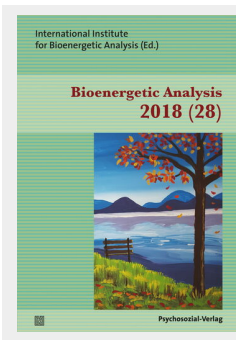


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The Mysterious Life Energy

On the Validity of the Bioenergetic Concept

Arild Hafstad

Abstract: The paper explores empirical validation of the bioenergetic concept by randomized controlled research on the orgone box. To improve concept validity the author anchors the bioenergetic concept in physical principles and metabolism, combined with principles from Bioenergetic Analysis. The research lends support to the bioenergetic concept by showing that “contextual” stimulation (in the orgone box) can increase free energy in the human organism, indicating influence on a human bioenergetic system. These studies show that the human bioenergetic system is under contextual influence. The orgone theory has formal weaknesses and a sound scientific strategy gives priority to examining the equipment first.

Key words: bioenergy concept, organismic viewpoint, orgone, RCT validation of a bioenergetic system

Introduction to Bioenergy

What is life and what drives the process of development and survival in the world of living beings? Are they not among the most fundamental and interesting questions to ask? Some people find questions about life and energy wonderfully attractive, at the very center of their attention. As one of those people, I just cannot stop wondering about these mysteries, as some people have always done.

In line with Ventling’s request (2013), the intention of this paper is to investigate how the Bioenergetic Concept can build Concept Validity and bring in a line of research that gives it empirical support from randomized controlled studies (RCT). It might come as a surprise that the research studies the effects of the orgone box (ORAC).

For this purpose I differentiate between *Theoretical Bioenergetics and Applied Bioenergetics*. Bioenergetic Analysis is the field of applying the study of bioenergy to psychotherapeutic work. For validation, we need to take a step

back and consider Human Bioenergy as a branch of the general study of Human Nature.

“Bioenergy” comes from two Greek words, *Bios*, meaning the world of living forms and *Energeia*, meaning force or movement (Caprona 2013). “Bioenergy” can refer to both the forces and drivers that form life and the process of movement experienced and observed in life forms.

It is no ground for questioning *if* organismic movements require energy. All movements according to physics and physiology involve some kind of energy (Frayn 2010). The study of drivers and processes of life forms are scientifically valid and is the basis for studying human metabolism, i.e. energetic transformations in organs and systems of the organism (Frayn 2010). We find the term bioenergy used in cell physiology, especially in mitochondrial energy production (Cooper and Hausmann 2009). Scientists like Deacon (2012), Saphiro (2007), Van Kranendonk, Deamer & Djokic (2017), are looking at the origin of life from an energetic viewpoint.

The bioenergetic field of study as we define it in Bioenergetic Analysis must include knowledge of metabolism but is also more than that since we study *the energy dynamics of persons*. This dynamics of persons must include a natural and cultural context. Also, it must include processes where energy and information are intertwined (Bateson 1979). In short, it is about *energetic dynamics in contextually interacting persons*.

Biochemistry and physiology have made huge leaps in understanding molecular, cellular, organ and system specific processes of human life and metabolic mechanisms necessary for its maintenance (Cooper & Hausman 2009, Frayn 2010). This scientifically validated knowledge is basic to the greater picture, how life processes fit into whole human beings, as organisms, persons and members of social groups. When we include more and more aspects of human existence, new qualities appear and integrate with basic physiological processes. These higher-level dynamics influence physiology, creating new circuits of change and balance. Recently Fina Pla (2017) has demonstrated how human relations are incorporated (involved in energetic bodily reactions). Daniel Stern (1995) has shown how these dynamics start from birth on; Antonio Damasio (2002, 2004, 2010) has shown how emotional life builds on and feeds back on metabolic processes, to mention a few substantial contributions. All these studies show that the general field of bioenergetics is necessary for comprehending the complexity of human life processes.

History: Reich and Bateson

Wilhelm Reich was a pioneer in investigating this greater picture at a time when physiology and psychology was not nearly as developed as today. It was Wilhelm

Reich (1942), who introduced the Bioenergetic concept. Academic psychology studies mental processes and the brain, but is hardly attending to the energetic and bodily conditions of the mind. The energetic models of the mind were exchanged for informational models in the 1960's and led most professionals to conclude that energy concepts had become old fashioned and invalid, quite contrary to what Gregory Bateson, one of the main thinkers behind this shift intended (Bateson 1979). So, in the human sciences we have a situation that promotes something like a collective blind spot – an inability to look for energy. This general position in the field was partly an effect of misunderstanding Bateson's work. Even though life energy is not directly observable, its work within the life process always implies movements of some sort. Gregory Bateson (1972, 1979, and 1987) stated:

“Mental processes require collateral energy. Although it is clear that mental processes are triggered by difference, and that difference is not energy and usually contains no energy, it remains necessary to discuss the energetics of mental process because processes, of whatever kind, require energy.” (Bateson 1979, p. 111).

So energy and information must occur together, simply shown by the fact that the brain consisting of roughly 2% of body tissue uses about 25% of body energy.

Bateson (1979) differentiated two energetic systems that are working inter-dependently in the life process. One is the system that uses its energy to open or close gateways; the other is the system where energy flows through when the gate is open. The first is the system of decision, difference and information. The second is the source of energy. The outcome of their interplay is circuits, coding and hierarchies of meaning, or simply mind, he says. If we follow Bateson, the rudimentary mind started long before any nerve cells or brain had evolved, since from the very start, life was both energy flow and rudimentary energy regulation (mind). It seems safe to state that life cannot exist without energy, an energy that burns like a fire that neither gets out of control nor dies out. The model seems very close to Reich's diagram of mind and body springing from a common energetic source.

Observations of Life-Energy

Empirical study needs to start with observation. We need to ask, is there really something we can call life-energy, does the word refer to something *observable and consistent*? If we close our eyes and feel into the body, we can always detect a feeling of multiple movements, patterns and qualities that leaves an impression on our present state of aliveness (Hafstad 2008). These senses, *interoception and proprioception* inform us of our internal organismic state. In addition, the external

senses enable us to perceive life in others, through the form of their movements and their emotional expressions. Further, through *the process of mirroring* we can feel the states of others (Rizzolatti, Sinigaglia, Corrado 2008). Also, there is the rather subconscious phenomenon of *attunement, resonance* and *radiation* that implies a gradual transmission of other people's bodily states into our own (J. Clauer 2016, V. Heinrich 1999, Keleman 1986). These pathways of perception are common human capacities, although persons may not be familiar with attending to them. The power of these capacities is to allow us access to actual life states, qualities of aliveness and vigor in ourselves and in others.

So we have a perception of liveliness, but does that count as observations? In the therapy room – yes, but as scientific data? The answer is positive in a hermeneutic *qualitative* approach, which is one of two valid strategies in human sciences. In a strict *quantitative* experimental approach, the answer is no. In such cases, we need physical measures of energy, like temperature or electromagnetic charge as indications of energy level. It also would require *a theory of life energy* that can produce prediction, reliable quantifying measurement and a hypothetic-deductive strategy. It also requires randomized controlled experiments (RCT). Interestingly, a few such RCT's exist already, as we will soon come to see. A third possibility often used in psychology could be combining verbal reports of subjective experiences and physical measurements.

What Needs Not to Be Explained?

The word “explanation” means *the act of laying out in the open a pattern or plan that reveals the nature of a phenomenon*. It is easy to be trapped in the idea that first we must prove that life-energy exists. When Reich (1942) postulated the Orgone, he attempted to explain how life starts. Also, he said there is a specific form of life energy in the human organism. This challenged the whole scientific establishment and activated conflict between different camps within the body psychotherapy movement. Fortunately, we do not need to prove *the existence* of life-energy if we are careful with the formulation. Then we can concentrate on how life-energy works, i. e. its natural form.

Physicists generally admit that *we cannot directly observe energy, only postulate and infer that it exists*. The word “energy” in physics denotes “the ability to do work”. *The first law of thermodynamics*, fundamental to physics, states: “Energy can neither be destroyed nor created, only changed into different forms”. We ought to adopt the same position and conclude:

All kinds of changes in and between persons are expressions of energetic transformations. Since the energetic transformations happen through organisms, it is an expression of bioenergy. It is the notion of organism that justifies referring to the energy (the ability to do work) as biological. Our point of departure demands no more

specificity; neither do we need to prove it, since it is an axiom in physics and not an empirical statement.

The Life-process as every real process, involves particles, atoms, molecules and organic chemistry. They all must build on physical laws. This is not the same as reductionism but an acceptance of the fact that even the most complex social process happens within the frame of physical events. One might object that even physical laws stand on shaky ground these days since we do not know what 95% of mass in the universe is (Conselice, C.J. 2007). Still, we cannot ignore what we know of the physical world. A valid bioenergetic concept must be based on what is known, postpone speculative notions and entertain notions that can be put to the test.

A Broader Frame and Character Formation

An issue has been that people think it is a problem with the bioenergetic concept that we cannot directly observe *life energy*. This gives fuel to the criticism that it is a speculative and metaphysical postulate and that we are just repeating the vitalism of the eighteenth and nineteenth century. We need not fall into that trap. Instead, we may reply that this exactly parallels the situation in physics. We need a bioenergetic concept since physiological knowledge of metabolism is not sufficient to explain all the levels and interactions of energetic transformations in human life. Science needs a broader frame to see the whole picture.

Character formation is an example of such an energetic interaction that happens within this broader frame. It has relevance for studying the shifts between *free and bound energy* on the organismic to interpersonal level. In biochemistry, the building up of complex molecules is a process of binding energy, while splitting up molecules releases electrons and increases the amount of free energy in a field. The human organism is a field composed of myriads of smaller fields. The process of binding and freeing energy happens continuously and at all levels in the organisms. At the person-level, character formation restricts free available energy. People generally have a lot of energy they cannot transform. When we do bioenergetic exercises and feel energized and alive, it is not correct to say that we get more energy; it is rather that we release bound or latent energy into flow and transformation. Building *more* energy may be possible but only as a slow growth process.

The Second Law of Thermodynamics and Negative Entropy

The second law of thermodynamics states that within a closed system, any initial energetic difference moves towards zero. This law implies that the inorganic

world moves towards breakdown and destroying differences. We call this process of gradual and predictable loss of energy – *entropy*. The same tendency of decay happens spontaneously within all compartments in this world. For open systems like organisms, the tendency towards entropy is stronger and lethal if not opposed, since energy is lost to the surroundings until there is no difference between inside and outside, even the boundary decay, as in a corpse. This *downward* or falling energetic tendency in the organisms is the first fact of energetic movement in living organisms. The energy level is both continuously declining and creates a falling movement in the body in the same way as a cold-water sink and warm water surface. Notice that this tendency is also in bioenergetic movement and an essential part organismic dynamics.

Life can and must oppose entropy by increasing energetic resources. It does so by producing repair and restoring differences and differentiations. This is called *negative entropy*. It can only happen because being alive implies the ability to import energy resources and transform them through physiological steps. The human energy system seems to be rather efficient, since our daily need for nutrients is around 0.5 percent of our body weight (Frayn 2010). This reversal of entropy, necessary for survival and vigor require energy or continual work. In physiology this is accomplished by an array of biochemical arrangements like double lipid membranes, sodium pumps, Krebs cycles forming ATP, enzymatic reactions, and oxidation etc. Gene expression, hormones and the central nervous system regulate these processes. (Frayn 2010, Cooper & Hausman 2009). The investment in work pays off since it enables the organism to collect more energy than the basic physiological mechanisms require, which is a precondition for growth, differentiation, reproduction and expansion. The surplus energy plays its part in sexuality and possibly evolution. Bioenergetic processes require both upward and downward flow, building up and breaking down – binding and releasing. They can be of any form that supports survival and vigor. I have argued that gravitational energy can build structure in human life, while the same gravitational energy creates structural breakdown in the nonliving world (Hafstad 2013). Clearly, it is not necessarily a question of what kind of energy fuels the life process. Rather, life has many ways of entertaining energy, and we scarcely know them. On the organismic to interpersonal levels, Self – Regulation and Self – Respect may be abilities reaching deep into the entropic/negentropic dynamics of the organism and by that promoting vitality (Helfaer 1998).

Life-Energy and Bioenergetics

Life-energy is everywhere in the living world (bios) – flows freely, transforms, gets bound in structures, flows further, gets bound and flows again – through cells, body fluids, the whole organism, personal and social life. Theories belonging to

the Reichian and Bioenergetic tradition can contribute to account for energy at all these levels.

Wilhelm Reich (1935, 1996) and Alexander Lowen (1988 a) stated repeatedly that life is movement and pulsation. Energy tends to flow where it can, taking the shortest and most economic route. Thereby, it takes part in forming and shaping the organism, the person and the personal environment. Energy tends to pulsate – expand and contract, creating spontaneous wave movements. Humans have complexities allowing conflicting tendencies and paradoxes to occur: *ego control* conflicts with natural flow and *character structures* build defenses in the organism that binds free energy. Therefore, life energy must interact with the structures and blockages toward the easiest routes and find diminished roads through and around them. The strongest energy currents flow along the body's main axis – both between center and periphery and along the body's longitudinal axis. Reich's (1996) orgasm theory stated that the orgasm is the prime example of pulsatory phenomena related to its strong charge/discharge dynamics. He understood its function as regulation of the energy system, promoting vitality and restoring organismic unity. Lowen added grounding as a basic functional characteristic of human bioenergy. The energetic part of grounding is *the pulsatory grounding wave*, an energetic current that once stimulated by gravity and motility in feet, ankles, knees and hips – moves between the ground and the head. When this wave finds its way through the body segments, in particular the pelvis where it connects with sexuality and the thorax where it stimulates the felt heart, the full potential of life energy is expressed (Helfaer, p. 35–46. 1996).

Life-Energy and Orgonomy

One might agree these principles have served well as a model in the therapy room, which I think is what Lowen intended. He did not go much into the kind of specificities required in scientific discourse. By that, he may have avoided a serious problem. Wilhelm Reich (1948) had in 1938 on a “scientific” basis claimed to discover a life energy substance, the *Orgone* and radically reformulate his energy concept into *Orgonomy*. In general, the scientific and professional world found this move unacceptable. The orgonomy controversy led to Reich's isolation, harmed reputation, imprisonment and his death in prison in 1957. It was then and still is – a trauma to the body psychotherapy movement.

The *Orgone theory* is in my opinion still an unsettled case, neither proved nor disproved. To my knowledge, Lowen did not discuss the Orgone theory, but adopted the earlier Reichian model of energy. It is now 80 years since the theory was born and 60 years since Reich passed away. In the meantime there has been considerable research on the effects of the *Orgone box*. Since the issue in this paper is about clarifying the concept of Life-energy, it will not do to continue to put

the question aside. I will therefore discuss orgone theory and present a section of orgone research that is relevant for validating the Bioenergy concept.

Wilhelm Reich's first model of bioenergetic systems was based on Freud's libido drive theory. Sexual energy (libido) and life energy (bioenergetics) became synthesized and coupled with the Freudian theory of psychic defense. Simply stated, libido and bioenergy flows with restraint due to mechanisms of mastery and character defense. In 1937 in Oslo, Reich installed a laboratory, making microscopic observations of biological preparations – specimens of living tissue. He observed from these trials that the tissue radiated a blue-gray shimmer. To exclude light bulbs as a possible source of the shimmer, he put the tissue in "Faradays boxes" – cases of metallic electric leaders that insulated the insides from electromagnetic influence. He observed that this arrangement made the blue-gray shimmer *increase*. By wrapping the metal boxes with tree spoon plates, the light effect grew even stronger. By adding more shifting layers of organic material and metal, the effect still increased. This was the first Orgone box. Since he now ruled out that the light shimmer effect of living tissue in the box was due to electromagnetic charge, Reich assumed that there had to be some other atmospheric energy involved. His idea was that this energy became attracted both by the material of the box and by living tissue, passed through the organic and metal layers and became accumulated inside the box and finally in the living tissue inside. He called it *Orgone*, a form of life energy he considered available in the atmosphere and in the cosmos (Reich, 1939, 1949 a, b, c).

He assumed this specific energy spontaneously assembled and attached itself to chemical-organic matter and as such is abundant around and inside living organisms. He claimed that concentrated orgone has the additional property of pulsation and that this explains why organisms and tissue pulsate. Reich thought low organismic pulsatory capacity was a sign of low levels of orgone. He formulated the core of his theory as a physical law of organotic potential (Reich, W 1950 d, Reich, W 1951).

Strong energy fields draw its energy from weaker fields.

This law contradicts the second law of thermodynamics and is a formulation of negative entropy. Its uniqueness is *not* due to its negative entropic statement. Negative entropy is a necessary characteristic of life forms. Its originality lies in the claim that it is a common *physical occurrence, existing prior to life forms*. From that base, he thought – it influences organic synthesis and can spontaneously develop life.

According to Reich, orgone boxes build an energy field stronger than the atmosphere but weaker than the human bioenergetic field. As long as a person sits in the accumulator, she receives energy from the weaker field in the box that in turn gets its energy from an even weaker field in the surrounding air.

Reich's (1942) "discovery of the Orgone" as he called it, is not actually a discovery, but a series of observed events that begged for an explanation, which Reich offered as his orgone theory. Reich explained his observations by claiming

the discovery of an unknown cosmic substance not accounted for in physics. As a theory, it had several formal flaws.

The theory introduced an explanation hard to test and it invented a “God of the gaps” which is a pseudo explanation. It violated the law of parsimony by increasing the complexity of explanation beyond the observations and was close to inventing “a God like” prime mover.

In my view, this series of observations *only* demonstrates *the possibility* that a *contextual arrangement* of electromagnetically charged iron sheets and organic material could elevate the bioenergetic charge of living tissue. The natural course of further investigation would be to see if the observation also would hold for humans and formulate careful hypotheses close to the observations, maybe something like the following.

Contextual sheets or grids of iron can increase free energy in tissue and organisms and for some unknown reason, the effect increases when adding an outward layer of hydrocarbon material. The effect can predictably increase with numbers of layers.

A sound scientific procedure would be to then investigate experimentally if such equipment does promote vitality. First, we should investigate the peculiar dynamics of a system consisting of organism/iron/hydrocarbon layers. External explanations should wait until we are forced to entertain them. Note that the effects of the Reichian equipment are independent of explanations. We can do well for a while with experimental observation. The validity and reliability of the equipment relies only on its predictable and repeated outcome.

The main question was, *would the observation also hold for humans?*

Reich did actually follow this line by building a box in Oslo in 1937 with several layers that a person could sit in. He claimed to have replicated the effect under this condition. This was a very interesting finding.

Eighty years of trials and experiments on this matter is now available. In an attempt to get an overview of the research on the orgone accumulator, Hafstad & Meyer (2017) did a review. I only summarize findings on temperature effects here. Heat is an expression of energy and therefore may fit empirical validation of the Bioenergy concept.

Research on the Orgone Accumulator

A first step would be to examine if any unexpected energetic occurrences happen in an empty ORAC. Reich decided to measure the temperature both outside and inside an empty box, since it would be a sign of energy levels. With repeated trials he found an increased temperature inside the box of 0.5 degrees Celsius with fluctuations between 0.2 and 1.8 (T-TO effect). There are at least 10 reported trials and experiments, investigating the T-TO effect from 1949 to 1987. One of them (Demisch 1979) with only 3 probes, found no effect. Gebauer & Mischenich

(1987) did a controlled study with 100 measurements. Mean difference was 0.62 C (1% of significance). The T-TO effect is of great importance since it contradicts the second law of thermodynamics. It indicates that the box in some predictable way holds a higher energy level compared to the outside. It is not clear from the research if the T-OT effect increases with number of layers. At present there is support for the general prediction that *the temperature inside an empty ORAC will increase to a level around 0.62 C above the outside ORAC temperature.*

Critics of Orgone theory countered the finding by claiming that the difference was due to increased electromagnetic charge inside the ORAC. Reich (1939) used an electroscope to measure negative ions inside the box. He found that it took more time to charge the electroscope inside the box, indicating a lower density of free electrons in the air inside the box, so the alternative explanation did not find support. Fuckert (1985) got similar results in a controlled study using a control box. What Reich also observed was that this finding follows a daily cycle and is most prominent under high atmospheric pressure. Whether Reich's conclusion that the reduced density of negative ions inside supports the theory of atmospheric orgone is hard to say. There might be other unidentified explanations. A further clarification probably requires examination by experts on physics. The observation as such only indicates *reduced negative ionic charge inside an empty box.*

The next question is what happens with temperature increase when a person sits in the ORAC. This is highly relevant bioenergetic research, since the amount of heat emission from the human organism must reflect general bioenergetic mobilization.

Hebenstreit (1995) made such a measure in a double-blind study (N=62). When comparing orgone box and control box, he found differences with extremely high statistical significance, both for Mean and Maximum scores (p. 1% = 0,0000.). This is an unusually strong statistical finding, and the strongest effect found in his whole study, compared to other psychophysiological measures.

If we import Gebauer & Müschenich's (1987) middle value for empty orgone box (see above) – 0.62 C above room temperature, we get the following table from combining these two studies:

	Middle temp	increase	accumulated increase
1. Room temperature	22.59		
2. Empty control box	23.06	+ 0.47	
3. Empty orgone box	23.21	+ 0.15	+ 0.62
4. Person in control box	23.85	+ 0.64	+ 1.26
5. Person in orgone box	24.90	+ 1.05	+ 2.31

The temperature increase in the empty control box is somewhat puzzling, since we would expect zero difference and not 0.47 C increase. But Hebenstreit constructed this control box with one steel sheet inside, which probably made it a one-layer orgone box. Temperature values in the control box may therefore have been artificially high in his study.

The mean total temperature increase from room temperature to person in the orgone box is 2.31C. The first increase of 0.62 degrees is the energy accumulation from the box itself (27% of the total increase). If we assume the average energy increase from the human body to be 0.64 C as measured in the control box, this would amount to 28% of the total energy increase.

The rest (1.05 C) would then come from the orgone box's interactive effect with the human organism or 45% of the total temperature increase. Since it takes more energy to heighten the temperature on the top of the increase than it does on the first increase, the energy difference is even greater than the percentage shown. Also, had the control box been constructed correctly, without iron sheets, we could expect the effect to be even stronger.

Clearly, the ORAC equipment is able to activate a strong general bioenergetic mobilization that must include metabolic processes. The high statistical significance almost rules out the possibility that the finding is random.

The finding is relevant to the bioenergetic hypotheses that energy flows from the core to periphery and that peripheral energy mobilization reinforces core energetic levels. ORAC research has investigated this dynamic by measuring both core and peripheral temperature change. In tune with the above findings, Reich (1950 a, b, c, 1952) found an increase in *core body temperature* after sittings in orgone boxes. Gebauer & Müschenich (1987) replicated this observation with statistical significance in a double blind study. In addition, increased core temperature influenced peripheral temperature. Increased charge in the body core corresponded with elevated tension in the skeletal muscles and noticeable muscular pulsation (Reich 1950, a, b, c). Ritter & Ritter (1953) found in two controlled studies that there was no core temperature increase in the control box but an increase between 0.6 and 0.75 degrees Celsius in the ORAC. The increased temperature was at its highest point between 20 and 80 minutes after the sitting in the ORAC ended. Gebauer & Müschenich (1987) conducted a double blind study with similar and statistically significant results. Core temperature in the human body is under strong homeostatic control, which somehow ORAC exposure overrules. The delayed response seems to indicate that the increase is not dependent on simultaneous stimulation.

ORAC exposure seems to gradually activate metabolic processes. The findings support the bioenergetic hypotheses of core to periphery energetic flow.

Gebauer & Müschenich (1987) found highly significant temperature elevations on the back of the hand (1%). Snyder (1990) found an M= 1.9 C increase

(p. greater than 0.04). Hebenstreit (1995) found a highly significant increase ($p = 0.005 - 1\%$). All studies were with control boxes. These findings show that the effect on peripheral temperature is more than double the core temperature increase.

One might interpret this finding as an indication that the energetic mobilization happens in parallel by peripheral and core body mechanisms or indicates that a unitary organismic response is involved. It supports the notion of a unified bioenergetics system.

Besides validating the bioenergetics concept and illuminating the existence of human bioenergetics processes, these studies seem to support the notion that the system is under contextual influence. Probably not only the ORAC has the property of constituting such an influence. Further studies on body temperature might illuminate the effects of interpersonal contact, bioenergetic exercises and bioenergetic therapy.

Can we explain the effect by inherent unknown properties of the material arrangement used in the ORAC equipment (repeated hydrocarbon layers outside iron layers) stimulating the bioenergetic system? Or is an unknown atmospheric substance not accounted for in physics at present attracted by the orgone box and finds its way into the human organism as Reich claimed? This is still an open question, but a scientific strategy would favor examining the first alternative as far as it goes.

I have chosen to present the studies on temperature measures, because of their obvious value in validating the bioenergetic concept. There are other findings in ORAC research and clinical experience with ORAC equipment too, that is of interest. There are several studies on the cardiovascular system that show significant effects of the orgone box, especially red blood cell proliferation (Buhl & Fischer 2007).

I have asked if the bioenergetic concept can be validated (face and concept validity) and explored a line of randomized controlled research to see if it can validate (empirical validity) the notion of a unified bioenergetic system ranging from biochemical processes to interpersonal influence.

Conclusion

By anchoring the concept in firmly established physical principles and validated physiological research combined with principles from Bioenergetic Analysis, this paper concludes that the field of bioenergetic study is well justified and valid. The following is a summary of the research on orgone boxes (ORAC) as detailed in this paper.

1. The research lends support to the following bioenergetics notions. Contextual sheets or grids of iron can increase free energy in tissue and organisms

and for some unknown reason the effect increases when adding an outward layer of hydrocarbon material. The effect probably increases with numbers of layers. This effect needs further study.

2. The observation also holds for humans, indicating influence on a human bioenergetic system.
3. The ORAC interacts with the human bioenergetics system to the degree that it increases the temperature in the box with 1.05 Celsius more than a similar box only made of wood but with similar insulation value (K value). This amounts to 45% of the total temperature increase. Since it takes more energy to heighten the temperature on the top of the increase than the first increase, the energy difference is even greater than the percentage shown. Also, had the control box been constructed correctly, without iron sheets, we could expect the effect to be even stronger.
4. ORAC equipment is able to activate a strong general bioenergetic mobilization that must include metabolic processes. The high statistical significance almost rules out the possibility that the finding is random.
5. ORAC exposure seems to gradually activate metabolic processes. The findings support the bioenergetic hypotheses of core to periphery energetic flow.
6. One might interpret findings on core and peripheral body temperature in ORAC as an indication that the energetic mobilization happens in parallel by peripheral and core body mechanisms or indicates that a unitary organismic response is involved. It supports the notion of a unified bioenergetics system.
7. Besides empirically validating the bioenergetics concept and illuminating the existence of human bioenergetics processes, these studies seem to support the notion that the system is under contextual influence.
8. Probably not only the ORAC has the property of constituting such an influence. Further studies on body temperature might illuminate the effects of interpersonal contact, bioenergetic exercises and bioenergetic therapy.
9. We can explain the effect either by inherent unknown properties of the material arrangement used in the ORAC equipment (repeated hydrocarbon layers outside iron layers). Alternatively, stimulation of the bioenergetic system comes from an unknown atmospheric substance not accounted for in physics at present (the orgone theory). The orgone theory has formal weaknesses and a sound scientific strategy gives priority to examining the first alternative as far as it goes.

This material was presented to provide information to those interested in scientifically exploring the validity of the mysterious life energy, particularly based on bioenergetic concepts.

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Abstracts

German

Der vorliegende Beitrag untersucht die empirische Validierung des bioenergetischen Ansatzes durch randomisiert-kontrollierte Studien zum Orgonakkumulator. Um die Kon-

zeptvalidität zur erhöhen, verankert der Autor den bioenergetischen Ansatz in somatischen und Stoffwechsel- in Verbindung mit bioenergetischen Prinzipien. Forschung unterstützt den bioenergetischen Ansatz, indem sie zeigt, dass „kontextuelle“ Stimulation (im Orgonakkumulator) freie Energie im menschlichen Organismus steigern kann, was auf eine Beeinflussung des menschlichen bioenergetischen Systems hinweist. Die Studien zeigen, dass das menschliche bioenergetische System unter kontextuellem Einfluss steht. Die Orgontheorie hat formale Schwächen, und eine solide wissenschaftliche Strategie priorisiert eine Untersuchung der Apparatur vor allem anderen.

French

Dans cet article, une recherche explore la validation du concept bioénergétique en menant une recherche par échantillonnage sur l'accumulateur d'orgone. Cherchant à augmenter la validité du concept bioénergétique, l'auteur l'ancre dans des principes issus des sciences physiques et dans des principes relatifs au métabolisme de l'organisme, les articulant à des principes issus de l'Analyse Bioénergétique. La recherche conforte le concept bioénergétique en montrant qu'une stimulation « contextuelle » (dans l'accumulateur d'énergie) peut augmenter l'énergie libre de l'organisme humain, ce qui signifie qu'il exerce une influence sur le système bioénergétique humain. Ces études montrent donc que le système bioénergétique humain répond à cette influence contextuelle. Il n'en reste pas moins que la théorie de l'orgone présente des faiblesses formelles et qu'une stratégie scientifique solide doit donner la priorité à l'examen préalable de l'équipement.

Italian

L'articolo esplora la validazione empirica del pensiero bioenergetico mediante una ricerca randomizzata controllata con la camera organica. Per arricchirne la validità, l'autore ancora la concettualizzazione bioenergetica nei principi fisici e nel metabolismo, combinata con i principi dell'analisi bioenergetica. La ricerca rafforza la concettualizzazione bioenergetica dimostrando che la stimolazione "contestuale" (nella camera organica) può aumentare l'energia libera nell'organismo umano, segnalandone l'influenza sul sistema bioenergetico umano. Questi studi dimostrano che il sistema bioenergetico umano è sotto l'influenza del contesto. La teoria dell'orgone ha delle debolezze formali e una buona strategia scientifica dà per prima la priorità all'esame degli strumenti.

Portuguese

Este artigo explora a validação empírica do conceito bioenergético através de pesquisa randomizada e controlada sobre a caixa de orgone. Para aumentar a validade do conceito, o autor o ancora em princípios físicos e no metabolismo, combinados com princípios da Análise Bioenergética. A pesquisa fornece apoio ao conceito bioenergético, mostrando que uma estimulação "contextual" (na caixa de orgone) pode aumentar a energia livre no organismo humano, indicando influência sobre seu sistema bioenergético. Esses estudos mostram que o sistema bioenergético humano está sob influência contextual. A teoria do orgone apresenta fragilidades formais e uma boa estratégia científica dá prioridade ao exame do equipamento.

Russian

Статья посвящена эмпирическому обоснованию биоэнергетической концепции в рандомизированном исследовании, проводимом с использованием «оргонного аккумулятора». Автор совмещает различные физические принципы и метаболизм живых существ для обоснования Биоэнергетического анализа, тем самым подтверждая научную состоятельность данной концепции. В результате данного исследования получены аргументы в поддержку биоэнергетической концепции. Продемонстрировано, что «контекстуальная» стимуляция (в оргонном аккумуляторе) может повысить свободную энергию в человеческом организме, оказывая влияние на биоэнергетическую систему. Исследования показывают, что биоэнергетическая система человека находится под контекстуальным воздействием со стороны окружающей среды. Оргонная теория не является строго научной, и для обоснованной исследовательской стратегии первоочередной задачей является экспериментальная проверка возможностей оборудования, в данном случае, оргонного аккумулятора.

About the Author

Arild Hafstad was born in 1957 in Oslo, Norway where he lives and works. Graduate psychologist 1983, clinical psychologist 1988, chief psychologist 1988–1993. Full time private practice from 1993 to this day. Certified bioenergetic therapist in 2004. President of the Norwegian Society for Bioenergetic Analysis 2006 – 2010. Former board member of The Norwegian Forum for Character Analysis and at present in the Reich Society. Assistant trainer in BA training group 2007–2010. Published in the European Journal of Bioenergetic Analysis 2008 and the IIBA journal 2013. Workshop presenter at IIBA conferences in 2013 and 2017. Conducts workshops in Bioenergetic Analysis.