can be considered as recapitulated archaic experiences.

When I have finished a sculpture at my studio, if it is of a suitable size to take home, I usually live together with it for some time. Actually in that period I decide whether it is a good sculpture or not. After finishing the piece I need to continue my conversation and arguments with the issue. The dialectic between me and the stone, initiated by the working process, needs to continue. Sometimes I am happy, namely when I can look at my sculpture again and again while forgetting everything else around and pictures are rising in my imagination. This is not because of some ordinary narcissistic movement, but I am sure then that I have accomplished a good sculpture. These particular moments are melting points of reality and imaginativeness, caused by a simple piece of shaped stone. How to get to this point? For a start it is the combination or interaction of a real sculpture and my personal perceptive structure. Later it could be interesting to consider the interaction with any other beholder of the sculpture.

I would like to focus primarily on the stone sculpture. The "making of" requires a lot of decisions, not only having an idea. Therefore a closer look at how the ideas for sculptures emerge is necessary. Regarding art in its broad spectrum we may observe that many times the issue is associated with a mythological theme. Also for me the idea of my work is often rooted in mythology. Generally, mythology is regarded as stories which contain little truth; also since mythology seems to be some tales invented by nonbelievers. This on the one hand is caused by religious dogmatism, on the other hand we cannot believe that one man, *Atlas*, carried the whole world, or that the stork brings the babies. As adults we may understand the metaphorical truth behind the stork story. As an artist I work with symbols and study their iconographic content. In doing so, the truth content can be amazing. Today we can quite accurately reconstruct Egyptian mythology thanks to the preserved stone reliefs in the temples of *Sakkara* for example; therefore, after thousands of years, we can put together and understand Egyptian cultural history. But also we can recognize that the people in the Sakkara period tried to establish their professed belief by drawing on the preexisting mythology with

all its variety, and then carved this in stone. So each culture stands on the shoulders of previous ones, thereby creating or somehow manipulating their mythology. In this sense the continuous assimilation of ideas and ideals creates the force behind a morphological development of sculptures.

A perfect metaphor for how mythology works would be the image of *David Nash's* floating *Wooden Boulder*. In November 2007 I appreciated very much the film about it, whilst attending a Nash exhibition in a gallery in Seoul.

*"In 1978 the British artist carved a large wooden sphere and documented its journey from the Welsh mountainside to the Atlantic Ocean. Over the years, the boulder has slipped, rolled and sometimes been pushed through the landscape following the course of streams and rivers until it was last seen in the estuary of the river Dwyrhyd. It was thought to have been washed out to sea, but after being missed for over five years the boulder reappeared in June 2009. There were indications that it has been buried in sand in the estuary."*⁷¹

Natural weathering and human impact is the force behind the mythos of the wooden boulder floating in the estuary. Just as archetypes as well as mythologies are floating in our sub consciousness, reappearing from time to time and showing features like the weathered wooden boulder. The actuality of these analogies is often amazing for me. That is why mythology for me is an essential part of making my sculptures, like the stone with its geological features, fractures and deposits and so on. As a result I create my interpretations of mythological characters as my personal pool of ideas and so a part of my ideas reach and enter into the recipients' good judgment. In fact I believe that it is difficult to have an idea for a sculpture which has no mythological dimension. Finally a bull-shaped sculpture represents not just the animal, as mentioned before it represents both - the animal itself and the symbol of power as the stories of the *Rape of Europe by Zeus*, or the one of *Minotaur* report.

⁷¹ [http://en.wikipedia.org/wiki/David_Nash_\(artist\)](http://en.wikipedia.org/wiki/David_Nash_(artist)) (09.08.2011)

3.1. SCULPTURE IS ENERGY

My intention is to define the hypothetical energy of the object sculpture. Doubtless, the perception of a certain energy loaded form depends on the individual approach, it is a subjective perception. Some people probably never would consider sculpture as an "energy-form" and would therefore deny any hypothesis about it. Whether a person appreciates art or not actually does not matter, sometimes even those who are not interested in art at all, get in touch in some way with the energy of a sculpture. This signifies that there must be something like the "aura of a sculpture", which distinguishes it from other man-made objects like a chair for example. Essentially this fact may merely signify that it deserves a closer look. To me the energetic issue of an excellent sculpture is manifest as the potentiating of the material, the spiritual and the physical energy of the artist. According to the law of conversion of energy, one could also say that the physical energy of the artist simultaneously disappears - or so to say converts into blasting stone chips, dust, heat and transpiration and so on. Another observer, when facing a sculpture, might see that the artist's physical energy has been transformed into a suspenseful form. This is then the view on a sculpture which was formed by chisels and hammer and by a perspiring artist. In this sense I am sure that a man-made sculpture inevitably reflects the power of the man who made it. The simplest example illustrating this statement might be the imagination of two black granite cubes in the same size, edge length around fifty centimeters, one made by manual skills and the other made by machines. The machine-cut and polished cube would certainly appear quite impressive, since the material and its gravity in any case would unfold their power. The manually chiseled and polished cube with its proper material-energy moreover would reflect the physical energy of the sculptor. Of course one could claim to follow the energy of the machine and where it has gone to, but in the machine I see merely a technological aid for the artist. What is important for my issue here is the way the artist uses machines and tools. To verify results it is good to have statistically relevant samples. So let us raise the example to five different sculptors. Even when the number of five is still not really significant, the machine-made cubes would appear all quite the same, while the handmade cubes most probably would show individual features. Herewith I do not want to say that a sculpture has to be made without the use of machines. I try to expose that the artists' idea about a cube becomes evident through their physical impact, which remains visible on the stones' surface, and which we then might consider as a personal working-style. In this sense the handmade cubes most probably feature the character of the

material and in addition an idea of the sculptors' character. Contrary to this, the energy of the industrially water-cooled cutting and polishing machines was transformed into an industrial product. Of course, I am conscious of the fact that some of the energy, equal to the *law of conversion of energy*, transforms into physical heat and movement. It would be exhausting to investigate the complete conversion physically and I would simply fail in my task. I want to look at the artist's physical impact on the stone-sculpture and what really remains perceivable from the working process.

During my apprenticeship as a stone-mason my first task was to make the greatest cube possible out of unshaped stone. Since I was not allowed to use machines, I was forced to develop and to learn basic manual working techniques; through my physical and intellectual commitment, the idea of the cube in the unshaped stone slowly took shape. After that experience I understood that there are many possible ways to make a cube. Furthermore, through the manual work my perceptive senses gained a feeling for the job and that it was not only the hands which were needed. Even by hearing the sound of the rhythm of hammer and chisel I became able to distinguish the quality of my act. My whole body sense slowly developed a feeling for the right body-coordination and so on, and the blisters on my hands were actually gone after the first couple of weeks. Over the years the working on stone reminds me of a kind of dialectical performance. The rhythm of the hammer strokes and the stepping back in order to look and see the next step really feels often like a mixture of boxing and dancing. So it is not only manual but also footwork, in fact it is the whole body which is involved. When I watch other stone-workers, I can immediately tell if he or she understands the work with the material. Beholders of my working act have told me that it has the appearance of an astonishing ease. At the end of a working day of course I can feel that I have done some work, but a tiring brute force is not necessary to shape stones. I want to emphasize again that stone-carving just needs a lot of practice. This fact seems to be in contradiction to a common opinion that today everything is a matter of a good organization and thus easy to obtain. One must only have an excellent idea and everything else is just a matter of purchase, such as the service of some stone mason or so. But who really would appreciate the dance of a dispassionate performer and what about the concert of a violinist? The beholder is right when she or he expects to see in the performance the reflection of a hard and passionate intention. In my opinion this is the minimum which should be reflected in a stone-sculpture.

As a sculptor I am free to make cubes in various styles; one might be rough, showing the marks of the chisels, others might be smooth and charged with suspense. A smooth cube

may possibly appear to be vividly breathing, as if something inside is trying to get out of the box, or on the contrary intends to implode. A rough cube may appear as if bearing the idea of a complete cube, while the real cube-volume is still coated under a rough shell. But when the deepest marks of a chisel at the rough surface already penetrate the imagined space of the cube, the potential becomes weakened thereby. This makes a big difference, since human imagination immediately comprehends either the potency of an uninjured cube, or the weak appearance of the cube whose volume was injured by the chisel. The surface of a stone-sculpture reflects the physical impact of the artist; hence the surface is one significant feature of the whole complex.

3.2. *SHAPE AND SURFACE*

The shape and surface of a sculpture generally reveal an individual style. The definition of style conveys the Latin *stilus* = penholder, which implicates an individual handwriting. Thus, style is an expression of a notable countenance. I attach importance to manual-technical skills, but not in a categorical and orthodox manner, since I was trained during my apprenticeship as a stonemason with a sometimes dogmatic attitude towards the use of tools and stones. Later as an art student, in the sense of being open to new opportunities, I had to get rid of some of these stonemason's categories. Generally, I do not deny mechanical techniques, as I also do not ride a horse instead of driving a car when I go shopping. In the end it is essential that shape and surface should express a treatment which meets the material and the idea. The aim is important; on the way to it everything is allowed. This position opens a wide potential of the sculptors' language.

The choice of the material figuratively could be seen as the selection of a language. Analogue shape and surface represent grammar and vocabulary. Hence, when I choose granite I speak a "granite-language". Herewith I just want to underline that I distinguish a vocabulary of sculptors' language for different stones. This involves each different stone demanding a sort of individual treatment. Here, I want to see the "authors' effort" - the labor of the artist, including its subject on the stone. The surface of a sculpture may hide the pains and sweat of the artists' effort, even though the surface remains as the "eternal" witness of its making, and

quite possibly an individual handwriting is recognizable now. A stone-sculpture does not forget the physical effort of the artist; it is the receipt of it.

When I observe certain sculptures, it is a pure pleasure to identify an easiness in the vocabulary used. The perception of easiness is the result of authenticity of shape, surface and idea. Thus it is my ambition to continuously train my vocabulary for my stone-sculpture work. A spectator who watches me working may consider my act as a kind of punishment work. This could be mistaken for a contradiction to the apparent easiness, but for me it is passion. I am convinced that the key which drives ambition is the passion of the artist and thereby exercise and knowledge develop an authenticity of material, shape, surface and idea. A vocabulary of formal contrasts like rough and smooth, naturally broken and polished, angular and round, are featured in my sculptures, whilst my effort is to integrate my individual solutions into the universal language of stone-carving. At the same time I make sure that the universal language of stone-carving does not become extinct.

A line which in terms of sculpture is an angle I usually work out with a minimal convex tension. Planes in my standard are tense as well. When I work on a concave form it always bears the idea that it is generated by convex forms. The tension in a form excites the vivid emanation, as if the form could breathe. In my work a plane or an angle should appear as being perfect but not perfect in terms of industrially polished or cut. I can see a big difference here and what is much more important, I can feel it. It is the impact of the certain working-style which supports excitement and the viewers' sensual perceptions, making him feel or see the emanation of energy.

During my recent investigations I asked Jan Koblasa⁷² about his opinion as to where energy comes from. His answer was that the energy of a certain sculpture simply is present, like a law – like gravitation. Immediately I understood that by the term "law" he did not mean ethics at all, he meant it in the tenor of comparison, like gravitation has existed since the beginning of matter. This was again a moment when I understood that all my efforts may help to illuminate the long way of the becoming of a sculpture, but at the end there will always remain a singularity which will be impossible to explain, since the coherence of energy and sculpture build up as well simply an indivisible entity. In the further course of our conversation we addressed the fact that the sculptor encounters the material from outside,

⁷² Sculptor Jan Koblasa (professor emeritus), my teacher at Muthesius Academy of Fine Arts, Kiel

whereas the material develops from inside. So sculpture is the encounter of an outer form with an inner form. In other words, the material stone is a naturally structured form, with all its geological features which the artist encounters from outside. The artist's idea and the material stone should become one. The term "singularity", which astronomers use for the moment of the Big Bang, may appear a farfetched analogy, but when seventy-eight year old Koblasa, an authority on sculpting, says that the energy of sculpture is law, then in my understanding it is as if the metaphysical becomes speech. Koblasa's talent is not limited to sculpture only; his prose appears as prose should be: the right word in the right place.

Regarding sculpture-energy in conjunction with matter and gravitation, one could receive the impression that the force of a sculpture increases according to its mass, but this approach is totally wrong. In terms of physical and even biological laws this conclusion might be significant - a mammoth certainly was stronger than a man. But by all means the force of a sculpture is not dependant on size, mass and volume. If the force were being dependent on size, it would be easy to make a powerful sculpture. Furthermore, the energy would be neither a mystery nor a singularity. The answer simply would be the law of gravitation. A small sculpture can just as well be a powerful form and this is, according to Koblasa, because the power exists. In my hypothetical solution the force of a sculpture is a matter of material, shape, surface and the idea, and the quality of their authenticity.

Here, I would like to recall an anecdote on my numerous and appreciated associations with artists around the world. At the international sculpture symposium at *Schoodic* in Maine, USA, my fellow and flat-mate *Narihiro Uemura* from Japan explained me his point of view. Although he is a brilliant sculptor, at that time he was making his money as a welder at a shipyard in Osaka. All his spare time he spends in his studio, where he carves excellent sculptures out of granite. He consciously adjusts the size of his sculptures in contrast to the gigantism he is used to working on when welding submarines for the Japanese navy, or bridge-elements which are supposed to connect islands. In contrast to his daily ordinary gigantism he really enjoys the small scale in his studio. To me his sculpture-work seems to express many times the power of countless monumental sculptures which are placed in public spaces and which apparently merely aim to be big. The artists' attempts to compete with the real capacity of industrial monumentality simply fails, as Narihiro said to me.

Considering monumental claims only, industrial steel manufacture provides some advantages of course. Whilst the carving of a stone-sculpture in any case, big or small, makes a lot of work, so the very question of matter should be considered carefully. The idea or

imaged form should fit the stones' features, like the hardness, the color, the effects of light, the size and the raw-block's form. Decisions have to be made as to which form I want to give the stone - including that the stone possibly encapsulates the idea in itself. My previous reflections on size applied more to the outer shape, but regarding a few other decisions the surface is very important as well. Shape and surface, from my point of view, accumulate on principle a very multifaceted complex.

The effect of light on the polished stone-surface allows a sort of insight into the depths of the stone, thus playing with properties of the material, like a seeming hardness or softness. This insight appears mostly deeper than it actually is. It depends on the crystalline structure and their transparency which usually is very little, except when materials like alabaster, onyx, white marble and a few other crystalline structured stones are used. Generally the insight is rather a matter of imagination. When there is no crystalline structure, then there are cemented sedimentary grains. A transparency cannot be expected here but again, it depends on the structure of the grains which for example could be slightly transparent quartz crystals. A sedimentary stone may even bear marine fossils which would then possibly appear at the polished surface like a cross section of the whole petrification. Therefore the beholder will probably obtain an image of the rest of the fossil, so through his mind's eye he has an insight and the plane becomes a body. Apart from that it does not really matter if the surface reveals fossils or not, in the majority of cases a smooth surface generates simply the image of a skin, and where it is shinier the imagination supposes something harder directly under the surface. Just as bones or muscles stress the skin, the shiny effect resembles the tensed skin and it seems to concentrate the power of the sculpture on that firm point. Hence, through polishing, the form becomes strength.

According to the grade of its sheen, a form draws attention to a certain power-point or power-line. In contrast, a rough stone surface supports images of undefined softness, like a coat which makes it difficult to distinguish the form underneath. Although the image of a broken and rough stone surface usually implies hardness, next to a polished part of the stone it possibly appears soft. A smoothed stone suggests strength because of our image of tightened skin, at the same time a smoothed stone might gain depths because of our natural urge to understand what is beneath the surface. So our imagination realizes a body under the skin, caused by the polishing, even if it is merely the color and the structure of the stone which become visible thereby. Again in summary, the polishing might convey characteristics of strength and hardness as power-points and moreover it suggests depths because the

polished stone uncovers its color and structure. But do properties, like hardness and depths which are exposed by the same working technique, compete with each other? Although the stone is still the same, it is the phenomenon of illusion which makes us perceive either depths or strengths, or both at the same time, depending on the viewer's angle of the viewpoint, and if thereby a certain point on the surface reflects the light or reveals the deep inner structure of the stone. These are only a few samples of sculptors' vocabulary to create illusions.

The imagination of an insight into the inner form of the stone also arises precisely from the revealed stones' structure. Therefore the choice of the material is significant. As a result it does of course matter if there is a transparency supporting crystalline structure or not, and/or if a sedimentary-stone surface may expose a sort of insight through fossils, changes of colors, layers and faults, or if the stone is black, blue, red or white. Hence, the polishing provides a real insight but also an illusion of an insight, and furthers a clear distinction of the matter stone. This forces the artist to consider his choice of whatever kind of stone very carefully. Finally, the stone in the pure sense of the material has its very own language. So the encounter of stone and artist has to be seen as a very multifaceted meeting between the inner- and outer-form, which also was quoted by Koblasa. I try to subdivide the enormous complexity of the whole only as much as necessary. Hereby it becomes clear that solely one aspect, namely the outer form man - no matter if it is the artist or beholder - could be a subject of versatile investigations in terms of our human perceptive senses. However, I am focused here merely on the making of, more precisely on the stones' surfaces. My expertise is the making of surfaces, not the neuropsychological perception of it.

3.3. TOOLS – INTERMEDIATION OF SCULPTOR AND STONE

The actual task of sculptors is to create forms out of imagination. The realized forms then create illusions. The elements of illusions are the vocabulary of the sculptor who encounters the stone, each counterpart with its proper language. However, as intermediaries between the stone and sculptor there are the tools, and it is important to know how to use them. Tools and working techniques could be seen as the mediators and translators of the encounter. But what makes the difference in working techniques when working on different stones? Then the language has to be modulated according to the stones' features. Generally,

the work with sculpture is a discourse of a certain volume in space. It is a formative act and as the painter has to understand how all the different nuances of light become paintings, a sculptor has to understand the effect of light on the different surfaces on a three-dimensional body in space. Consequently, working with white marble or black basalt makes a very big difference considering only the effects of light. Through nuances of the grade of polishing, the stone achieves depths or mirrors light. This is worth mentioning again, since it is another interesting formative contrast. Formative contrasts are substantial elements of the sculptors' language which one may assume are set, mostly consciously, by the artist. I accentuate "mostly" because the working process - the dialog - sometimes leads to decisions which were not foreseen. For example assuming a vivid colored material, I cannot really foresee how the colors and faults will change when I remove material to proceed to my imaged form.

All the aspects and characteristics of the effect of light on smooth surfaces however increase, when taking different stone types into consideration. Before I reflect on different stones, I still want to emphasize more the working-technique issue. The attention on this subject only opens the view on much more varieties of surfaces, as naturally broken, split by wedges, rusticated (*Bossiereisen*), sand-blasted, flattened by point-chisels and bush-hammered. All these are examples for the more rough appearance. Tools for the finer labor are amongst others toothed blades (*Zahneisen*), rasps, diverse grindstones and sandpapers. A very big diversity of surfaces can be achieved just by the skilled usage of the tools. Above I stressed a conscious application of the polishing, in order to add depth, strength, hardness and softness to the stone. This might suggest that these forms become polished in an instant. But the working procedure usually begins with a quarried stone; hence, a time-consuming, ongoing application of working techniques and different textures is essential. Again, these vary greatly because the act of smoothening from rough to polish has to be performed step by step, each procedure using a different tool. Now I have the option to finish every step by eliminating all the tool-traces of the previous step, or I can keep some of the traces of the preceding tool. At the finished, polished surface I can then see, depending on the grade of elimination of the tool-traces, either a totally closed and shiny surface or a shining surface with interruptions. In this way I also include the stones' natural manifestations in my conscious performance, like colors, faults, crystals and so on, since it is my decision to put emphasis on certain parts of the stones' structure.

In consequence, the skilled use of tools helps to arrange the forms. The traces of tools may highlight tension in the form or can break the tension. The textures of the different tools

can support the single forms but are also capable of creating transitions from one form to the other. The tool traces on the stones' surface are the graphical technique comparable to two-dimensional etching and drawing techniques. The texture of chisels, rasps and grindstones can be set parallel, criss-cross or without any apparent order. In this sense the appearance varies, it may stress the form or soften it. By a sensible application of the tools I can decide if the transition between the forms put together is fluent or abrupt. The texture of the tool traces is made more or less consciously. More clearly, through the working process the final appearance of the surface is composed step by step. Carving naturally is an individual intent to creation, so the work is laid out in the mind but at the same time it is always partly intuitive. Indeed, it is difficult for me to decide whether my single decisions are more intuitive or conscious. Finally the more practice I gain, the more certain my techniques become and the more my intuitive realm develops as well. I guess the easiness of the vocabulary is furthered by practice, which then turns out to be the necessary succession of my dialectical approach to the stone. In the same way we train our verbal speech we can develop a sculptors' language. Each generation distinguishes their style of language. I can find myself in front of a sculpture, sometimes lost in a contemplative attitude, studying the details. I can understand what the texture and the form is telling me about the use of tools and techniques. The right tool-stroke at the right place is like the right word in the right place. In these moments I appreciate the perfect prose of the sculpture.

All kinds of different surfaces and textures can be seen as formative acts of the artist. In analogy to grammar and language, a certain curved line within the whole form stands for a certain subject or verb and the different textures stand for adjectives, prepositions and conjunctions. The whole surface and shape in fact is narrative and the material may stand for the idea. Altogether a sculpture is an essay without words. The essay tells about the past and the present, but also a future outlook might be activated. A stone-sculpture in fact comprises a stone-aged language and the real beauty is that it can still be understood, while the spoken language of the man who carved the little mammoth in the *Vogelherd Höhle* certainly remains unknown forever.

The manifestation of the surface, finally, is a performance of stone and illusion. In this sense my act as the maker of surfaces is to create tensions in the outline which make the beholder perceive a "breathing" form; thus, my act creates an urge on the beholder to touch the stone. It seems that we sometimes do have a need to control through our fingers what the eyes have already conveyed. We want to verify the feeling which is excited by the sight.

Indeed, when we touch the stone we probably feel a real stone but also associate vivid feelings such as force, strength and even warmth.

By my attempts to subdivide the facets of making of the sculpture, it is clear that I cannot describe the energy of the mere sculpture without other chains of association. On the basis of my real act of stone-carving and my closer scrutiny of this matter, I accentuate the relative aspects of the making of a sculpture. I consider my typical neurophysiologic structure as a relevant feature which distinguishes me from the other individuals. My individual perception of stone-sculptures is certainly more trained, whilst a beholder who has never touched any stone-tools probably looks differently on sculptures. When I see a sculpture for the first time, I usually immediately search for the tool traces. Why - because my view is simply more scrutinizing. But does it necessarily mean then that I understand more of the phenomenon energy than other people? I never can be really sure if the input of my information is understood by the recipient 1:1, whether it is sculpture or my text here. The biggest problem of both subjects, stone and text, is to find an absolute and clear language. In this context I understand my tools and my working skills as the mediator between the stone and myself and further, I understand a possible beholder's desire to purchase one of my sculptures as a recognition of my accomplishment.

My effort in my stone-work is my individual and passionate act of creating forms and surfaces and my doing so is moderately dependent on people's opinion. Of course, it makes me happy when people become touched by my sculptures and therefore try to lay a hand on them. Whereas it is impossible for me to describe exactly what another person might see and feel, anyhow it seems that the prose of my sculptors' language causes illusions and associations.

An excellent stone-sculpture is prose and poem at the same time, without using a spoken language.

It is grammar and vocabulary with no words.

It is the entity of matter and idea.

It is energy.

3.4. *AUTHENTICITY*

I speak a lot about authenticity, which in fact is a meaningful and general expression, so it is necessary to define what this term means from my point of view. Regarding my thesis, the term "authenticity" is focused on the complex of material, shape, surface and idea. Judged from this point of view, the authenticity of a stone-sculpture actually has little to do with today's appearances of zeitgeist and its genuine elements. Considering zeitgeist, the making of stone-sculptures could even be interpreted as antagonism I fear, since it is a time-consuming occupation and therefore simply attracts far too little awareness. It seems that the general public perception rather demands haste in correlation with less effort, which only then possibly becomes associated with an authentic behavior. At this point I would like to draw attention to an apparent general "fast-food-fashion", which also applies to contemporary art market and art fairs, where one single stone-sculpture could simply present an embarrassing ignorance, or let us say an addiction to zeitgeist of the art dealers involved. Nevertheless, this market-oriented behavior is also by all means purely authentic. By the way, ignorance and arrogance are immediate and real human patterns of behavior, and are thus significant and therefore possibly also authentic. More examples for the quite expandable quality of the term would be numerous, since in these times of global industrial manufacturing of all kinds of goods, up to date people take these manufactured goods for granted, just as they favor the same style of shopping malls, which are available everywhere, whether it be in Dubai, Shanghai or Hamburg. Even our daily food has to a considerable extent become based on industrial manufacture. I do not want to consider additional sensual consumptions here, but the unresolved associations of the term become obvious. Just by considering the globalized styled shopping malls, the gap to our original culture is usually huge, that is why a globalized lifestyle in the major part of the globe rather seems to be artificial, thus unauthentic. But this is a question of individual realities. Despite all this confusing and undecided definitions of the term, I suspect that within a global-fast-food-reality, a slowly fashioned stone-sculpture paradoxically could appear to be totally unauthentic. Nevertheless, I do not work in accordance with industrial fashions, nor do I work with stretchable materials like gum; instead, my material is durable stone. In this context, authenticity clearly and simply means that the stone must be appropriate to the idea, it must further the working style, which is notable through shape and surface, and must expose an authenticity of the characteristics of the artist. In this sense an artist and his sculpture always fit together, therefore authenticity

applies here. In my reality it always feels very refreshing to see individuality in the form of an excellent stone-sculpture. I appreciate being touched by the immediacy of the working-style which the stone claimed from the artist.

Considering time, fashions are always limited. So what in contrast does time mean for a stone? I value the material as timeless, and very likely a stone-sculpture will remain longer in shape than me. The geological character of stone is actually a sufficient substantiation to declare it as a straightforward material. A specific staging is not really necessary, also because time and fashion certainly change the environment of the sculpture. As a representative example of environmental changes for stone-sculptures, I would like to remind of an ancient statue which embodies the Roman emperor Konstantin. Fragments of the sculpture are displayed today at the *Musei Capitolini* in Rome. More than a millennium after the sculpture was made the Renaissance Roman people regarded the unearthed fragments of the sculpture, broken but still colossal, as the work of mysterious giants and accordingly celebrated the pieces as findings of mythological times.⁷³ Again more than other five hundred years later we might adore Konstantin's stone-knee as an anticipation of Henry Moore's sculptures. These are just two quick spotlights on a stone-sculpture which is around 1,700 years old. The environment of the sculpture changed, surely in the beginning it was staged and admired, then the sculpture was damaged, smothered under the gravel of history, unearthed and displayed in a museum. Sometimes it seems that the fragmented sculptures are even more powerful than their original form. Examples are uncountable although this might rather be a typical contemporary perception. But it seems to me that parts can potentially bear the power of the whole. This apparently genetic analogy underlines the importance of the coherence of originality and authenticity. However, I still understand that authenticity is based on the making of a sculpture, which is by artistic means, and on that account a passionate act of originality. This implies a development of a distinct character. A characteristically sophisticated personality chose a piece of stone and made a sculpture out of it which was straightforward and which does not really need a staging. For that reason an excellent sculpture remains authentic anytime.

I understand sculptures as creditors of the artists. Hence in my absence the stone-piece acts as guarantor for me. As a sculptor I have to give the best I can, which is a question of honor since the sculpture after finishing has to talk for itself. Usually I cannot remain attached

⁷³ Irvin Stone (1997): *Michelangelo - Biographischer Roman*

to it as its interpreter. In consequence it must be my aim to make sculptures whose language should be universally and comprehensible to anybody. Who knows which language, regarding my sculpture, these people will speak in the future? In a way it should create contemplative moments for the people. An excellent sculpture features authentic elements at any time; moreover, its contemplator and the sculpture build an energetic entity. I think my definitions' attempt have made my position clear: in my sculptors' reality, the terminus authenticity has minor parallels to a "fast-food-authenticity". In conclusion I will repeat the substantial elements which create a real authenticity of stone-sculptures' language: firstly, a straightforward and unique material stone which secondly appropriates the idea, thirdly, a passionate working-act of originality, fourthly a non-industrial manufacturing and fifthly a possibly glance into the artist's character, which remains readable on the sculpture's surface. When all these adjectives come together, they make an authentic sculpture. For that reason the whole process of the making of I understand as a form of refund. The material stone generates images in my mind, thus I owe the stone the best I can do to shape the idea. Now I raise the question, is there anything more authentic in reality?

3.5. MATERIAL STONE

*“Their anthropomorphic appearance invites the viewer to perceive the stone as skeletal forms; ones created by different geological processes, by deposit, compression, eruption, crystallization and fracture. The result of each of these geological processes is found in corresponding features of the stone; in the ribs, veins, lines and shades of color.”*⁷⁴

Karl Prantl (1923 – 2010)

As a bridge to the issue of stone as a material, Prantl's text is helpful here, as the geological features of course play an important role in the choice of a stone and the work on it. But what kind of further information does an igneous stone carry and what distinguishes it from metamorphic or sedimentary stone? Apart from visual differences which become exposed by polishing, it is the hardness of the stone. I cannot explain it in a rational way, but

⁷⁴ Elisabeth Thoman-Oberhofer (1997): *Karl Prantl Sculpture – Yorkshire Sculpture Park* (p.14)

The Austrian sculptor is the founder of the international sculpture symposium idea.

my personal perception, visually and haptically, indicates that igneous rock, like granite, diabase or basalt, mostly appears harder. Especially by touching a stone, the immediate feeling is different, although one could think that stone is stone and so the feeling should be the same. A polished surface of a limestone might be even closer and denser, considering the finest fissures amongst the single grains which could denote that it is more solid, and thus harder. I have no significant explanation for the differences perceived in the hardness of stones, except that it is a common knowledge that granite is harder than limestone or marble. Today we have a choice of measurement methods to prove the hardness of materials. But these methods are mechanical, physical or chemical proofs, far beyond the capacity of natural human perception through fingers and eyes. I can feel a great difference in hardness with the tip of my fingers, even if I cannot mechanically scratch the surface or do anything else to test the elasticity of the material. Obviously our cognitive senses supply us with information beyond our consciousness. This mysterious impression increases when taking into consideration that I can feel even diversity in the hardness amongst different igneous stones (granite), just by touching it. Usually I cannot resist, I have to touch sculptures, but this is not always allowed: in museums for instance, I have to trust my visual sense only. But even the bare view of a stone-sculpture bears clear witness to the enormous hardness of the stone and thereby to the pains and labors of the sculptor wringing a form from the stone. In this sense I have the highest regard for the accomplishment of Pharaonic sculptors.

3.6. *SELECTION OF STONES*

The layman's feedback regarding my daily work reveals that he obviously misconceives the process of selecting stones, by considering two categories only. On the one hand the stones' selection is seen as a romantic adventure, just like Michelangelo who ostensibly had to quarry the stones, but before that he even had to find the mountain and develop the quarry. The other approach is a synonym for modern reality where everything seems to be available, just by sending a mail order to a quarry which has been found by *Google*. Both ways are possible but very unrealistic. Of course, I can send an order to a quarry and likely a delivery of something would arrive at my studio, but certainly the stone delivered would feature something strange, a defect for example, or it would be the wrong size, which I

certainly would not appreciate. Hence for a sculptor who wants to work with stone, it is obligatory to go into the quarry. But I do not have to open a new one, since there are plenty of them.

Now, the layman could also think that all quarries are the same but this is also mistaken. Each quarry is particular, some are up in the alpine mountains, some are inside a mountain, some are anywhere in the plain and some are underground and so forth. The difference in the geological environment suggests a specific quarrying. I think it makes sense to anybody that when underground, the working conditions and techniques are different from a quarry which is developed on the mountain slope; different rocks demand special splitting and cutting techniques. By these examples, the variety of quarries becomes apparent. To go into a quarry should be easy, one could think, but usually the roads are very bad and often the stone pits are, despite their size, somehow out of sight. Once I went to Belgium to find the quarries of the *Noir Belge*, somewhere between Namur and Brussels in the plain countryside close to the little village *Mazy*. To find the mine I was like looking for a needle in the haystack. It was just an unspectacular hill of debris which revealed the presence of the underground quarry. The entrance to that mine was like a cave, the way down was very steep and slippery but particular front loaders still drove down into this gorge. At about 65 meters depths the black strata became visible, seeming like a coal seam. Generally the highest quality of this peculiar stone is quarried from a stratum which has a thickness of about 45 cm. Each stratum is indicated by a certain thickness and by strata of another kind of brownish rock between. One can imagine that a mine like this certainly leaves an impression on me, which is totally different to a quarry of white marble on top of the *Alpi Apuani* in *Carrara*.



IMAGE 20: MARBLE QUARRY AT ALPI APUANI, ITALY

In spite of the difference of the rock, an additional discovery was interesting for me. Namely those quarry workers and owners seem to be very similar to each other, no matter where in the world. This I could also discover in Japan, Egypt, Belgium, Italy, Austria, France, Norway, USA and Germany to date. This is an unspecific personal statement of course and not really relevant, but once I became familiar with this stone-related mentality, it helped me to develop friendly contacts and to purchase the stone of choice.

The most significant experience for me as an art student was the annual working period in the heart of a quarry in Anröchte, Germany. Every year our professor took us into the same place - "May" was a synonym for "quarry-time" for us. My knowledge about the matter stone was born there, simply because I was standing on the material, I was working with the material and it was everywhere around me, seven days a week, four weeks long. Even after completing my degree I was welcomed in the quarry anytime. While working one Sunday afternoon, a visitor in the quarry showed us his photos. Photographing through a microscope was his hobby. It was in the nineties, just at the same time when the first photos of the famous new *Hubble Space Telescope*⁷⁵ were firstly released in some popular magazines. Having these galactic photos in mind and looking at the micro-structure of thin sections of the same material we were standing on and sculpturing with, was a revelation for me. It was there that an idea, an understanding about micro and macro-cosmic dynamics arose in my mind. The small structure of the stone which was displayed by the microscope appeared to be very similar to structures we could see when we just turned our head around and looked into the quarry. Apparently the big scale recapitulates the small scale. By observing the mineral-structure the microscope verified that there is no steady state, also not for the matter stone. As in any other photo, these too were just snapshots of one state of the dynamic development of stone, which in fact has no determination. Of course, the change is invisible for human eyes since it is far too slow. From that day on I dismissed any idea of steady state and instead appreciated the idea of a dynamic which is in fact an idea of a cosmic dimension, released simply by a detailed look at the matter stone. Nevertheless, one must not imperatively see the stone through the microscope before working with it, the pure experience of a few days' working period in the quarry could be sufficient to comprehend that stone is not a "dead" material at all.

⁷⁵ Hubble Space Telescope HST; <http://de.wikipedia.org/wiki/Hubble-Weltraumteleskop> (09.08.2011)

In my paragraph regarding the statue of Konstantin and its powerful monumental relicts of the Roman Emperor time, I already proposed my idea about the power of fragments standing for the whole piece. In reference to the micro- and macro-structure, a more differentiated look at these seeming similarities shall now be taken. Analog to a possible mirror image of the materials' micro and macro-structure, the fragment of the statue could possibly also mirror the general energy of the whole sculpture; even though it has broken off the monumental statue. A real relationship between the complex of physical-chemical structures within parts and the whole of a rock certainly does not exist, but on the other hand, the energetic power of fragments and the whole sculpture offers an astonishing affinity. I think the appreciation of broken fragments of sculptures is caused by relicts of romantic visions; eventually romantic pictures always convey the idea of transience.

By explaining some of my rich quarry experiences, I want to underline that I feel a kind of magnetic appeal to be inside a quarry, quite frequently. Before starting the work with a stone I have to have a certain feeling for it. This applies to all the stones I work with, the ones I store at my working site, and also those I search for in a quarry because of some commission. Therefore I have to go where the stones are. Only there, in the pit, can I learn about the particular properties of the stone by studying the quarrying method and by seeing the way in which the stone is usually fashioned. The knowledge gained here later turns out to be an advantage in the whole sculpture's working process of course. Moreover, in the quarry I have a huge choice of differently shaped blocks. Usually I arrive in the quarry with an image in my mind or even with a model. But here in front of the quarried blocks, all models, drawings and images must stand their first reality-proof. Within the constraints of a certain volume, which I need for the project, I have to decide whether the block with the parallel sides or the one which is more triangularly shaped is the right choice. The next decision might be if I can keep the beautiful natural surface which, surprisingly, is provided by one of the blocks. The selection usually needs two days for me to come to a decision. At that time the most important thing happens more or less unconsciously, namely I get formed on the stone as if it was a moment of an "offspring". After that the stone and I somehow seem dependent on each other and I do not know who is who in this game. Since I am a man I do not know about mother feelings, so I would rather stress a father-son dependency. And since the stone seems to be more durable than me I consciously say it is me who gets formed by the stone, even though in biological terms the forming of parent and offspring is usually both-sided. The first reality-proof of my concept, whether it is present as a model, drawing or image, most

probably creates adaptations on the stone's reality. Indeed, it is quite seldom that there is no change of the concept due to the quarried block. In consequence, the real presence of the raw-material stone always demands certain cooperation between the two of us, even if this appears to be dull and esoteric for the pragmatic understanding of the layman. The reality of a quarry creates authenticity for me and my work and as a picture of the whole selection process in the quarry, I would rather apply the metaphor of an active listening-experience to a symphony of *Beethoven*, than just the volatile music of a harp. Finally the selection of huge stone blocks means action.

For me, spending two or three days in the quarry is always worthwhile, not only because in that time my image and the stone find each other. A quarry always provides additional inspiration for me. In comparison to a possible purchase without going into the quarry, the advantage gained by the travel is large. In the quarry I gain knowledge about the stones' typical properties and further, I find the right stone for my project along with an associated good feeling for it. This might be seen as worthwhile even from an economic standpoint. The selection of a stone is a dialectical approach, no matter if it happens in my own stone storage or in the quarry. Each stone has its own history in geological terms, but also in the way in which the stone comes to my studio. This historical dimension of the stone I understand as a certain, thus authentic, element of the becoming of the sculpture and therefore it is a consistent part of my considerations about the energy in form.

When I am in a quarry I always take some extra stones back to my studio, where these pieces then wait, sometimes for years, until I make a sculpture out of them. The decision to make a sculpture out of a certain piece of stone occasionally happens very spontaneously; mostly it is a longer term of watching for the right moment. When I have a clear image of a form in my mind, associated with an authentic feeling which demands to do it, then the moment is right. A representative example for that case is one black spiral-shaped sculpture which I made in 2001. This particular sculpture plays a key role in the development of my repertoire of forms. I had already kept the raw block directly beside my main working space for at least two years. Like this I always had the stone in sight but rather unconsciously. In time, an image arose of what I wanted to make out of it, namely a spiral form in which three repeating winding forms topple over from a vertical to a horizontal dimension. One day the image and time were ripe, I clearly saw the form in the raw block, and I just had to shape it. It was at the time when I had already been given the commission to make the mythological *Twelve Olympic Godheads*, but I still did not have a clear imagery about their forms in my

mind. The only thing I knew was that I wanted to shape them in my form-repertoire. I did not want to quote their typically allocated attributes, and I did not want to work figuratively. By the time the twisting sculpture out of black limestone was finished, I took it home and placed it on the kitchen table. The polished stone-spiral was indeed a very powerful form, and actually it was my wife who said: this is *Poseidon*. In that moment I got "twisted", and finally I felt free to call a simple spiral-form Poseidon. Thanks to this sudden freedom of thinking, my brain was inspired to develop a lot of new ideas for the other eleven characters. In this sense my sculpture of Poseidon plays a key role as a symbol for my personal working method. The sample shows that my unconsciousness continuously works in the background. A finished sculpture, which is made by just an image of a certain shape, quite often sets in motion a multitude of other ideas. When I got the commission mentioned above, I already knew that spiral forms would be one of the options to create the Olympic Gods, since these kinds of ornamental forms were also used in pre-archaic Greece; at that time some ancestors of the Olympics existed probably in the former mythology. The attempt to characterize these mythological figures by simple geometrical forms was a challenge for me, and suddenly I pulled the release cord by finishing this particular black spiral form. While I daily pass my stored stones, some of them are always a little more in my focus, because of my permanent unconscious search for solutions to certain form-problems. In consequence all my stored stones are somehow associated with some of my thoughts, and therefore they include a common history for the two of us. The selection of stones for me always is an emotional moment of authenticity, no matter if it happens in any quarry or in my studio. Stone is much more than just a raw material to be shaped; moreover, the metamorphic character of some of these stones seems to be mirrored in my mind. Sometimes the conscious-unconscious decision process in my mind turns out to be a magical metamorphosis, just like the pupa emerging as a butterfly.



IMAGE 21: POSEIDON (2001), NOIR BELGE, H: 25 CM

3.7. THE SPLIT OF STONES

The moment when a stone, forced by wedges, opens a split can be called magic in a way. The signal which announces the split is an audible crunching and next a thin line betrays the direction of the split. One more hammer stroke and the stone is divided in two parts. The freshly split surface has never been seen by anybody before. It is me, who forced the wedges into the stone, who first looks these surfaces. It is a suspenseful moment indeed, and by splitting a stone the skilled understanding of the matter becomes obvious. Accidents can happen very easily. If the split goes in the wrong direction, it is usually a disaster for the whole project. Learning the splitting skills is also a process of first insights into the inner of the stones' structures. Concerning this fundamental skill an old wisdom of stonemasons says in the German language:

"Ein Stein wird nicht zerschlagen, er wird zerguckt."

In reality it means that it needs a lot of practice to be able to imagine in which direction the stone prefers to split. Therefore, one must learn to see the stratification, even if the material seems to be homogeneous. Typically granite appears like that. Above all one must be able to recognize a deceptively homogeneous appearance as well as the counter stratification. In the case of stones, which by their clear stratification might be recognized

automatically as being split easily, one might cause surprising results. For example a travertine, despite its obvious layers sometimes tend to resist any attempt to split, while schistose stones of course split easily in the direction of the layer, and granite for all its hardness generally splits better than marble.

The splitting technique varies depending on the kind of stone and on its stratification. As a sculptor I usually exercise two different techniques. One is to remove bigger parts of the stone, and the other is to remove smaller parts. To take out bigger parts I drill holes in the direction of the aimed split. How many holes, how deep and in exactly which angle I have to drill them, depend on the stratification of the stone. In this sense sometimes only two holes can be sufficient to split an enormous part off, while sometimes I need to drill deep holes, each hole next to each other, just like a perforation. The force of the split-wedges also has to be understood. Only by an understanding of the stones' structure is there a good chance to imagine in advance my impact on the stone by drills and wedges. The other technique, to remove smaller parts by splitting, I usually employ to shape fractions of the sculpture into a nearly final state of surface. With this technique generally my effort is to create a vivid and rough surface.

The split-offs are quite often beautiful forms already, thus a further source of inspiration for the next forms. During one of our working stays in the quarry Koblasa called these split-offs the good genes of the big stone. These kinds of "offsprings" of an actual working process possibly could be the raw material for new sculptures, albeit small ones of course. Also here it becomes clear that the complex of the working process and matter creates new ideas. Stone work might appear as a Sisyphus' work, but unlike Sisyphus, who had to roll the same stone up the mountain again and again, I regard them as a vehicle for my spiritual progress. The working process generates new ideas for future sculptures. As I carve, the form changes and I have to react to these changes. After many years of stone-carving thankfully I can say that I know what I am doing. Shaping a raw block of stone needs some working strategy, I compare it with the rules of games like chess for example. When I do one thing, then the stone responds in a certain way, meanwhile I should be preparing for the next step. It is a matter of imagination and exercise but also of respect. When I face a 25 ton block or so, usually I am even scared, but probably just because I know that I am going to be the servant of the stone for the next three months. It does not really matter if the stone is huge or small, the imagination is always most important. To imagine the form when looking at the raw block is an essential condition of making an excellent sculpture I believe.

3.8. *IMAGINATION AND VISION*

The encounter with a stone-sculpture, regardless if as a beholder or an artist, in any case is an ongoing dialogue with a tangible concrete form. I consciously emphasize any case, since the adjective concrete could be mistaken as the counterpart of "abstract". By this approach it is irrelevant if the shape is abstract or figurative. Firstly a shaped stone in any case is a concrete form, not in terms of abstract but in terms of its tangibility and therefore an emanate vision seems to come from inside, as if an immemorial original impression arises.

Basically there is no obligation for artists to be objective. My teacher in the academy of fine arts, Jan Koblasa, used to describe his practical artist's exercise by saying certain knowledge already exists, before one starts thinking. He talks about a canon of forms which we already feature; he sometimes seems to think with other parts of the body, I suppose he meant his gut decisions. When watching a sculptor working, he does not sit and wait for the gut feeling, he is more like an active wrestler or boxer who also had to train hard before succeeding in the ring.

One artwork can never represent a holistic view, rather just parts of it. But the recipient of the artwork can find through the artwork an emotional mood, as if it were a holistic insight. What, if not art, can get people close to the emotion of cognition, to a deeper understanding of essentials? In the fields of science there is a "terribly" high level of specialization, so that almost nobody can follow the whole ensemble, only a few experts can discuss the most recent discoveries. In contrast the recipient of art, music and theater must not necessarily have knowledge of art history or so, in order to get in touch with the essence of the art piece. Intuition is possible for the recipient as well! It is not important to know all the art forms, to be able to understand the form. Form is essence, it is nature, constitution, and being, and it is energy. No doubt the way to interpret a piece of art is also a question of the environment and zeitgeist as well. But before the recipient can interpret something, there has to be the object, and this could have been made 10,000 years ago or last year.

For me a school of fine arts is a school of seeing. As I travel a lot around the world, I can see that art actually is practiced as a universal language. A powerful form is recognized as such in Japan as well as in Germany or France. While traveling I am absorbing and learning and later my work is a reflex of my experiences, so traveling for me is an essential part of my work. But still my work in stone is a hard work which needs endless practice. My challenge is

to find the true form for the single particular stone. My approach is intuitive and subjective, and so it seems that there are diverse truths. But with the years I have discovered a connecting idea within my work, and also the connection between a sculpture of Karl Prantl and a Pharaonic one.

There are very big differences in mentalities and ways of thinking and cognition. Let us just think about recent global developments, where "all of a sudden" European individualism encounters Chinese Confucianism. Evidently a century of euro centrism has drawn to a close, whilst a dynamic force coming from China is standing in the wings. In the sense of assimilation and adoption of identification related items, I explained above, I can see that cultural achievements are creating a bridge again. In any case art is also an article of commerce; in the globalized markets art is a vehicle to export ideas. It is an object of identification and in that way, art is always a part of the pioneers' luggage.

As modern travelers we can get from one point of the world to the other so quickly and as sculptors we now have amazing tools like water cooled diamond blade cutting systems and air powered pneumatic hammers and more, but still I see that sculpture-making is a slow discipline. At the beginning of my career as a sculptor my way of thinking was: I am well-skilled and I can realize anything which seems impossible. I tried to make the impossible possible. However, through my numerous travels I discovered that the form is more important than realizing the impossible. I slowly transformed myself, also because in the meantime I have seen many apparently impossible things which were already realized a long time ago. So the desire to realize impossible things I identified as something quite ordinary. Instead, the form and its expression have more and more come into my focus.

EPILOGUE

"Mankind always sets itself only such problems as it can solve; since, looking at the matter more closely, it will always be found that the task itself arises only when the material conditions for its solutions already exist or are at least in the process of formation."

Karl Marx, A Contribution to the Critique of Political Economy (1859)⁷⁶

I have tried to compile a sufficient revision of geology, concerning the origin of my sculptures' raw material, for two plausible reasons, namely to fathom the essence of stone and thereby to become aware of the unimaginable, even cosmic dimensions we are living in. Regarding the essence of stones anybody who has tried to carve immediately becomes aware that one of the stones' innate qualities is that it is hard, and therefore, a well-developed character is required to appreciate the work with it. By observing a shaped stone, the thoughtful human being likewise makes out the mysterious forces which formed the rock, the shaping act in a way becoming associated with metaphysical forces; eventually there must be an additional power which formed the rocks. Obviously it is a typical and normative behavior pattern of Homo sapiens to believe in animated matter. The ability to shape stones established the human idea of certain significance in the cosmos; hence I conclusively state that stone-



IMAGE 22: KNOT (1997), ANRÖCHTER STONE, H: 50 CM

⁷⁶ As cited by D. Lewis-Williams (2002): *The Mind in the Cave* (p. 7)

carving was important in terms of the development of the human mind.

The act of stone-sculpturing leads to the creation of objects which are historically long-standing and enduring, in contrast to the previously noted relative insignificance of human being's short span of existence. Thus it is both legitimate and natural in our contemporary world to continually scrutinize stone-sculpture from a critical and an aesthetic point of view. I have tried here to analyze the object stone-sculpture alone, fully detached from the rest of any matter concerning the issue "energy in form". It has of course proved impossible to completely exclude all other matters, but that was foreseeable. With regard to the "making of", it has turned out clearly that the various opportunities of contemporary tool engineering provide a considerable aid for the artist. Nevertheless I insist on the point that modern tool technique is not a substitute for well developed manual skills. In reality, sculptures which have obviously been worked out according to the possibilities provided by the machines mostly reveal themselves as boring. For me, tool engineering is a vehicle to assist, nothing more. I prefer to talk about sculptures which suggest a sort of consistency, where I can see a real keen application of all kinds of proper skills. So a contemporary stone-sculpture should reflect a passionate commitment which may be crafted through engineering while still demanding a sometimes exhausting manual craftwork of the artist.

While we can regard the stone's worth and our mythological concepts as relative constants in the course of history, the general human concept is subject to continual change, just as almost everything else. The fact of the matter is that both in the macrocosm and the microcosm, continual process or continual change represent the reality of life.⁷⁷ A short phrase of *Berthold Brecht* expresses this perfectly:

*"Das Sichere ist nicht sicher, so wie es ist, bleibt es nicht."*⁷⁸

Which means that everything that is certain is not safe, for as it is, it will not remain. In terms of contemporary art conception I regard myself as constantly on the move, while my stone-sculptures stand in contrast to this as a snapshot, created to reveal a detail of my reality. Although I am a perpetual traveler, as a human being I typically want to keep hold of something, to collect souvenirs, and thus I try to eternalize specific, identity-related things. In this dichotomy, I regard myself as a "bourgeois pilgrim", or a traveler with bourgeois tendencies! As the pilgrim I am always in search of excellent forms, and as the bourgeois it is

⁷⁷ Fred Hoyle (1997): *Kosmische Katastrophen und der Ursprung der Religionen* (p.38)

⁷⁸ As cited in Fred Hoyle (1997): *Kosmische Katastrophen und der Ursprung der Religionen* (p.26)

my propensity to keep holding on to something, which could be interpreted as a necessity to impose order on an otherwise chaotic existence. In this sense I am not a shaman, as many artists like to define themselves, but I am a pilgrim looking to create form.

Reading *Oliver Sacks*, a neuropsychologist who writes on case studies out of his clinical practice, revealed to me a realistic idea about the typical human urge to create individuality. In one of the case studies Sacks explicitly points out:

*"Jeder von uns hat eine Lebensgeschichte, eine Art innere Erzählung, deren Gehalt und Kontinuität unser Leben ist. Man könnte sagen, dass jeder von uns eine "Geschichte" konstruiert und lebt. Diese Geschichte sind wir selbst, sie ist unsere Identität."*⁷⁹

If we include Neolithic civilizations as an important part of human history, the "civilized" person who today pronounces art as unimportant should ask himself, I believe, if a life without identity is worth living. The interpretation of Sacks' clinical case studies may give an idea of what life would be without identity. At this point I cannot resist formulating a somewhat adventurous hypothetical question, namely why did all the other hominid species become extinct? I suppose that for Neolithic men identity was as important as it is today, even though our multi-pluralistic society is certainly not comparable with Stone Age societies. Today countless associations offer people topics to identify with, such as political parties, religious confessions, sports associations, art-clubs and so on. Nonetheless, we should not underestimate the essential force of the little artifacts on our early ancestors. In this sense I understand Neolithic art - sculpture, cave-painting, music and dance - as basics for all human societies. Without it we certainly would have shared the same fate as our fellows from Neanderthal did long ago. In this way an excellent stone-sculpture confers significance and conveys vivid energy. In the depths of our mind a sculpture can activate the optimistic basic concept that sculpture and energy are "two sides of a coin". The aphorism highlights that sculpture and energy are law and form an indivisible entity.

I understand the effort to form stones as a response to the natural feeling, the wish to have some influence on the environment. Thereby *Homo sapiens* created Paleolithic rock art, the Temples of Göbekli Tepe, the Charioteer of Delphi, and the Thinker of Rodin. The first sculptures may have had a symbolic function, such as a talisman, but I am sure that these were already steps towards the development of an evidently religious mindset. As a consequence of

⁷⁹ Oliver Sacks (1987): *Der Mann, der seine Frau mit einem Hut verwechselte*

Göbekli Tepe the experts are now discussing the theory of the so called "Neolithic revolution" by means of new aspects⁸⁰. To create these monumental temples, a level of organization that was unimaginable for that period was necessary. I call attention to the development of religiously shaped human cultures which followed, without question, even a golden calf.

I would like to conclude my essay with a philosophical question:

"Wer bin ich - und wenn ja wie viele?"⁸¹

I am a sculptor and as that I stand on innumerable shoulders and somehow I can identify with some of these ancestors, even with the carver of the little mammoth-sculpture. But I am also someone who lives in the here and now reflects on his motives. The term "art is a currency" is to be understood in a non-monetary sense, although it implies that an artwork's value is dependent on the presence of an observer. Nevertheless, let us assume a stone-sculpture, but in the radius of a hundred kilometers from it there is no single human being around. As such the art of itself turns out to be quite meaningless, therefore only in the course of encounters of men and art, can art convey significance.



IMAGE 23: OBELISK (1999), ANRÖCHTER STONE, H: 4.80 M

⁸⁰ National Geographic Deutschland, (issue June 2011): *Die Geburt der Zivilisation; Göbekli Tepe vor 12000 Jahren*

⁸¹ This is the title of a book of the German philosopher Richard David Precht (2007): *"Wer bin ich - und wenn ja, wie viele?" Eine philosophische Reise*

Science seeks evidence - the mystical seems to have no space here, except when a celebrity like *Stephen Hawking*⁸² explains his cosmic models. Any attempt to investigate a sculpture "only" by scientific methods, concerning its energy, would reveal the problem to be certainly the same as mine: that it is difficult to explain the nature of human perception. As an intuitive-conceptual-worker, rooted in a mythological basic concept I generate tangible results: sculptures. Although in theoretically consideration, regarding its contemplative force, I do not really convey a tangibility which could stand any comparison with the real object sculpture. The energy of the sculpture remains partly a mystical problem in the face of some quite illuminating approaches of mine. We ourselves should constantly be aware of the significance of the term of the "freedom of art" and we should defend this freedom as our utmost concern. Therefore I am free to state that an excellent stone-sculpture embodies both a material and at the same time an immaterial energy; as a result I understand these kinds of objects as:

Energy in Form!

⁸² Stephen Hawking (1988): *Eine kurze Geschichte der Zeit*

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According to the faculty's website, the Faculty of Music and Visual Arts at the University of Pécs in Hungary is a pioneering centre that shapes the cultural life of the region. I think that the influence goes far beyond the region. While travelling in diverse parts of the world, I have met a number of sculptors who are University of Pecs' Graduates. The idea to this doctoral thesis originated during my work with Prof. Colin Foster, whom I first met in 2006 in Yesemek,⁸³ a small Turkish village very close to the Syrian border. His report about the Doctor of Liberal Arts Programme (DLA) awaked my curiosity and the writing process thus became a very personal quest and "journey" for me.

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⁸³ *Yesemek Bienal* - International Sculpture Biennale 2006

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CURRICULUM VITAE

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- more than 70 group and single exhibitions in Germany and international