

## Subtle Energies in Energy Medicine

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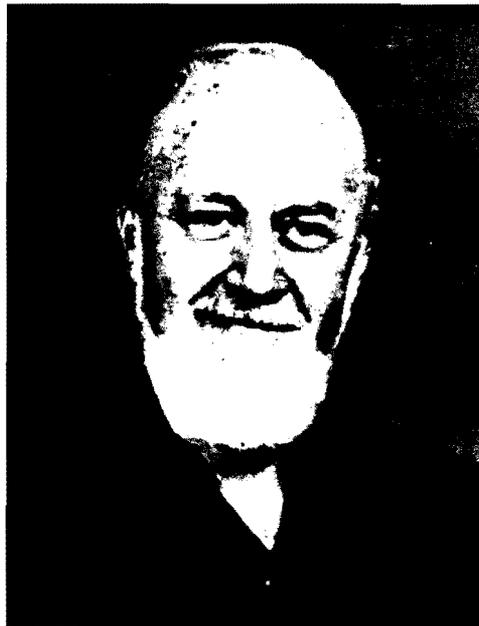
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In conventional science, four forces are considered responsible for all the observable phenomena in the universe: the strong nuclear force, the weak nuclear force, the electromagnetic force, and the gravitational force. However, a growing body of experimental data has appeared that seems inexplicable based on these forces alone. These data seem to require the presence and action of what this paper terms "subtle" energies for a satisfactory explanation.

Early in this century science and medicine saw organisms as operating by the following reactions [1]:

Function  $\leftrightarrow$  Structure  $\leftrightarrow$  Chemistry (1)

Human health was thought to depend on the integrity of the body structure whose balance or homeostasis, in turn, depends on a host of organic and inorganic chemicals. Whenever the body doesn't function properly, structural defects arising out of chemical imbalances are blamed. To cure the problem and readjust this balance, sophisticated chemical complexes with increasingly larger dosages are ingested to trigger the body's defense and repair mechanisms. However, both the body and the threatening invaders adapt to the new chemical complexes, becoming less and less sensitive to them, and so the escalation of potency is generally continued. Unfortunately, the



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unnatural chemical additions sometimes produce unfavorable side-effects and affect other functions besides the one being treated. This "chemical medicine" has been very successful in the past, but its future is in question.

Neuropsychiatry has demonstrated that small electric currents between specific points in the brain give rise to the same behavioral changes that are observed with the injection of certain brain-stimulating chemicals. Others have found that small electric currents can stimulate cells to regenerate, fractures to heal

faster, and tissue to repair itself. Although the use of x-rays and diathermy is established in medicine, recently MRI scans have been added. Thus, Eq. 1 is not complete and needs the incorporation of electric and magnetic fields as another term on the far right.

The body's electric and magnetic fields provide the necessary conditions for homeostasis at the chemical level. Detection of imbalances at the electric and magnetic field levels would be an early warning system of potential disruptions in the chemical homeostatic condition with eventual repercussions at the body's functional level. With this addition, "energy medicine" joins chemical medicine as a separate type. Any therapy that uses an energy field (electric, magnetic, sonic, etc.) rather than a chemical as its treatment modality may be classified as energy medicine.

The altered Eq. 1 is still deficient because it does not account for mental effects. Under hypnosis, the human body has exhibited truly remarkable feats of strength and endurance, attesting to a mind/structure link. In aikido, zen, and yoga disciplines, a conscious link between mind and body function is evident. Modern psychotherapy shows that certain chemical treatments induce mental states, and certain mental treatments

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influence chemical states. Biofeedback techniques show that the directed mind can not only control various autonomic body functions like skin temperature, pain, etc., but also repair the body. In a recent study [2], a gas discharge device was described that responds to an energy emission from the body, an emission directed by mental intention. Here, the mind interacts remotely with electrons. There seems to be little doubt then that mind, as a subtle energy [3], must be included in the altered equation.

*“What we observe  
is not nature itself,  
but nature exposed  
to our method of  
questioning.”*

—Werner Heisenberg

Remote influence experiments with healers indicate that the process involves not only the mental domain but the spiritual and emotional domain energies as well. Thus, these energies need to be added to the far right of the altered equation, too. Experiments on remote viewing, psychokinesis, clairvoyance, homeopathy, and other phenomena attest to the presence of other subtle energies (etheric, etc.) functioning in the homeostasis chain.

Three experiments conducted by this author in the 1970s led to a model of subtle energies. The first experiment was an auric field type of study

conducted with small children as sensors[4]. They were all able to see colored, geometrical patterns in the air gap between two large copper plates that were powered by either a large voltage difference or a strong electromagnet. For a particular child on a given day, the pattern would abruptly change at a given field strength so that several different patterns would be seen between 0 and 15,000 volts DC applied to the plates. Viewing these patterns through a simple telescope or prism revealed light behavior that was essentially opposite to that normally encountered in optical experiments where the index of refraction of glass is always found to be greater than unity. In these experiments, the index of refraction was found to be less than unity, and diffraction, rather than refraction, phenomena were observed with the prism experiment. Were the children using a radiation pattern that travels faster than normal light that reveals some regular structure of space?

The second experiment used a man who had the ability to sensitize an ordinary camera so that regular Kodak color film would reveal remarkable optical effects in addition to the scene being photographed. In a series of studies, two cameras were mounted on a single tripod with a single shutter release. One of the cameras was sensitized while the other was not. Most photo-pairs showed significant differences. The sensitized camera would often show one or more people in the frame as transparent, so that objects behind them could be seen clearly, but the unsensitized camera showed their bodies as opaque to physical light. In other experiments, the lens cap was placed on the sensitized camera, but the subject could still obtain remarkably clear photographs even in that circumstance. Was he somehow revealing patterns of subtle radiation that were imprinted on the physical level of the film used in the sensitized camera?

The third experiment was an outgrowth of earlier work on Kirlian photography and involved the development of a gas discharge device that was responsive to subtle energies emitted by humans [2]. In these studies, it was shown that an energy or energies emitted by humans can increase both the size and the number of electron avalanches crossing the gas in the device. It was also shown that, with an identical experimental protocol except for the intentionality of the subject, the energy could be mentally directed into the device to cause an increase in counting rate, or mentally directed away from the device so that no change in counting rate occurred. Is this a mind/electron interaction here that might have future ramifications for sophisticated electronic systems?

Although little is known about the various nonphysical energies that lie to the right of electric and magnetic energies in the altered Eq. 1, there is a linguistic and cultural discrimination between them. Although interaction has been demonstrated, there seem to be characteristic differences between these types of energies. What is important is that they exist at some level of the universe, although they cannot be directly detected [3]; thus they affect hu-

man health. We shall call all of these energies "subtle energies." Subtle energies must be in balance with the other factors in the equation for a perfectly healthy condition. Each level is sustained in its state of homeostasis by the proper balance of energies to the immediate right of that particular level. Scientific monitoring of the energy state at any particular level lays the foundation for an early warning system concerning potential imbalances appearing at the level to the immediate left. Instrumentation that senses and/or treats at a particular level in this chain to the right of chemistry is a part of energy medicine. Reliable techniques and instrumentation will become available for accessing/inputting both energy and information at levels successively further to the right in the homeostasis chain, which we can now write as:

Function ↔ Structure ↔ Chemistry ↔ Electric & Magnetic Fields ↔ Subtle Energy Fields (2a)

Subtle ≡ Etheric ↔ Emotional ↔ Mental ↔ Spiritual ↔ (2b)

Currently, most energy medicine practitioners deal with instrumentation lying in the range from electric and magnetic energies to etheric energies, with some incorporating mental energies in their considerations.

The terms subtle fields or energies, as used here, do not mean weak fields or energies. In most human experience, the subtle fields are normally only very weakly coupled to physical fields, so only small effects are noticed. However, under a favorable set of circumstances, these fields can be strongly coupled, and then large effects are possible. Future technology in this area may reveal latent energy content and utilization of such subtle fields that are many orders of magnitude larger than those due to any currently accepted physical fields.

Quantum mechanics, which has only an empirical foundation, deals with the interaction between matter and everything else in the universe. At its simplest level, this means the interaction between matter and the vacuum state. In modern treatments, the vacuum is defined as the lowest energy state of the system whose equations obey wave mechanics and special relativity. The Dirac Equation, although Lorentz-invariant, gives not only the energy states of particles but also predicts the existence of particles with negative energy [5]. These negative energy states are unphysical and therefore unobservable with present-day instrumentation. Nevertheless, by stimulating the negative energy states with sufficient energy, particles may be kicked into positive energy states and become real. The holes left behind are the antiparticles. Thus, it is imaginable that a sea of virtual (unobservable) particles—the Dirac Sea—is everywhere. As all physical observations represent finite fluctuations in energy and charge with respect to the vacuum state, this leads to an acceptable theory. To date, antiparticles have been found experimentally for all the particles known to physics.

Although hundreds of papers have been published in the past 30 to 40 years on considerations concerning the zero-point vacuum state, most physicists, chemists, biologists, and engineers have little knowledge of the nature of this ground state for matter. In essence, the vacuum is seen today as a chaotic sea of boundless energy (energy density equivalent  $\sim 10^{94}$  grams/cm<sup>3</sup>) [6] at the quantum relativity level with incredibly large destructive interference of wave functions; i.e., it is the domain where virtual particles and antiparticles are found. It is also the domain where subtle energies are found, as they all fall into the "unobservables" category. This author's writings and modeling of the past 20 years in this particular area have dealt extensively with the substructure of the vacuum state (without specifically calling it such).

In conventional science, the movement of any electric charge involves the emission of electromagnetic (EM) waves. Thus, the movement of electrons in atoms leads to emission in the ultraviolet, the movement of atoms in molecules creates emission in the infrared, the movement of molecules in cell membranes leads to emission in the microwave range while the movement of cells in muscles and body organs generates emission in the radar and radio frequency ranges. The larger is the entity causing charge displacement, the lower is the frequency of the EM energy emission.

In addition to the foregoing, an indirect mechanism exists for EM

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emissions from the body. Here, the primary stimulus comes from the sound spectrum (also called the phonon spectrum) of the body's cells, muscles, and organs associated with their relative motions. The sonic resonances for a particular body part occur in a significantly lower frequency range (by a factor of 1 million to 10 million) than its EM resonances, because the sound wave velocity through body tissues is about 1 million times slower than the EM wave velocity. Because collagen, tissue, and bone are all piezoelectric materials, the small stresses produced by the sound wave patterns generate associated electric field patterns and consequently emitted EM wave patterns. Thus, movements of a particular body part give rise to two emitted EM wave pattern signatures. One signature occurs at very high frequency due to direct ion movement while the other occurs at low to medium frequencies via the indirect piezoelectric response to a sonic (phonon) resonance. For example, the indirect sound pattern to EM wave pattern resonances for body cells are in the  $10^6$  hz -  $10^7$  hz range, while the direct EM emission from these same body cells occurs in a frequency range about a million times higher.

Thus, the body can be thought of as a transmitting/receiving antenna [1]. Incoming EM waves of a particular frequency range will stimulate movement of the appropriately sized body part. If there is no correlation between the movements of various sized body parts, then there is no integration in the system so the emit-

ted radiation has no regular pattern and is called "white" noise. The greater the degree of correlated movements between different sized body-parts, the more pattern-like the total emission, the greater its information content, and the more integrated the system. From standard antenna theory, such EM emission has a mathematically real part, which is the transmitted energy spectrum that travels some distance from the body, and a mathematically imaginary part that is a near-field or standing-wave pattern existing very close to the body. This latter pattern could be called the EM "aura" of the body.

***"Our notions of physical reality can never be final. We must always be ready to change these notions—that is to say, the axiomatic structure of physics—in order to do justice to perceived facts in the most logically perfect way."***

***—Albert Einstein***

In experiments with energy healing, clairvoyance, psychokinesis, etc., it seems that these processes involve the transmission and reception of subtle energies from and to the body. It is reasonable to conclude that there are structural elements of the body that constitute the sources and sinks for these subtle energies. The behavior of subtle energies may be expected to be somewhat analogous to that found for EM energies. Subtle energy "auras" are likely to occur around the body; this may be what clairvoyants detect. Organized flow channels of subtle substance and energies in the body analogous to neural, lymphatic, and blood flows would be expected. Finally, some sensory capacity for these subtle energies would be expected, just as physical senses react to EM energies.

A well-developed EM technology has led to a good capacity for reliable detection of electric and magnetic energy emissions. But what about subtle energy emissions? To date, the capacity in this area is undeveloped. Humans are potential sources and may be conscious detectors of subtle energies. In addition, it appears that, at an unconscious level, all humans respond to subtle and physical energies at a muscular level.

Conventional dowsing studies, in which the dowser holds a type of "wand" and walks over the ground being scanned, have shown that the dowsing response, in the final state, is a muscle reaction connected by a sequence of biological processes to the initial cause. This initial cause is often some type of

magnetic field effect or subtle energy field effect (map dowsing). The seat of the magnetic field sensing ability seems to be in the adrenal glands [7].

In other experiments, chiropractic and osteopathic practitioners have shown that the muscle tonus of patients can change almost immediately when specific minerals or chemicals (located in a glass jar) are merely held in the patient's left hand or placed on the stomach. This falls under the general category of applied kinesiology. One should be aware that the electrodynamic forces from materials have a very short range and, if they are contained inside a glass jar, their EM emissions are unlikely to reach and interact with the body's EM aura. Thus, such a kinesiological response is likely to be caused by a subtle energy interaction.

From the foregoing, three categories of devices are available for use as detectors in energy medicine: (1) devices for detection of electric, magnetic, or EM fields; (2) reliable humans who consciously perceive a physical or subtle energy field; and (3) devices for kinesiological testing of the human unconscious response to subtle or physical energy fields.

Two other categories of devices involving the use of transducers of subtle energies to physical energies can be conceived. The first is devices that are either electrical or mechanical in nature and that are connected directly or indirectly to a living system and give a conventional type readout of a subtle energy input via the living system acting as a transducer for the subtle energy/physical energy conversion. Electrodermal devices have such characteristics. The second is "stand alone" devices based on a unique logic wherein certain combinations of materials/geometries would act as satisfactory and reliable transducers for subtle energy/physical energy conversion, substituting for the living system. Transducers from subtle energy to physical energy might, for example, be used to evaluate the subtle energies in a particular environment, such as a home, a doctor's office, or a hospital room. At present, there are few, if any, examples.

Until humans develop the reliable conscious capacity to detect and discriminate among subtle energies, these energies will not be directly observable. To be useful, devices will need a transducer able to reflect nonobservable subtle energies as physically observable energies. One side of this transducer will be the patient and on the other side is the read-out mechanism based on (1) electric or magnetic field effects, (2) photon effects in different frequency ranges, (3) acupuncture point response effects, (4) electrodermal effects, (5) homeopathic remedy effects, (6) kinesiological effects, and (7) mental/spiritual level effects of the radionic type.

In addition, the practitioner is not a passive factor. Training will be required to discipline the subtle energies of the practitioner. Double-blind testing procedures can be used to demonstrate the efficacy of the devices, even when subtle energies are not thoroughly understood.

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***"Great new views  
in physics always  
involve giving up  
great prejudices."***

***—Paul Dirac***