

Between order and chaos

Looking for light between rolling stones

Introduction

In this article the tension between order and chaos is the central issue, referring to the title. The rolling stones need energy from a physical point of view. Mankind is focused on energy, but what is the underlying relation to being, in an ontological view?

I assume there is a scientific relation between the famous equation of Einstein and the conflict of order and chaos. Not based upon scientific proof, but upon an ontological draft. A key concept is the theory of entropy. Entropy contains a process of decreasing order and so increasing chaos.

Human kind is subjected to this scientific charged concept of entropy. What is our answer to this race to the endgame? A conclusion could be, man has to activate his spiritual talents; to bet on matter alone is a losing game. So he has to search and see beyond the collapsing powers of order and chaos, between rolling stones.

Entropy and chaos are related. Chaos means emptiness, chasm, abyss. It may also mean space, the expanse of air, the nether abyss or infinite darkness. In chaos battle is embedded, in personal, cultural, but especially in cosmological view. In myth the monster of chaos, a serpent or a dragon, is defeated by a hero or saint. Many legends from religious origin deal with this battle, for example saint George who killed the dragon. Apparently, the human struggle is to oppose chaos and strive for order, to create a world which we understand and follow predictable principles.

Another significant concept is ontology, the philosophical study of being. It is not necessary to understand this concept entirely. The article is an invitation to think about the combination of scientific and philosophical, religious statements. For example, the Church Fathers from the 2nd century, posited a creation ex nihilo, 'out of nothingness'. This is nowadays opposed by scientific studies, claiming essences caused the big bang.

In this article the struggle between order and chaos is a central issue. The following questions are discussed. Because this article is a philosophical draft, questions point towards selected topics.

What does science say about chaos nowadays?

What does the struggle mean to our mental state?

Where does the illusion of identifying the mental state with the physical order lead to?

What if the process of entropy reaches the end?

What might the principle of self-organization mean to human species?

Light at the bottom of the box?

The article is like former articles written from a scientific point of view. This is a starting point to question, explain and exhibit the significance and meaning of the mind. In contradiction to former articles, this article asks for more ontological and religious affinity.

What does science say about chaos nowadays?

In physical science the concept of chaos is related to entropy. Entropy measures the continuum of order and disorder of scientific relations. To highlight the fact that order and disorder are commonly understood to be measured in terms of entropy, below are current definitions of entropy and further conceptualization, you will find on Wikipedia.

- A measure of the unavailability of a system's energy to do work; also a measure of disorder; the higher the entropy the greater the disorder.
- In thermodynamics, a parameter representing the state of disorder of a system at the atomic, ionic, or molecular level; the greater the disorder the higher the entropy.
- A measure of disorder in the universe or of the unavailability of the energy in a system to do work.

So far the concept of entropy; but what is the meaning? Entropy and disorder also have associations with equilibrium. Technically, entropy, from this perspective, is defined as a thermodynamic property which serves as a measure of how close a system is to equilibrium — that is, to perfect internal disorder. Likewise, the value of the entropy of a distribution of atoms and molecules in a thermodynamic system is a measure of the disorder in the arrangements of its particles. In extreme, the end of the universal process is total equalization, like a formless water.

In a gas, the order is perfect and the measure of entropy of the system has its lowest value when all the molecules are in one place, whereas when more points are occupied the gas is all the more disorderly and the measure of the entropy of the system has its largest value.

In this direction, the second law of thermodynamics, as famously enunciated by Rudolf Clausius in 1865, states that “the entropy of the universe tends to a maximum”.

Thus, if entropy is associated with disorder and if the entropy of the universe is headed towards maximal entropy, then many are often puzzled as to the nature of the ordering process and operation of evolution in relation to Clausius' law, which states that the universe is headed towards maximal disorder.

So we could say that this is our fear in our mental process of human kind. Are you ready? Everything falls apart towards a formless pudding. This is the abyss, nothingness, death, and this is not so bad in relation to physical law. It is what it is. But the abyss is the dragon religions ask man to stand up to. Is it possible to redirect the mental melt down?

What does the struggle mean to our mental state?

In the article ‘Marking the mind’ I explained the process of the mind is marked by the quality of balancing powers by equalizing concepts. With the famous formula of Einstein, $E = m \cdot c^2$ I indicated the human mind is able to abduct change to transcend to a static view. Moreover, this supposes a path of transcendence. So man is receptive for higher power or God. Besides rationality to understand the process of entropy, man has the ability to see beyond the collapsing powers of order and chaos.

A balancing power in the physical world is therefore a different order. The concept of survivor of the fittest leads to a balance in lifecycles which supposes the strong animals survive at the expense of the weak, for example. But this is not an absolute balance, beyond change, but because of change. So this concept is applied in the physical world.

This is important, because the mind conceptualizes the events in the world. Moreover, the mind has the tendency to identify itself with the world. In that way man is able to convince himself he is a species in the physical order.

His frustration is embedded in the fact that the physical order is a time and space configuration, so in change. He wants to harmonize the order of the mind with the reality of the physical world.

The problem of frustration makes life sometimes a burden. But what does it mean to the physical world? If man thinks in terms of survival of the fittest with man above the chain of life, he destroys the physical order or accelerates the decay of species. On earth, he will introduce more chaos. The order will be declined. And this is important, because this means if man applies concepts of the balancing mind to the physical order, he may accelerate chaos.

The mental state is focused on the physical order, which is in progress. The physical process is directed towards chaos, in the process of entropy.

Where does the illusion of identifying the mental state with the physical order lead to?

It is an illusion to think our aim is to subdue the cosmos. This leads to a Pyrrhic victory. Ecologically man will create a situation in which the physical order shifts to chaos, devastating the environment. Philosophical speaking, he fuels chaos and equalizes everything to a nothingness, without understanding, because he is trapped in circular reasoning. His mind is focused on the world which is subdued to the process of entropy, the way to equalize order. The mind is focused on balancing power and identifies himself with this process of equalization because a world without order is an extreme form of equalization.

And this form of identification makes man an addict, but leads ultimo to a mental nothingness. Because physical the process of entropy is natural, but the mind searches a form in which it realizes itself in a process of identification.

So we have to realize that in fact we search for a balancing power, the equilibrium we find in science, in physical prediction by scientific law, a great abyss stares at us and swallows us. The dragon wins.

It is difficult to withstand the temptation of striving for the balancing power of the mind I mentioned in the previous article, for that will give man in the physical dimension nothing else than the great nothingness.

So if man identifies himself with the physical certainties leading to the fantastic equalization of everything which in physical order exists, absorbing the power of the mind in the nothingness.

The mind should be aware of this delusion, and withstand this natural balance in the centre of chaos. He has to recognize his true origin, in so far his mental condition.

The problem is that an addict does not recognize or admit his state of being. All great religions refer to this problem and lead to strong recommendations of compassion with man. Some religions

emphasize belief in God, humility and spiritual love, other currents recommend a way of contemplation and introspection. But, we have ontologically an important indication to support religious ways of life: entropy is not our mental cup of tea, unfortunately. All effort to find the holy grail, to create a perpetual motion, will bring us to a point of no return, to an absorbing chaos.

What if the process of entropy reaches the end?

But the conclusion reaches further. Beyond our lifetime, in addition to earlier recommendations, there is another reason to be careful with energizing the chaos. Energy is in terms of the entropy theory the motor of change towards the point in which there is total disorder. In philosophical terms this could be described as a state of silence. It is the same in the case of fire. If there is no more oxygen, the fire will turn off. The same to chaos. If the supply of energy will be stopped, the chaos will no longer be energized from this point and drift not further away from God.

Congruent to this point, the Hindu cosmology says there is no absolute start of time, as it is considered infinite and cyclic. Because of that space has neither start nor end. After the universe is created, it will find its way to chaos and destruction, and in a cyclical way, will be re-created.

What might the principle of self-organization mean to human species?

In case energy is added to a chaotic system, for example radiation from light, a self-organization is created to a greater or lesser extent. Structures might develop in an increasingly complex form. The emergence of structures at the quantum, atomic and molecular level is made possible by the laws of nature.

In terms of the chaos theory, when sufficient energy is available, self-organization arises between parts of an initially disordered system. This is a local, decentralized organization and might be compared with an island of predictable events in the middle of a process of entropy. This may be a reason for our interest and struggle with energy. The battle to possess energy turns out to be a more or less devastating effect on our community and habitat.

Much of the self-organization in nature is related to the harmonic series, the golden ratio and the formulas of Gödel and related series. It is important for us to see the rational base of universe indicates relations with each other. But if we are not able to harmonize these relations, to which we have the ability, physical harmonization will end in battle because of the law of entropy. So therefore every kingdom or culture will rise and ... fall.

An example of self-organization is the emergence of order in a box with small and large balls when it is shaken in a gravitational field. The small balls will then eventually be placed at the bottom. So by shaking, order has been disrupted. This is caused in this example because there is an energy benefit for the small balls in the system to lie at the bottom. The small balls fall down through the openings that leave the large balls open. Man who struggle and battle for a better place in the box, cannot know if they will be better off, in the middle of the rolling stones.

And this behaviour is a part of human existence, the physical way. The human individual is a form of self-organization, his mind focused on making his life sustainable and predicable, if he is focused

upon the process of entropy he is related to. But, in the process of entropy, his situation will evolve to a problematic condition. This, for sure, is a problematic and frustrating view on the development of the human species.

Self-organization emerges into a temporary order within an entropic process. That means that physically one can never work towards a higher order, but order only can arise temporarily within a process towards ... more chaos.

Light at the bottom of the box?

In religions humans are described as image of God and we will by mercy of God part of the great resurrection. Therefore, somehow, man has a characteristic by which he is abstracted from the process of entropy in a certain way. The exact conditions to be part of this transformation are not clear and topic of interpretations and debates. A problem is that self-organization in many ways takes power over the spiritual purity. But self-organization is distinguished from a mental process, known by the concept of soul. We should not identify ourselves with the temptations which bound us to the entropic process. We should identify us with God, by acts of virtue, meditation, praying too.

In Hindu philosophy, Ātman is the first principle, the true self of an individual beyond identification with phenomena. In order to attain salvation one must obtain self-knowledge. It is a process in which man learns the true self (Ātman) is identical with the transcendent self (Brahman).

In Buddhism, the religion of nothingness, is no longer really nothing, but the better alternative compared to the situation of total equalization.

In Christian mysticism spiritual or contemplative practice of the consciousness may prepare and reveal the presence or unification with God.

In both ways, self-organization is no longer the issue and aim of consciousness. Shouldn't consciousness look beyond, against the current of the rolling balls which sink in the process of entropy to the bottom, through the openings which are revealed by the rolling balls, to welcome the presence of God?

The mind is confused, because the physical surrounding attracts the focus of our mental and physical state towards the self-organization, to anticipate on the process of entropy and so to prevail life. However, this process will be unsatisfactory in the end, because science proves this process is irreversible. So science does our mental order a great service. So there is only one direction to hold on to, to search between the rolling stones the mental order which requests another mentality.