

Bioinformation Between Life Energy and Qualitative Regulatory Processes

The relationship of quantive life energy concepts compared to non-energetic bioinformation using the example of the Orgone Theory according to Wilhelm Reich: A holistic analysis of effective mechanisms of the Orgone Accumulator

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Summary

This article examines the question concerning the information regulation of life processes. The first part of the article discusses the life energy concept according to the Orgone Energy theory of Wilhelm Reich. For example, Reich's orgone accumulator is analyzed, and its effectiveness on the physical, biological, psychic, and spiritual spheres is described. It shows that Reich's observations and experiments provide no key evidence for a specific life energy, but rather depict misinterpretations of known effects. Proceeding on this assumption, the second part of the article suggests not to use the energy concept combined with informational biological processes ore use it at least very carefully. Instead, non-energetic regulation processes are introduced as background phenomena, which, without supplying energy, can trigger effects in biological processes. These ultimately appear in the ostensible world as energetic. As a model, the unified quantum field theory according to Burkhard Heim and the dualistic mind/self according to John C. Eccles are discussed.

Keywords

Bioinformation, Life, Life Energy, Non-energetic Regulation Processes, Burkhard Heim, Wilhelm Reich, Orgone, Orgone Energy, Effective Mechanisms, Orgone Accumulator.

How Does Life Function?

This is probably one of the most important questions raised in the natural sciences: how does life function? What makes life vivacious? And this question is in no way new: in biblical times the talk was of the breath, with which the creator of the matter breathed life into things. This methapor of breath is very close to an explanation, for this explanation is understandable for every person due to his corporeal functions. For many thousands of years, Asian cultures have discussed extremely complex models for life and the world, for example Dao and Qi as cosmological concepts for the theory of life.

Energy, Radiation and Information

Due to the investigation of electricity and its technological application in the 18th and 19th centuries, the terms energy and currents gained popularity. In biology, the term life energy arose. And in the psychoanaylsis, Sigmund Freud coined „libido“ as the energy of instinct. Freud's student, Wilhelm Reich, saw it has his life's calling to understand life processes though a physically measurable life energy. Deriving from orgasm and organism, Reich called his concept „Orgone Energy“ and published between 1935 and 1957 approximately 20 physical experiments as evidence that it actually deals with a specific energy form which can be converted into other physical energies (Sharaf 1994).

Fortified through the discovery of the X-Ray, termed in German by the discover, and though the discovery of radio-active rays, the ray methaper has dominated the 20th century in popular science discussions. Such an example can be found in the seven rays of theosophy as well as in the pictures of Wassily Kandinsky (Asendorf 1984).

During the second half of the 20th century, the dissemination of information technology and of the mass media has made this informational term common to all. Since the beginning of the century, the basic research in natural sciences in physics and biology for the meaning/significance of this information term; and also in naturopathy has found a usage for this information term. In discussions about the mode of operation in homoeopathy, for example, the information term appears as often as the term „frequency“, whereas Hahnemann's original term „Dynamis“ is hardly ever mentioned.

Life Energy

The following text is a contribution for the clarification of our understanding of life processes. In Part One, the energy point of view will be examined: our of all models of life energy, Wilhelm Reich's, even today, has enjoyed the widest acceptance. His energy point of view in the body-oriented psychotherapy is used in assorted variations by many therapists. With his orgone accumulator, Reich postulated the possibility to concentrate life energy and to use it medically. This way, it also should be measurable. Reich viewed the orgone energy partly as antagonistic to electro-magnetic energy and examined the connection, among other things, with his Orgone Energy Field Meter (Reich 1981, Harrer 1998). The effective mechanisms of the orgone accumulator will be analyzed in the first part and will be put into relationship with the biological and physical processes.

The Kingdom Come of Energy

The Part Two of the article transcends the energy term and discusses structural and informational inceptions for description of life as well as qualitative regulation processes as a non-energetic background of the emphasized energy-matter, biological happenings. The question of electro-magnetic bioinformation stands in the spannungsfeld between the world of quantities (energy, matter) and the world of qualities (regulation, ideas, goals). And what do we actually know about it?

PART ONE: Life Energy

What is Life Energy, What is Life?

Life energy is supposed to be a specific energy which is inherent in all living things and which differentiates the living with the dead. The custom of approaching this question is as old as humanity. And one has answered this question in many different ways.

Energy

Many researchers have tried to understand purely physically this life energy, that is to descend it into the material world. If this works, we would be dealing with an energy which we could measure and which could be transformed into other physical energies, for example electricity, in motion, and in warmth.

Transcendental Science

This is what I understand about life energy research: a classical, natural scientific research which is open to the fact that spiritual, mystical, and magical elements exist in human experience. These also are natural phenomena, and these also can be researched. A natural science which allows such a crossing of the frontier to the spiritual aspect of reality is indicative of transcendental sciences.

Four Demands for the Science of Life

What can one demand from a science which tries to understand life? Firstly, the *regard for the scientific history* and the question: „Why do we conduct research?“ We conduct research, because we want to know the reason how we are actually human. Who are we? Why do we live? What is hiding behind the scenes? These ancient questions have not only been generated in religion and philosophy but also in the natural sciences. However, hundreds of years ago, a separation occurred: the scientists claimed, „We have argued for so long if wisdom is in a stone or what life and God mean! We are going to dispense with that which we can only speculate about and only will discuss that which we actually can measure. What we can measure, we also can describe mathematically and, in general agreement, discuss. We want to see, where this path will lead.“ One terms this the Galileic Renunciation. This renunciation developed into the currently understood material scientific standpoint and, so to speak as a side effect of this search for knowledge, brought about the modern technology.

The next important point is the *methodology of research*. If one wants to find an answer in nature, then one must pose the proper questions. If I ask a question, then I will receive an answer; if my question is not precise enough, then nature will probably lead me astray. Such resulting errors are apparent in the history of science, and, in current life energy research, more than sufficient.

The third presupposition are the subjects of religion, ethics, philosophy, and the question: *What is actually reality?* How substantial is that which we are seeing, and, moreover, does there exist more? For example, some people believe that they can see an aura around bodies. They are aware of that which others are not. Is this aura reality, although it is beyond the realms of measurability? In the Indian culture, there is a consensus to this reality which no one would counter. The Christian tradition confesses that saints emanate a holy shine or are able to show it at will. Hence, when conducting research in this field, the question of the nature or the quality of this reality must be regarded.

The Four Scopes of Existence

The fourth basic point is the scopes of existence according to scientific research. We know that a physical realm exists, a *Physis*, which encompasses everything which can be calculated and measured. We know that a biological realm exists, the *Bios*. Our biological bodies are a great deal more complicated than just the purely physical component. We know that a psychic realm exists, because every person experiences this *Psyche*, an emotional world. And we know that a spiritual realm exists, designated *Pneuma*, which, likewise, produces/calls forth real impacts in the world. Examples of such impacts from the spiritual realm are the impressions of dreams or other ethical insights. An inspiration from a dream or an ethical reflection can radically change a person's life, hence, has a real impact upon the physical, biological, and psychological world. Yet, it originates in the spiritual world. The description of the world based upon these *four scopes of existence* introduces a long-established concept used by many world cultures.

The energy term is defined only in the first two scopes since the scopes of *Psyche* and most especially *Pneuma*, the domain of the spirit, are deprived of a quantitative measurability. Here, we are dealing actually with qualities which cannot be measured, and accordingly, there can exist no terminology for matter or energy. The human spirit, therefore, is non-material, non-energetic occurrence.

Demands upon research that tries to understand life:

1. Regard the scientific history: Why do we conduct research?
2. The methodology of research: What is our question exactly?
3. Religion, Ethics and Philosophy: What is real?
4. Scopes of existence: *Physis* (α), *Bios* (β), *Psyche* (γ), *Pneuma* (δ)
What is the world exist of?

An Example: The Orgone Energy Theory According to Wilhelm Reich

For all those interested in the works of Wilhelm Reich, 1997 symbolized the year of celebration: A hundred years prior, Wilhelm Reich was born in Austria, and forty years prior, he died in the United States of America. A student of Sigmund Freud, he devoted his life to the research of life processes, especially its role in the sexuality. Emanating from Freud's terming of the Libido (the instinctual energy in the *Psyche*), Reich postulated a life energy, which not only works on the biological and psychological levels, but also is an all-encompassing, creative life energy. Deriving from the term orgasm and organism, Reich called this energy „Orgone“. He attributed it distinct physical characteristics and published approximately twenty experiments based on its measurability, upon which he attempted to build a foundation for his theory. Admittedly, today Reich enjoys an important influence upon a small current in the field of psychotherapy, however, not in the natural sciences, although he himself saw his concept of a physically understandable life energy as his life's work.

This first part of the article alludes to my experiences collected between 1990 and 1994 during my studies of meteorology at the Free University Berlin (FU-Berlin) when I was the initiator and director of the study group, „Orgone Biophysics“. During this time, almost all of Reich's biophysical experiments were reproduced in a controlled environment and documented using the most modern equipment of the time. A part of this work was conducted within the framework of the tutorial project entitled „Orgone Biophysics: A critical approach to the biophysical works of Wilhelm Reich“ at the FU-Berlin University Clinic Benjamin Franklin (Steglitz), Department of Naturopathy, under the guidance of Professor Joachim Hornung. The financing for the equipment was made possible by the FU-Berlin as well as through private donations and a grant from the „Wilhelm Reich Society for the Research of life-energetic processes“ („Wilhelm Reich Gesellschaft zur Erforschung lebensenergetischer Prozesse e.V.“), which I was a member of at the time. All of whom I would like to sincerely thank.

The following realizations fulfill Reich's demands according to immanent methodological criticisms, for they are based upon an intense explanation of Reich's physical as well as other works without side-tracking from scientific research and thought models .

The Accumulation of Life Energy in the Orgone Accumulator

In order to make his orgone energy useful on the medical and technological level, Reich constructed various appliances, the Orgone Accumulator being the best known. The Orgone Accumulator is a small box made from galvanized sheet metal, which is insulated on the outside and only via a small opening is a minimal flow of air allowed. It is just big enough to fit inside in an up-right position. One enters the box generally naked or minimally clothed. It is based upon Reich's idea that one can accumulate life energy in a box if on the inside it is panelled with metal and on the outside with alternating organic/non-metallic and metallic layers. Hereby, life

energy is attracted from the outside by the organic material and pulled inside and radiated to the inside via the sheet metal.

Why do people experience a specific warmth and energy feeling? Two thesis papers show a significant difference of the individual psychological dimensions (Größen) of test persons (Gebauer/Müschenich 1987 and Hebenstreit 1995). But how do these physiological effects occur?

Analysis According to the Four Scopes of Existence

Below I introduce an analysis of this Orgone Accumulator, namely according to the model of the four scopes of existence in the world. It is helpful to view natural phenomena according to this four-sided outline because it helps in maintaining a holistic view.

Physis

What happens in the Orgone Accumulator on a *physical* level? A person who sits in a small enclosed metal box finds himself in a specific micro-climate. His body in an upright position emits approximately 140 watts of warmth, comparable to two 75 Watt light bulbs. He must emit this heat in order to inhibit a heat blockage inside the body (Activity and Metabolism from: Jendritzky, G. in: *promet* 3/4, 1983 in Wedler, o.J.). Both the skin and the breath emit humidity into the air. Due to this, within a short period of time, a climate change will occur: the air temperature and the humidity increase. The constriction/narrowness of the space and the closed door with only a small opening allow minimize the air movement and exchange. The warmth emitted from the body (infra-red rays) are almost completely reflected by the galvanized sheet metal and are reverted by to the body.

The four quantities, air temperature, humidity, air movement, and warmth, put together define the meteorological term for atmospheric humidity. After some time in the Orgone Accumulator, a climate arises which is as humid as one would find in a tropical climate. (Zuträglichkeits-Bereiche für Innenräume nach Leusden-Freymark bzw. Kip und Courtice in [Wedler o.J.]).

Bios

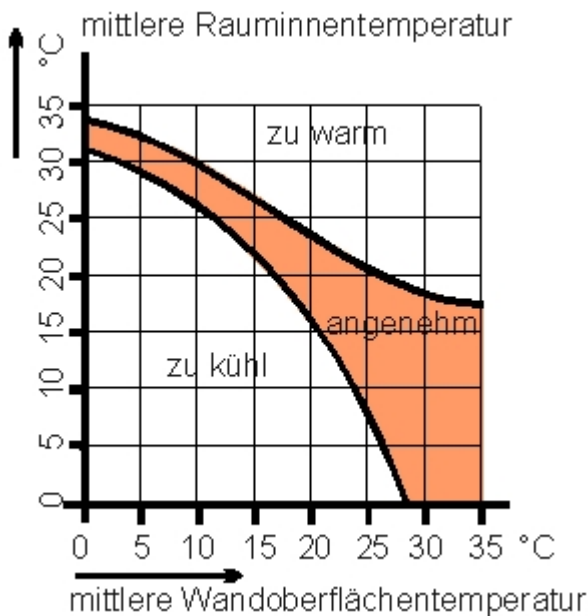
This climate change on the physical level is apparent on the biological level since the body's thermal regulatory system must react. The constant combustion process would lead to the overheating inside. In order for the body to balance its heat budget, it must activate a few regulatory systems. Ultimately, as described by both Reich and others, an evident warmth appears in the body: the surging up of heat, perspiration, reddening of the skin, and a measurable increase in temperature both within and on the outside of the body. Through the regular repetition of such heat situations, the body's reaction changes through an adaptation (Batchelder 1996). Additionally, due to the minimal air exchange in the environment, the oxygen supply in the air also is minimized, which, likewise, leads to the specific feeling of „Now is enough!“ which occurs after approximately 15 to 45 minutes in an Orgone Accumulator. (Reich „Der Krebs“ 1981).

A control box, which is panelled on the inside with wood (instead of sheet metal), has a comparably small reflexion of heat and also absorbs the humidity. Therefore, the corresponding values for humidity will not be achieved or will not be achieved so quickly. Subsequently, the Orgone Accumulator acts as a Faraday cage, through which the electro-climate in both of the boxes is very different. The meaning, however, is hard to assess. Subtle electro-magnetic affects are plausible; however, these probably cannot achieve such stark physiological effects as those due to the climatic effects.

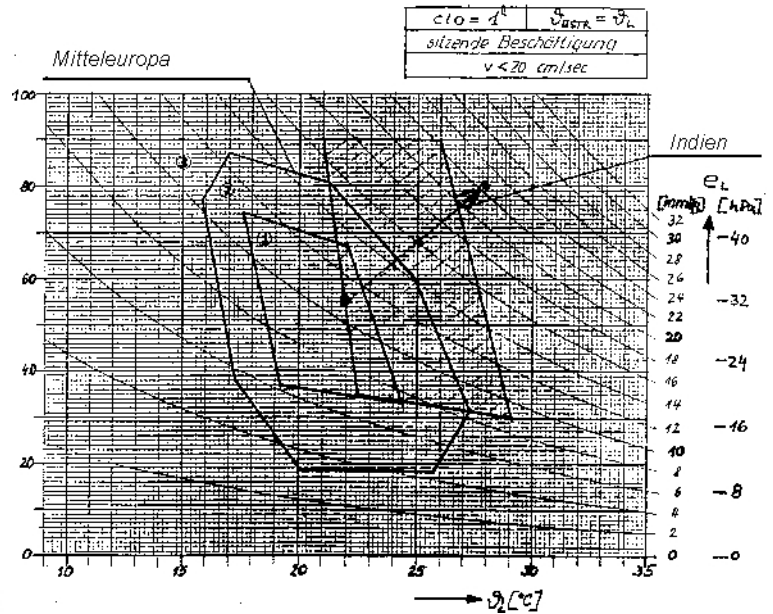
Heat Effects

The following illustration shows that the air temperature and heat radiation are equivalent to the heat temperature felt by the person (Verband der Elektrizitätswerke Österreich o.J.). An Orgone Accumulator, in which the temperature is 25° C and the person sitting inside has a body temperature of 32° C, emits a reflective radiation back to the body equalling the wall temperature of 30° C. The picture illustrates that this situation is generally felt as too warm for the body. The heightened humidity and the lack of air movement enhance this feeling to the point that sitting inside the Orgone Accumulator finally becomes too uncomfortable. The above mentioned two double-blind experiments depict these differences in the heat radiation, therefore, the proof of a specific life energy can not be deduced. The fact that one is dealing with climatic effects is additionally emphasized in that Reich could only find this heat radiation in small metal boxes; in larger metal spaces this effect could not be felt, because the climate change takes a longer period of time to make itself apparent. Hebenstreit, in his very thorough work, observed in the middle a heightening of the metal box's inside temperature of approximately 2.17° C, whereas in the control box, which has an initial temperature of 23.2° C, an increase of only 1.24° C was observed. (As a note, I worked as a consultant for the building of these boxes). Hebenstreit

does not find a direct dependency of the physiological quantity of the inside temperatures, because he only took the air temperature into account and not the humidity factor (Hebenstreit 1995 and a personal meeting in 1998).



Graph 1: Room temperature/surface temperature



Graph 2: Comfort zone in Central Europe and in India

Psyche

On the psychic level, the biological bodily reaction is connected with the personal belief that one is acquiring life energy. Attention is focused on giving oneself that which is curative. Everything which one gives intense attention to can have psychosomatic reactions and even a placebo effect, especially combined with consistent repetitions. An example for the biological effects due to the connecting of perceptions, attention, and repetition is the Pawlow Reflex. A further example is called Autogene Training: in a basic exercise („My right arm is warm“), one connects his relaxed attention to the memory of warmth. After a few repetitions, physiological reactions can be measured in the veins. The same pattern occurs with a person who sits in the Orgone Accumulator: relaxed attention is connected to the belief of curative, healthy effects. This positive expectation meets a positive verification due to the biological sensation of thermal regulation and, through repetition, can lead to an obvious psychosomatic reaction. An improvement of health would be just as possible through the use of Autogene Training; however, the postulation of a specific life energy is not necessary.

Pneuma

Examination from the perspective of *Pneuma* places attention on qualities and classification patterns of occurrences. The upright, sitting position corresponds to the Tao-Yoga style and is held as a very effective yoga position. For more on the relationship between body positioning and spiritual states, please see Felicitas Goodman (Goodmann 1993). The regulated use of the Orgone Accumulator becomes a ritual. The ritual is conducted with the wish to absorb life energy and can be compared to a kind of religious, magical, or shamanistic practice. We know that such rituals can be effective. The attitude and the spiritual focus upon absorbing life energy is identical to faith healing traditions, especially the form which the Bruno Gröning Group practices. Here, in an upright position, one relaxes his mind, with the attitude that one will receive „divine healing rays“ (Gröning called it so), and all „burdens“ should be given over to God. (Gröning suggested not to use the word illness.) People have reported about incredible spontaneous healings, and a few of these cases have been documented by Matthias Kamp (Kamp 1993). Gröning's term for „divine healing rays“ also uses the image of currents/flowing and most likely appeals better to the qualitative occurrence on the spiritual level than the energy terminology, because energy meets the mundane ideas of electrical sockets and is measured in kilowatts per hour. The grace of a faith healing, however, cannot be measured in kilowatts per hour. The effectiveness of spiritually focus is very immense, as presented in a series of studies on the subject of faith healing (Benor 1993; Wiesendnager 1994).

The cited view point indicate how complex the occurrence in an isolated metal box with the appropriate ideological superstructure. Hence, based upon the experience of a person in an Orgone Accumulator, no conclusive evidence for a life energy can be deduced. During a typical Orgone Accumulator session of 15 to 45 minutes, different physical, biological, psychological, and spiritual effects ensue, which could possibly have

healing properties. Since the setting as a whole is focused upon the curative, healing effects are not necessarily impossible. The same effects are possible to achieve without the acceptance of Reich Orgone Theory and without the expensive Orgone Accumulator, for example using climate therapy, Autogene Training, and yoga.

**An Example Of A Holistic Analysis:
Effective Mechanisms in Wilhelm Reich’s Orgone Accumulator**

Scopes of Existence in the World	Life Energy ?	What happens in the Orgone Accumulator?	Explanation without the absorption of life energy
α) Physis (quantitative)	life term; energy term	Climate change (air temperature, humidity, air movement, heat radiation), Faraday Cage	Heat effects of a small metal box
β) Bios (quantitative, partly qualitative)	life term; energy term	Body reaction: thermal regulation of the body converts itself from a moderate to a tropical climate	Climate therapy, Reiztherapie, adaptation
γ) Psyche (quantitative and qualitative)	life term; energy term	The perception of a bodily reaction, personal beliefs, and the wish to do something curative, regular practice	Psychosomatic, Placebo effect, Pawlow Reflex
δ) Pneuma (qualitative)	life term; beyond energy and matter	Meditative posture (Tao Yoga), effectiveness in terms of a ritual	Philosophy, Radionics, Schamanism, Psychokinese, faith healing

The Physical Reproduction of Reich’s Experiments

The Orgone Accumulator is most likely Reich’s most famous experiments, and it is still used by doctors and clinics. Other experiments of Reich and their reproductions were published in 1997 as a handbook to Wilhelm Reich’s „ORANUR Experiment: First Report“, which the doctor Christian Rudolf and I wrote together. This book is published by Zweitausendeins Verlag but only available in German (Harrer 1997). In this handbook, Reich’s relation to physical measuring techniques and radiation are illuminated and commented upon. In his book, „ORANUR Experiment: First Report“, Reich reported about a series of physical experiments which he conducted in 1938 where he asserted that he had found the final physically measurable proof for his thesis on the existence of a specific life energy. In our handbook in order to be understandable for non-physics, we tried to depict the fundamental physical and technical conformities of these experiments, how this results occurred, which were interpreted by Reich as Orgone Energy phenomena. In the excursi of our handbook, we analyze the temperature difference experiments, his experiments with electrostatics and the electroscopes, his work with vacuum tubes, and his experiments with the Geiger counter and radioactive substances. Furthermore, we describe how I was able to reproduce the famed Orgone motor, with which Reich hoped to convert life energy into a motorized power source.

The Results of Five Year’s Researching Orgone Energy

By conducting experiments true to the original models, we were able to observe the same phenomena which Reich had described. The analysis of the experimental design as well as our employment of modern measuring devices proved that all resulting phenomena could be explained by the classical physical effects (Harrer 1997, 1998). An indication of a specific life energy could not be found. The inspection of Reich’s original machines housed at the Wilhelm Reich Museum in Rangeley, USA, proved a grave deficiency in the measuring techniques and lead us to believe that Reich had not versed himself thoroughly enough in the basic principles and methodology of experimental physics, especially those concerning measuring techniques. Hence, he was unable to interpret his observed results in any suitable manner. It could be proven that Reich made continuous mistakes in measuring and Experimentator-Effekte (Harrer 1997, 1998). Correspondingly, it seems that the formation of his theory is indefensible, and the term Orgone Energy is unsuited for scientific discussions concerning the question of life energy. This insight is confirmed though the analysis of all of Reich’s published texts. If there should exist a specific, measurable life energy, Reich was unable to prove this. Instead, he „let himself be misled by illusions only he could follow“ (Albert Einstein in a letter to Wilhelm Reich dated February 7, 1953).

PART TWO: NON-MATERIAL REGULATION PROCESSES

From Life Energy to Non-Energetic Regulation Processes

It becomes apparent from Reich’s mistakes how nature can lead a scientist by his nose when the questions are not posed precisely enough. In order to pose a precise question, one must not hold on too strongly to certain

terminologies. Already the choice to use the term „life energy“ limits the possible answers, for life probably does not need a specific life energy: bioinformaton must not necessarily be energetic e.g. material! Energy and matter are the rulers of Physis and Bios. The quantities and principles of cause and effect rule here. However, in the scopes of Psyche and Pneuma these principles do not place the first violin. Instead, we are opened up to a world of qualities and probabilities. This point of view is in no way new, as we can see in the example of the Chinese concept of Qi:

In traditional Chinese medicine and acupuncture, we encounter the concept of Qi as the central explanation for natural events. Often the term Qi is dubbed life energy. According to Kubny, here one is dealing with qualities of the world which are continuously moving in the flow. The Chinese Qi-concept is more like a cosmology or philosophy, and to accord it the term „energy“ would be like cramp together all Occidental philosophies and term it „electricity“ (Kubny 1995).

A further idea which, in correlation, is termed life energy is that of vibration, which is synonymously used for the resonance phenomenon or the term harmony. The term vibration is often used in unconventional healing, for example in the case of electro-acupuncture according to Voll or in bio-resonance therapy. Also when explaining homoeopathy, the term vibration is often used without being able to accord it any frequency, amplitude, or phasenanlage, let alone actual being able to define what is supposed to be vibrating. The founder of homoeopathy, Samuel Hahnemann, used the term „Dynamis“ to illustrate his theory, which, in my opinion, can hardly be translated into a material, physical phenomenon. More suitable would be to understand Dynamis as a dynamic informational substance or non-energetic qualitative regulation process.

Matter, Energy and Information

Information is non-energetic and non-material. The example of a radio station where we know that electromagnetic energy is transmitted. In order to realize an idea (purpose or goal), certain information, an ordered pattern has to be imprinted. A receiver will translate this pattern from an electromagnetic carrier into an acoustic carrier (air vibration), and when listening, the original idea is once again evoked and can possibly create new ideas (insights). Comparable to dream content, which has neither an electro-magnetic nor biochemical nature but nonetheless can carry over and have an effect, the informational substance is independent of energy and matter.

Entelechie

If bioinformation is to mean a controlling, form-giving idea which gives the living in humans and gives the human a form, than the term Entelechie is more suitable than life energy. Entelechie means the regulation „towards a goal“. Due to the current understanding of energy, the term Entelechie has moved into the background. In the medical sciences, we will find it at the very least in the anthroposophical medicine as Bildekräfte. In comparison, we can mention bio-medicine (gene technology) which tries to reduce life and humanity only to the DNS. This matter-oriented stance is unsatisfactory and, in the meantime, has been denoted as too diminutive. Especially since it has become apparent, as the noble prize winner, Barbara McClintock, proved using the example of corn crops, that even the structure of the genetic code can take a leap (transport itself) from one generation if this serves the idea of nature. She views abnormal corn seeds not as proof for disorder or irregularities, „rather as a higher classification system which can not be reduced to one specific law“ (Fox Keller 1986).

Physics

The German physicist, Burkhard Heim, who developed a uniform quantum theory, also used the term Entelechie. A physical theory, which deserves the designation „uniform“, must be able to meet the statements of the four scopes of existence in the world. Heim's work is a classical, physical description of the world, but poses the question if it is actually possible to describe the human spirit in physical terms. Heim's works belong among some of the most complex theories currently discussed in physics.

Neurophysiology

How does neurophysiological research answer the question of life? In my opinion, one of the most interesting assertions in this field is that of the noble prize winner, John C. Eccles. As brain researcher and neurophysiologist, Eccles describes the dualism between consciousness and brain. The brain does not create the consciousness (Eccles call this the „self“), but rather the consciousness (the scopes of the Psyche and Pneuma) controls the brain as an organ of a physical-biological system. The „self“ accepts that it is dealing with a non-material occurrence, a non-material structure. Consciousness is as such no organ which can be study in a laboratory or isolated in a test-tube.

Building upon Margenau, Eccles could prove that it is possible to regulate biological processes without using energy. The „self“ can move its body without having to input energy into the body. Quantum physics provides an explanation on how this is possible through the phenomena of non-locality and probabilities (Eccles 1995). And Eccles observed this characteristic of probabilities in the micro-fields (domains) as well as in the microbiology of the brain. There exist structures which are so small that, in the larger picture, they all belong in one domain where probabilities are at work. According to Eccles, the brain works so that conscious processes of the „self“, the consciousness, lead to a change of probabilities for specific biological processes, approximately the distribution of very specific messages. The result is that the brain cells are activated and appropriate body movements or sensory perception are released. Yet the consciousness responsible for this is non-material and non-energetic. The „self“ does not need any energy in order to generate a change in the brain, it does this automatically due to changes in the probabilities processes.

Projection Process $G4 \rightarrow I2 \rightarrow S2 \rightarrow R4$

What could such a regulation in the micro-system look like? In the beginning, I pose the question of reality. There is a reality which we are all in agreement with, that is the four-dimensional space $R4$: length, width, height, and time. However, if we want to describe the world, these definitions are not sufficient. We know: there exist structures on different levels of organization. An example of this is that a cell can be independent or an element in a cell formation, which itself is independent or it can be a part of an organ, which then can be a part of a larger structure (the body), which then is a part of a larger organisation (bee hive, family). This degree of organisation can also be described as an independent dimension (Entelechie), and in a connection with a sixth dimension, which describes the actualization of the order in time (according to Heim „Ion“), results in a structured space $R4$. Together the result is a six-dimensional space $R6$. In this space energy and matter are defined.

Now we must ask ourselves: is this enough, or do we need more dimensions for a uniform description of the world? In mathematical physics, dimensions are nothing more than collections of numbers, which are capable of having characteristics ascribed to them which are independent, that is which cannot be supplemented by other characteristics. The dimension of height cannot be supplemented by length, width, time, or degree of order. Like many independent characteristics of the world display, it is a basic theme for a uniform description of the world. It appears that Burkhard Heim was successful in finding a structural law which confines the amount of possible worldly dimensions. It results in the solution that the so-called $R6$ is a sub-space (that is a part) of a twelve-dimensional hyperspace $R12$.

Humans also know a spiritual realm and this is not found in $R6$. We have order space, time and organization, but not yet information. Based upon mathematical deduction Heim shows that there must exist a two-dimensional information space $I2$. And furthermore, there also exists a four-dimensional space which he denotes as $G4$, so that all in all a twelve-dimensional space exists $R12$. In the dimensions 7 to 12, matter and energy are not defined, as their structures are non-material and non-energetic but are real notwithstanding. The name G in $G4$ stands for „God only known“ and refers to structures which one knows they probably exist, because they give meaningful arithmetic results, but no one knows how to interpret them.

The Regulation of Biological Process

Both Dröscher and Heim could prove that this $G4$ could produce a picture, a projection into the information space, and that this informational space supplies a picture of a structured space, that is an organizational niveau. How the matter is ordered is so to speak defined by the spiritual/informational level. This non-energetic, non-material space $G4$ forms an image in an information space, this forms an image in a structured space, where we can observe formations (Formbildung). Finally, the structured space projects itself into the four-dimensional time-space and controls the biological outlets within time and space (Dröscher 1996).

Subsequently we are dealing with a projection process $G4 \rightarrow I2 \rightarrow S2 \rightarrow R4$ from the non-energetic spiritual realm to the energetic material realm. Here is the key which I currently believe depicts most clearly the process of life. Perhaps these projection processes can be described without the usage of mathematics – I will try to will an old Sufie song:

„Let the heaven be reflected by the earth, Lord, that the earth may turn into heaven.“

According to this model, energetic, material processes, which occur in time and space, are governed by a non-energetic regulation. Thereby, the entire spiritual, psychological, and biological occurrences can be explained without having to use additional life energy. Albeit it is important to recognize that the emphasized material, energetic world has a non-material, non-energetic background which is only recognizable when thoroughly scrutinized. Perhaps a person only made aware of this background in extreme situations, perhaps first with death.

For during the process of death, as is described by Heim in the book, „Postmortale Zustände?“ (Post-moral States), there ensue a separation: the biological disintegrates but the spiritual, informational, structural part lives further as the „self“. This correlates with that which Eccles discovered: during death a separation occurs between the „self“ and the brain. The brain is given to the worms and the „self“ goes – yes, where? – „back to its home“ would be the answer that all religions could give.

The mathematical derivation of the projection processes is unfortunately not trivial. Heim needs a complex formula and, in order to describe the spirit-matter interaction, need to develop a polyvalent logic. The complexity as well as the minimal amount materials available in English still limited the possibility of a wider, physical discussion of Heims results.

This complexity demands a careful application of Heim's theory to Erfahrungsheilkunde (empirical natural medicine). Individually, it has been attempted to illustrate Reich's Orgone Accumulator with Heim's terminology. Heim himself has found no indication in his mathematical description of the world of an additional interaction which could correspond to a specific life energy. As a classical physicist, he separates himself rightly so from misapplications of the complexity of his works for esoteric topics.

Non-Energetic Regulation in Biological Processes

Where can the initial steps of non-energetic regulation in the biological process provide an explanation? Heim often uses the example of species development in the evolutionary process (Heim 1997). He quotes Schindewolf, who describes time lapses during the species development, necessitating a goal-oriented evolution for new biological characteristics of species and of its genetic codes (Schindewolf 1993). It appears that evolution is not ruled by an aimless principle of trial and error, but rather would necessitate a much longer time period than the actual age of the earth. It appears, instead, that a direct expression of an idea in evolution is produced.

A second example could be human memory. As complex as our neurological system may appear, memories and insights seem to be stored in the „self“ rather than in the physical, biological organ. The conversion of non-energetic ideas in the physical process must have a intersection where the probability changes are transformed into changes of energetic outlets.

The physics of micro-domains in quantum dynamics describe such processes. The brain exhibits many structures whose overall make up would suitable for such processes. The occurrences within DNA happen in the micro-domain, where changes in probabilities can enable specific results.

Information in Homoeopathy

Perhaps we should also investigate the effective mechanics of informational therapies like homoeopathy and Bach Remedies. An significant current in homoeopathy has been studying the effectiveness of the so-called „water memory“. We have known that water can store information since the 1950s, when the operation of magnetic fields in water tank was installed.

Homoeopathy practices the principle of potensifying the idea of the original substance (plant, mineral, etc.) into a carrier of information. Since the immaterial idea can express itself in the form of plant, then the plant also can do this by mean of a carrier. This carrier, Due to the immaterial process and the potensifying, can transform itself into an agent and give the idea to the recipient. Just by using such homoeopathic remedies, some sensitive people can begin to perceive the elements of the original substance. The actual intake on the physical level is viewed by some homoeopaths as not necessarily required.

Subsequently the question is posed, if the information can actually be found among the physical structures of R4 (water, electromagnetism) or if it is only formed in S2, I2 and G4. If in this last case, homoeopathic research could only be based on the effectiveness of individual applications. A measure-based examination would be found most likely near the board-line of evidence. This is exactly the picture that current homoeopathy research is offering.

The carrier of homoeopathic information also offers the possibility of realizing this information, just like how electro-magnetic radio waves can realize an idea. Only then within the „self“ of the biological recipient can the idea, which the carrier holds within its information framework, be transformed into a measurable effect (for example healing, insight). To materialist philosophers this phenomenon must appear as psychokinese, when it is expected that the carrier must be able to physically realize the information. If we accept that there exists a non-material aspect of the world, and there exist enough verifications, then it could be possible to incorporate such natural phenomena defined by psychokinese into the classical sciences. This type of potential can be found in the uniform quantum physics according to Burkhard Heim (Senkowski 1984, 1993).

Electro-magnetic Bioninformation

When researching electromagnetic bioinformation it is important to separate the electro-magnetic aspect of the phenomenon from the non-energetic aspect. If this does not occur, it could be possible, that the serious research into such phenomena would be placed below the actual production of electrical devices, and that such devices would be connected with exaggerated promises of health. Life and health is a continuous process of information management between the dynamic structures and degrees of organization against the tendency in Entropy. Healing in the sense of a qualitative process is rooted in the immaterial control and insights. These are more likely found on the inside or through exchanges with other people, and hardly in the form of various life energy devices. I can understand Paracelsus when he said, „It is never the remedy which heals.“

Conclusion

Independent of the assessment of Reich's experiments, the question remains „*Do such phenomena exist which we can define as life energy?*“ There are many things between heaven and earth which the classical school of thought has not dreamt about. From the leaps made in scientific insights it is becoming more and more apparent that life and human cannot be viewed purely as physica, which is exactly what has been proposed in the 20th century. It seems as if a plan is in the background, which actually breathes in the life. For a long period of time the world was satisfied with the idea that this „breath“ was divine and beyond human comprehension. Time and time again, however, people have tried to „understand“ this occurrence, and to accomplish this, the natural sciences were employed as a tool.

Additionally, the physical term energy has been allotted by many thinkers in order to understand the non-energetic aspect of the world. Reich transferred the psychoanalytic term libido energy as the „energy“ for the instinct and the psyche. He purported that this energy, Orgone Energy, could be found in natural phenomena outside the psyche. By interpreting this energy on a physical level, he found himself in the realms of physics and its assertion that different energy forms can be transformed and can be measured. Reich search his whole life for the proof of this energetic character for life processes.

It should be fundamentally considered if the physical term for *energy* in this connection is even useful, for there according to my knowledge, there exists no verified proof of a conversion of *life energy* into another physical energy form.

In my opinion, attempting to measure the creative spirit in the world of matter and energy is a hopeless cause. There are a number of physical models which do not step beyond the boundaries of the scientific presentation of evidence, and nonetheless go beyond the energy term. They suggest that one takes into consideration non-energetic control processes. In physics, the term „probabilities“ is used. The changes of probabilities in a biological process does not necessitate any energy, but it still changes the development of energetic, biological events. John C. Eccles, when postulating about probability changes in the neuronal network of the brain, suspected a specific mechanism which converts the non-energetic, human self (spirit, consciousness) into energetic, biological functions.

The fascinating physical theory, which also integrates such non-energetic control processes, was presented by the German physicist, Burkhard Heim, in the form of a unified quantum field theory.

What would happen if the earlier mentioned „divine breath“ was in actuality a energy, which could also be accumulated? To imagine such a discovery would be literally *Science Fiction*. In his wonderful story, *Das Absolutum oder Die Gottesfabrik*, Karel Capek in his own way dreamt of this and fully carried out this idea to the end (Capek 1990). If we separate ourselves from this mechanical idea, then a new possibility for understanding the informatative activity in biological life.

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About the author

Bernhard Harrer has been dealing with the problem life energy since 1986. From 1990 to 1994 he directed a research project at the Free University in Berlin, Department for Naturopathy under the supervision of Professor Joachim Hornung. Within this framework, he carried out a series of experimental and theoretical works on this topic, and today it is still being researched.

Since 1994, Mr. Harrer has been director of the project 'Patients Information Center for Natural Medicine π '.

The vision of this work, through the assembly of a comprehensive database and consultation services, is to make the knowledge of a holistic medicine available to patients and experts. Additionally, his company, 'Bernhard Harrer Wissenstransfer' consults research groups about information management and knowledge transfer.

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