

Toward a Future Medicine Based on Controlled Energy Fields

Summary

This paper points out that certain psychophysiological effects, the validity of which is not now commonly accepted, need to be introduced into medical treatment to ensure optimum effectiveness. Introduction of these concepts will require a change in our present world picture.

Experimental data which violate our present world picture are described, and a new formulation incorporating physical-mental-spiritual interactions is presented. This involves much greater emphasis on the generation and reception of electromagnetic radiation, magnetic and gravitational effects, and a new nonelectromagnetic interaction involving positive and negative space-time energy fields. Our biological nature and components of healing are discussed within this framework, with emphasis on the body's antenna system connecting the internal energy fields with the informational energy patterns outside the body. Some directions, methods and devices for balancing the body's energies are suggested.

Introduction

One of the important questions to be asked here is "What is the structure of a happy and healthy world and how do we realize it?" We especially want to know what role medicine will play in this structure. I feel that before we can start answering this three-part question, we must change our self-image. We must start seeing ourselves as transcendental beings influencing both our internal structure and the structure of our environment with our thoughts (41). Until practitioners learn the real nature of this change, of course, the incidence of psychophysiological effects in medical treatment will seem to increase. Since such psychophysiological effects will influence the efficiency of any energy-field therapies we may create, we will return to them at the end of this paper.

In this paper, I wish to outline some experimental data that violate our present world picture, to suggest directions of needed change, and then to describe a new world picture that fits the data and moves in the right directions. Next, I present some of the essential background on our biological nature and the components of healing. I then discuss the body's antenna system con-

necting the internal energy fields with the informational energy patterns outside the body as a two-way transmitter-receiver system. Finally, I consider some directions, methods and devices for balancing the body's energies.

Cracks in Our World Picture

Until now, science and medicine have seen living organisms as operating largely by means of the following sequence of reactions:

$$\text{function} \rightleftharpoons \text{structure} \rightleftharpoons \text{chemistry} \rightleftharpoons \dots (1)$$

A growing awareness of the interaction between chemical states and electromagnetic fields will probably soon add a new component at the right of this sequence, which we will call equation 1 (eq. 1).

Whenever an organism isn't functioning properly we blame structural defects in the system arising out of chemical imbalances. To cure the problem we usually try to adjust this balance, using ever more sophisticated chemical complexes and larger dosages to trigger the organism's defense and repair mechanisms. Unfortunately, both the organism and the threatening invaders adapt to any new chemical complex, becoming less and less sensitive to it, and so the escalation of potency must continue. Worse still, the unnatural chemical content begins to influence other levels of functioning besides the one being treated. The effect is particularly serious in agriculture, where the chemicals are applied to the soil. A chemical equilibrium develops between the plants and the soil, percolation spreads the chemicals over a large area, and the whole ecosystem begins to suffer from chemical pollution. Clearly, we must find a better way of understanding and dealing with functional flaws in living organisms. However, so long as we continue to see living organisms as in eq. 1, we are stuck with our present methods.

In searching out other methods for influencing the well-being of living organisms, one must first question the validity or completeness of eq. 1. Are there effective physical, as distinct from chemical, techniques for modifying function? Do potential techniques lie also in the domain of what might presently be called nonphysical energies? Let us look at observations that reveal the total

inadequacy of eq. 1.

Its most obvious defect is ignoring applied electromagnetic fields. Everyone is familiar with the use of x-rays for tumor treatment and of diathermy (electrically induced heat) for muscle relaxation, and we know that other non-chemical techniques such as osteopathic physical manipulation techniques have improved human functioning for the past hundred years. In addition, neuropsychiatry shows us that small electric currents between specific points in the brain give rise to the same behavioral changes that are observed with certain specific brain-stimulating chemicals (41). Becker (2) has found that small D.C. electric currents ($1 \mu\mu\text{A}/\text{mm}^2$ to $1000 \mu\mu\text{A}/\text{mm}^2$) can stimulate cells to regenerate, tissue to repair itself, and fractures to heal faster.

Thus, the first step in improving eq. 1 is to add electromagnetic fields:

$$\begin{array}{c} \text{function} \rightleftharpoons \text{structure} \rightleftharpoons \text{chemistry} \rightleftharpoons \\ \text{electro-magnetic} \\ \text{energy fields} \rightleftharpoons \end{array} \quad (2)$$

A second obvious defect is that eq. 1 takes no account of mental effects. Under hypnosis, the human body has exhibited truly remarkable feats of strength and endurance attesting to an unconscious mind/structure link. In Aikido, Zen or Yoga disciplines, we see a conscious link between mind and both structure and function. On another front, modern psychotherapy shows us that certain chemical treatments influence mental states and certain mental treatments influence chemical states (9).

The acupuncture points, known since ancient times in the Orient, have different electrical characteristics than the surrounding skin (26). In addition, variations in alertness can cause significant changes in the skin's electrical potential and impedance (35). Some Soviet investigators find that concentration techniques can be used to increase the "effective" voltage difference between two acupuncture points from $\sim 50 \text{ mV}$ to $\sim 500 \text{ mV}$. Finally, biofeedback techniques (7, 3) show us that directed mind can not only control various autonomic body functions like skin temperature, pain, etc., but also repair the body. Certainly the experiments in which Jack Schwartz thrust needles through his body and mentally controlled the bleeding attest to this.

There is little doubt, then, that mind must be included in our equation:

$$\begin{array}{c} \text{function} \rightleftharpoons \text{structure} \rightleftharpoons \text{chemistry} \rightleftharpoons \\ \text{electro-magnetic} \rightleftharpoons \text{mind} \rightleftharpoons \\ \text{energy fields} \end{array} \quad (3)$$

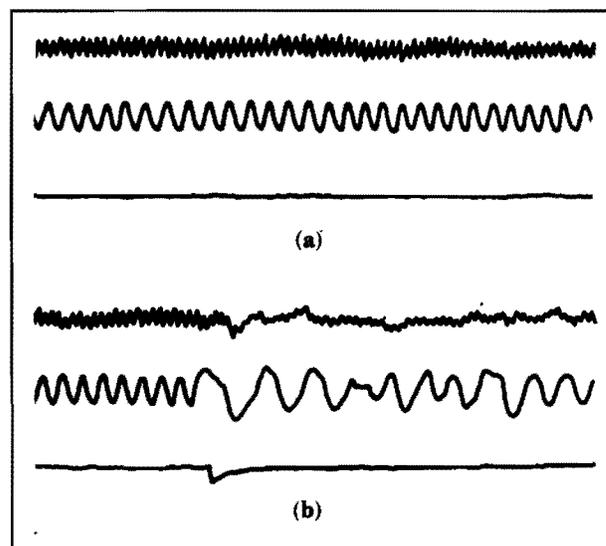
Now the going gets a little tougher. We have shown a link between what we have called mind forces and the other elements of our human reaction equation. We have not shown that these mind forces directly influence inanimate matter, or if the influence is indirect via an intermediate reaction component between mind and physical energy fields, nor have we demonstrated any unique and distinguishable characteristics of mind. In what follows, we will supply some of these missing pieces

to the puzzle. Here, we must go further afield to find published supporting data.

The activity of the enzyme trypsin can be altered by placing solutions of it between the poles of a strong magnetic field or between the palms of a healer (10). The effect of the healer's hands was comparable to that found with fields in the range of 10^4 gauss. Other healers have influenced the growth of plants and affected cloud formation by holding their hands next to (a) a small cloud chamber and (b) a visualization of the same chamber from 600 miles away (17). References to other healers, from Jesus to Arigo (24), continue to appear in our publications and one study (36) has even noted a change in the electrical impedance of specific acupuncture points on both the patient and the healer as a result of a laying-on-of-hands.

Motoyama placed a person who showed marked psychic ability and a second, ordinary person, in separate rooms shielded by concrete walls lined with lead. The gifted person concentrated his mind on the other person while Motoyama monitored the subject's bodily functions (19). Motoyama found remarkable changes in the subject's pulse, bloodflow and respiratory rate during the concentration period (see Fig. 1). Since the two rooms were shielded against physical energy, he deduced that the psychic ability responsible for these changes was essentially nonphysical in nature.

From experiments on communicating with plants, we gain more support for the interaction between physical and nonphysical energies. One of the most remarkable of such experiments is taking place in Findhorn, Scotland (39) where, in barren sandy soil and a hostile climate, the small community produces vegetables, flowers and trees of unexcelled size and beauty. Everything is based on the



1. [a] From top to bottom, plethysmogram, respiratory and galvanic skin resistance recordings in an ordinary person occupying a shielded room before the period of mental concentration by a psychic person occupying a separate shielded room.

[b] Recordings after the psychic person's period of mental concentration began.

philosophy that plants, soil, the natural forces of sun, rain and wind—and people—are collective parts of the community of life. By community meditation, talking to and expressing love and thanks to the plants themselves and by invoking the aid of elemental nature spirits, the people have created agricultural products that defy conventional explanation.

Backster's (1) and Vogel's (40) initial work indicates that experimenters can get an electrical response from a plant by focusing the mind to project (a) damaging another plant, (b) destroying another life form or (c) love, healing, and other positive thoughts.

Finally, to see our connection to the earth, we note that electromagnetic resonance (27) for waves bouncing around the earth between the earth and the ionosphere is in the 3- to 14-Hertz range which encompasses the alpha, beta, delta and theta ranges of the dominant human brain wave patterns. Recent studies have revealed that 10-Hz electric fields control the human circadian rhythms and that human reaction times are strongly dependent on the specific ELF (extreme low frequency) field being propagated in the local earth environment (12). In this series of experiments, we begin to see a connectedness between living things at levels of energy more subtle than those associated with our physical chemistry.

Turning to the area of psychokinesis (movement of objects with the mind), we find an even greater conflict with our present world picture. I saw psychokinetic demonstrations done in the Soviet Union by two different people (32). Also, Swann did two significant experiments in this area (28): (1) in the first he mentally altered the temperature of a small piece of silicon (a thermister) located twelve inches from his body; and (2) in the second he seemingly influenced the decay rate of a very sensitive magnetic field detector located behind vast metallic and concrete shielding at Stanford University. Forwald (6) has done 15,000 psychokinetic experiments on small wooden cubes over a 15 to 20 year period and showed a mathematical relationship between his ability to mentally influence the cubes and both the thickness and chemical nature of films coating the cubes. Most recently, the Uri Geller demonstrations have brought forth children in many lands who are as gifted as Geller and perhaps more so. Taylor (30) has described his experiments with such children in England. Perhaps most striking is their ability to mentally bend aluminum bars placed inside sealed transparent plastic tubes. The foot-long straight bars become S-shaped, filling the cross section of the 1" diameter tubes, while the tube's seals stay intact. Clearly, mind forces can be used to influence not only living systems but non-living ones as well.

Recent experiments on "remote viewing" (28, 29) have shown that people can (a) perceive and accurately describe objects placed far away from them and out of their line of sight, (b) be given the longitude and latitude coordinates of a location on the earth and accurately describe the terrain of that location even though it is thousands of miles away and (c) tune in on a specific individual and view a remote locality through that individual's eyes. The sensitive individual may even perceive the scene before the target individual gets there. The

reverse of this process, wherein one chooses a particular target, like a potential oil well, and asks for the specific earth coordinates, also works.

When one uses instrumental assistance, the technique falls into the category of "Radionics" (5, 4) and the specific sub-category is called "map dowsing". Radionics is an instrumental form of radiesthesia (defined as sensitivity to radiation, physical and nonphysical, from any source either living or inert) and, as such, deals with the interaction of mind and matter and with the complete interrelationship of all things (34).

Conventional dowsing studies, wherein the dowser walks with a wand over the ground being scanned, have shown (28) that the dowsing response is a muscular action connected by a sequence of biological processes to the cause, which is often a magnetic field gradient. One individual has responded to a 1-microamp current flowing in a wire, imbedded several feet in the ground, as he walked across the wire's location. The magnetic field at wand level was about 10^{-10} gauss (earth's field strength is 0.5 gauss). The seat of this sensing ability appears to be the adrenal glands (8). Osteopathic practitioners have shown that muscle tonus can change when specific minerals or chemicals are merely held in the left hand or placed on the stomach (the ingredients may even be in a glass container). I have found very similar responses to specific chemicals contained inside jars using a type of dowsing wand called a biomechanical transducer (38).

Telepathy and clairvoyance (29, 23) can be used as diagnostic tools in medicine. Karagulla (11) has used clairvoyants to observe the "auric" fields around patients and thence describe their state of physical and mental health. These auric fields appear as patterns of light of different colors extending outward from the body. Some subjects can perceive the patterns with their eyes closed or in total darkness.

Studies of precognitive awareness are also widespread, and a precognition teaching machine has been developed (25) that allows one to train this ability into subjects or, rather, to enhance its original operating level. Experiments being conducted with pyramids of specific shape suggest that they are useful for preserving cellular tissue and enhancing the healthy growth of plants, even in total darkness (23, 18). Unique combinations of shapes and materials have produced devices called "psychotronic" generators (23) that can be charged with biological energy and do things that confound conventional understanding. I have seen such devices in operation and accept that they most probably respond to a "New Physics".

I could go on, but I hope I have made the point that both eqs. 1 and 2 are inadequate to account for a variety of new (and old) human experiences. People who have never experienced these "other" energies of nature find such work hard to accept. Understandably, too, the work is vehemently rejected in many quarters as violating our collective picture of the universe. Some experimental procedures may indeed be sloppy (as critics have claimed), for it is extremely difficult to develop a completely "clean" protocol for these experiments. But even though one may attack the quality of a particular experiment or the veracity of a given experimenter, the body of experimental data is

so vast and growing so rapidly that it cannot be denied much longer. The evidence is becoming so strong that it merits a wise person's reflection.

Toward a New World Picture

If we accept the experimental results discussed in the last section, we must think of substance in a larger sense than we have normally done in the past. According to the model I have been working with, seven unique levels of substance in the universe express themselves in seven unique dimensions each with its own set of laws and these substances, because of polarity principles, form special atom-like energy configurations (33). It is proposed that the energies of the different dimensions interact only weakly with each other under normal conditions because they represent different frequency bands, but mind can bring them to interact strongly.

My model treats physical substance functioning in a frame of reference of the universe called the positive space-time frame as the lowest energy band in terms of basic energy quanta. The next higher level, or frequency band, is called the etheric substance which functions in a frame called the negative space-time frame, which is a type of mirror image system to the physical. The third level is a transitional dimension between the space-time and the non-space/non-time dimensions (called the astral level in theosophical literature). This energy band seems to be the framework for our emotions.

The next three levels are levels of Mind: instinctive, intellectual, and spiritual mind. The seventh level is the level of Spirit (33). These last four levels are all non-space/non-time, and as such cannot be effectively described by the spoken or written word since, at the conscious level our perception mechanisms are only spatial and temporal. Therefore, this model consists of two important groupings of energy levels. The first is a space-time construct that we may think of as an enlarged physical frame embedded or enfolded in the second, a non-space/non-time construct and connected by way of the transitional frame. Space and time seem to be properties of this embedding frame just as mass and charge are properties of electromagnetic energy in the space-time frame. Events taking place in the non-space/non-time frame can affect space-time and thus the events in that frame.

If we use this model, the human reaction equation we need to devise good therapies now takes the form

$$\begin{aligned}
 &\text{function} \rightleftharpoons \text{structure} \rightleftharpoons \text{chemistry} \rightleftharpoons \\
 &\quad \text{positive} \quad \quad \quad \text{negative} \\
 &\text{space-time energies} \rightleftharpoons \text{space-time energies} \rightleftharpoons \\
 &\quad \text{mind} \leftarrow \text{spirit} \rightleftharpoons \text{divine} \rightleftharpoons \quad (4)
 \end{aligned}$$

As I see it, the space-time frame consists of two conjugate parts in a special mirror relationship to each other. Today we know only one of these parts well. I propose that substance functioning in the negative space-time frame consists of magnetic monopoles bound together to form

atoms and molecules that travel faster than light and thus are not directly observable by our five physical senses or by any known instruments. The radiation emitted by these atoms and molecules, called magnetoelectric energy, travels at 10^{10} times faster than the velocity of electromagnetic radiation from the substance at the positive space-time level (37). Table I gives some of the important corresponding characteristics of substance at these two levels. I am just now beginning to study some of the quantitative aspects of the relationship between these two frames, and cannot yet discuss them meaningfully.

At the extreme relativistic limit (where speeds exceed the speed of light), quantum mechanics predicts a spectrum of negative energy states (14). Specifically, a particle in a positive energy state can make a transition to a negative energy state and cascade downward to lower and lower negative energy states while radiating unlimited quantities of energy.

If we think of these negative energy states as all being occupied by particles, then when one particle moves to a positive energy state, the vacant energy state appears as a hole and has all the properties of an antiparticle. Since the hole has a positive energy, both our physical sensory system and our instruments can observe it, and we have detected this spectrum of *antimatter*. However, the sea of negative energy state particles, unobservable with such

Table I

Space-Time Substance Manifestations	
X	X*
Electric monopole	Magnetic monopole
Forms atoms, molecules, etc.	Forms atoms, molecules, etc.
Coherence state I	Coherence state II
Positive mass	Negative mass
Slower than light	Faster than light
Electromagnetic radiation at speed of light	Magnetoelectric radiation at $\sim 10^{10}$ speed of EM light
Positive energy states	Negative energy states
E increases as v increases	E increases as v increases
Positive time flow	Negative time flow
Gravitation	Levitation
Frequency	Frequency
Screened by Faraday cage	Not screened by Faraday cage
	Magnetic cage screening
I_e generates H	I_m generates E
Space I	Space II

"Mirror" Relationship

X = physical X* = etheric E = energy

sensors, remains undetected. However, their faster-than-light speeds and their negative mass do appear to be observable by other sensory networks developed in certain sensitive individuals like clairvoyants.

For many people, science holds the keys to our future. Looking into the past, they see times of hardship, darkness, ignorance and superstition—from which we are well delivered. Rather naturally, they are concerned that talk of things nonphysical and unobservable is poor science and could lead us back into the dark ages. Not so! The term “nonphysical” as used here merely differentiates what is presently known and physically sensed from what is not; “unobservable” refers only to the five physical senses and that kind of physics. After millenia of investigation, we may ultimately find that there is only *one* dimension and only *one* energy but that it displays multifaceted matrices of characteristics that are separately discriminable by multi-level networks in a well-developed sensory vehicle.

To make eq. 4 less threatening to such concerned scientific readers, we may look at the chemical potential, μ , of a physical molecule as influenced by forces manifest in these proposed various levels of the universe. It is well known that changes in the chemical potential of a molecule determine what will happen to that molecule. Further, the spatial gradient of μ determines the kinetics of attainment of that future potential. If living organisms are being influenced ultimately by chemical or by mechanical means, the effect must show up at the chemical potential level of those molecules that stimulate cell growth and repair or destroy invading organisms. In the most general cases, the chemical potential, μ^j , of the j th species in the environment is given by

$$\begin{aligned} \mu^j = & \text{chemical factors} + \text{electrical factors} \\ & + \text{pressure/volume factors} \\ & + \text{magnetic, gravitational, etc. factors} \\ & + \text{deltron potential factors} \end{aligned} \quad (5a)$$

For those readers interested in the mathematics of this equation, the full equation is

$$\begin{aligned} \mu = & [\mu^j + RT \ln \gamma^j C^j] \\ & + [Z^j e \phi - \frac{E^2}{8\pi} \frac{\partial \epsilon}{\partial C^j}] + pV^j + \dots + \\ & + f(\Delta, \frac{\partial \Delta}{\partial x}, \dots) + \dots \end{aligned} \quad (5b)$$

Here, the first terms on the right relate to the chemical state of the local system, the next to its electrical state, the next to its pressure or stress state. The next unsymboled terms reflect other field interactions like magnetic, gravitational, etc., and the final term is due to a new potential, Δ , associated with a nonelectromagnetic substance that is the bridge between negative space-time energy fields and the positive space-time level. I call this the “deltron” potential.

There will also be a chemical potential, μ^{1j} , of a molecule at the negative space-time level which also con-

tains several field contributions, one of which is thought to be directly influenced by the Mind level of the universe, and a deltron potential term that will be directly influenced by the positive space-time level. Thus, coupling relationships exist between all the different levels of the universe. An impulse at any level creates a set of waves rippling throughout.

Necessary Components of the Healing Mechanism

From the foregoing, we can see that humans are multi-dimensional beings, functioning on many different levels of Nature at once. We are mostly unaware of these levels of self and cannot visualize the extended energy structure that integrates our beingness with seemingly separate localizations of beingness. We need to realize our human potential as expressed by eq. 4 and to recognize that, if our energy structure is perturbed at any one of the indicated levels, ripples of effect flow out in all directions to produce corresponding perturbations at all other levels. However, the size of the effect and the time required for it to show up at another level will depend upon things like the intensity of the original signal, the conductivity of the medium of the original signal and the degree of coherence of wave structures at the boundaries between levels.

A body structure at the physical level is stable and sustained by a type of chemical homeostasis or chemical pattern which, in turn, is kept stable by a pattern of electrostatic and electromagnetic potentials and other specific positive space-time patterns of potential (e.g., deltron). These positive space-time patterns of energy are themselves kept stable by specific negative space-time patterns of potential which are themselves stabilized by energy field patterns at the mind level of the universe. At this point, it is useful to recall Wolf's law of bone structure: if one of our bones receives nonuniform stress for an extended period, the bone will grow new trabeculae (a type of bone girder) in the exact locations needed to support this stress distribution. The physical strain field probably interacts with the electrostatic field of the system producing changes, and these changes cause ions and molecules to be carried to specific locations and to agglomerate into specific tissues and structures making up the trabeculae. These changes probably all occur as a response to the strain energy contribution (pressure/volume factor) influencing μ^j in eq. 5.

Carrying this idea further, we can think of mental field patterns as acting like a stress influencing the field term of the magnetochemical potential of molecules, μ^{1j} , at the negative space-time level. By way of the deltron potential link, this pattern produces the required correlate at the positive space-time level in the μ^j and thus in the structure of the physical body.

When we remove the body stress that created a certain pattern of trabeculae in a bone, the trabeculae do not dissolve at once. Rather, they may dissolve very slowly (under the proper exercise) because of the molecular kinetics involved and they may maintain the body in a distorted shape for a very long time even though the initial physical cause is removed. The same is true for physical

structures generated by emotional or mental stress. But when these unharmonious patterns—which scatter energy from the main flow at the various levels already discussed—are finally removed, more energy will be available for the organism's functioning.

All this leads quite naturally to a perspective on healing; i.e., that pathology can develop at several levels and that healing is needed at all of them to restore the system to a state of harmony. Beginning at the level of Mind, the pathology affects both the negative and the positive space-time levels. We then perceive what we call disease or malfunction at these levels and try to remove it by a variety of healing techniques. The best healing mode is to help the individual remove the pathology at the *cause* level by a return to "right thinking". The next best is to repair the structure at the negative space-time level.

The third best is that of today's medicine practices, wherein doctors repair the structure at the positive space-time level. Since all the levels are coupled, repair at a lower level will produce some feedback modification or energy structure at a higher level. However, if harmony is not restored at the higher level, then a force will persist for pathological development in the lower-level energy structure.

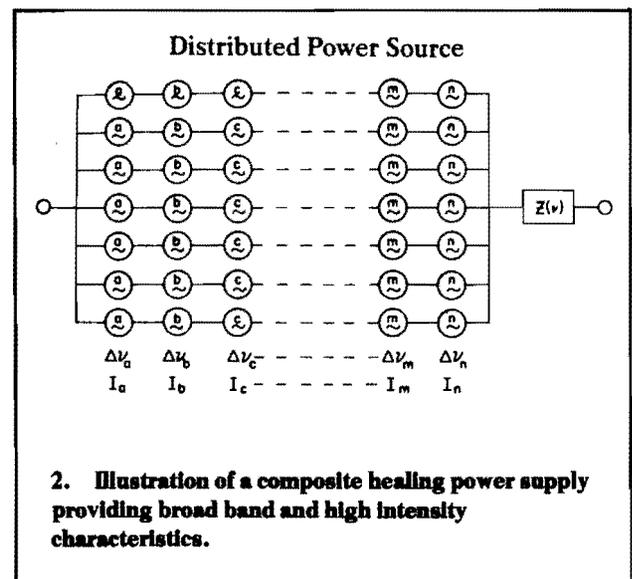
Of course, this force is basically like a thermodynamic potential to produce change. That is, the effects may show up in very different forms depending on how the energy structures of the positive and negative space-time frames have been changed. The closest analogy to this can be found in the field of "phase equilibria" of materials. If you heat a complex alloy to its melting temperature, then by cooling it again you produce a thermodynamic driving force for a phase change to one of several possible solid forms. By varying the chemistry, the cooling rate, or other variables in the process even slightly, you can alter the initial solid phase and the final crystalline form.

Healers use their own extended energy structure to channel the proper frequency components of the needed energy at the particular dimensional level into the one to be healed. Since a given pathology produces a particular energy pattern, and all patterns are formed by the superposition (type of addition) of waves, then a pattern can be changed or completely eradicated by putting in the right wave components at the right intensity level. To do this effectively, one must (1) generate or tap all these needed wave components, (2) tap these wave components from her/his extended energy structure at the specifically needed ratios of relative intensities, (3) tap the requisite correction energy pattern at a high overall intensity so that healing can be brief, (4) be sharply attuned to the one to be healed so that these energy components can be brought into his/her extended energy structure without scattering losses and (5) have the confidence of the one to be healed so that the healer's efforts are not distorted or undone by fears or doubts.

To understand how this is possible and to gain an appreciation for the implications of such healing events, let us consider the necessary structure of an electrical system designed to deliver electrical energy over a broad frequency range with a specific intensity distribution of frequencies. The individual components in the system will

be resonators having a limited band width of frequencies and limited output intensity. Thus, to get the required frequency and intensity ranges, we would need (1) several kinds of resonators coupled in series and (2) many resonators of the same kind, coupled in parallel. Finally, in order that this energy reach the load (the place where work is to be done), the supply must be properly coupled or impedance-matched to the load. Such a situation, illustrated in Fig. 2, must obtain when we are using biological resonators in healing. The extended energy structure of the healer, then, must include a number of different but overlapping frequency bands integrated into a functioning energy system. Further, as healers expand their consciousness to resonate over a larger frequency range and build themselves to transmit energy at higher intensities, they become more effective as a healing channel.

In the framework of my model, humans appear as beings whose primary level of existence is at the non-space, non-time levels of the universe and who have placed themselves in space-time vehicles of consciousness for the purpose of growing in awareness of and generating coherence in the True Self. Our perception mechanisms at the space-time vehicle level lock us into a very narrow view of reality and the Self. Disharmony created by the ego at the deeper levels of self materializes as error or disease in the space-time vehicle, indicating something wrong at a primary level. Self-healing or healing by another involves coordinating energy at various levels and teaches us that the sensory apparatus of the space-time vehicle perceives only the world of appearances and has no knowledge of reality. It teaches us that the space-time vehicle is not Life but only a simulator of Life.



The Body's Antenna System

According to some evidence, the envelope of the human body contains an antenna system by which the body communicates with its external environment. We will discuss some of this evidence later. Acupuncture data, among others, point to the presence of an antenna system near the surface of the human body by way of which the internal environment communicates with a matrix of points on the body surface and vice versa. The primary structure of this antenna system may be located not in the positive space-time frame of the body but rather at the negative space-time level. However, electrical correlates are located on the surface of the body along the acupuncture meridian and point network illustrated in Fig. 3. These points, thought to be the mapping transform of the negative space-time antenna system, show no structural differentiation from the surrounding cells because it is the bridging deltron potential changes, affecting the electrochemical potential, μ^J , of the ions of tissue fluid, that eventually lead to the electrical manifestation.

To proceed further we need to develop an understanding of (a) antenna theory, (b) external radiation fields, (c) internal radiation fields and (d) deltron fields.

(a) *Antenna Theory:* We are all familiar with the television-receiving antennas perched on top of most houses. Transmitting antennas are very similar. They consist of just a few long strips of metal perpendicular to the main shaft, designed to radiate (or receive) energy as effectively as possible.

Look at the two-wire transmission line shown in Fig. 4a, connected to a radio-frequency generator (or transmitter) (13). Along the uniform part of the line, electromagnetic energy is guided with little loss. The spacing between the wires is a small fraction of the wavelength, λ . At the right, however, the transmission line opens out. As the separation approaches or exceeds the wavelength,

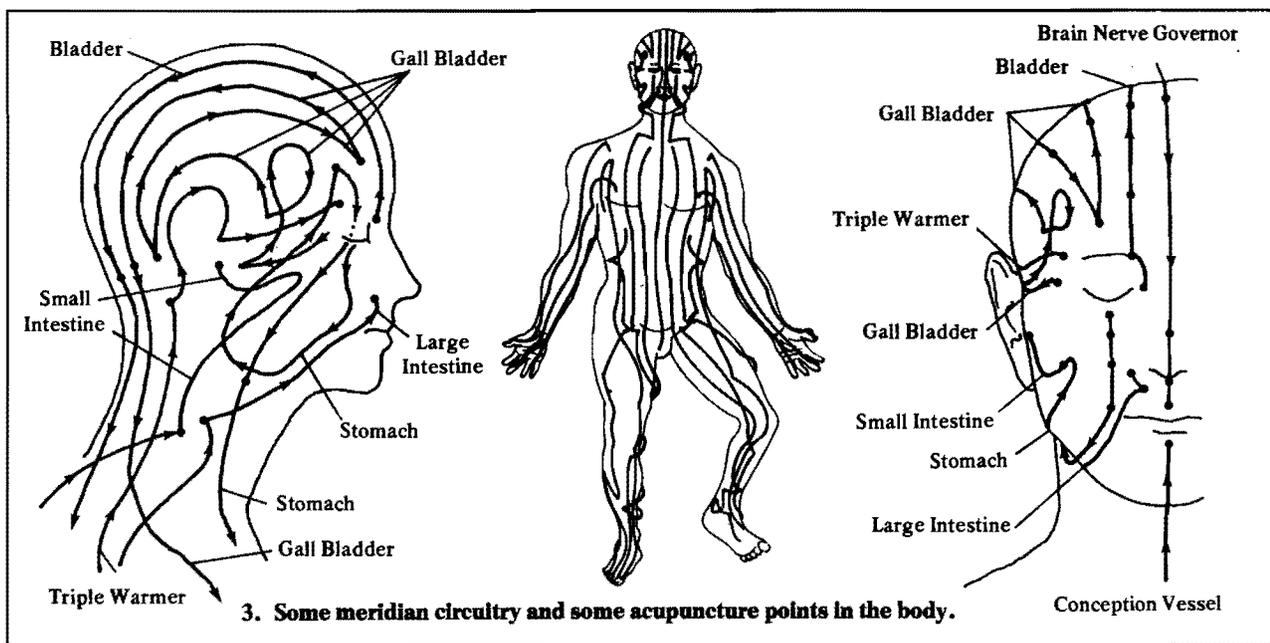
the wave tends to be radiated so that the opened-out line acts like an antenna, launching a free-space wave. In fact, an antenna can be defined as *the region of transition between a guided wave and a free-space wave*.

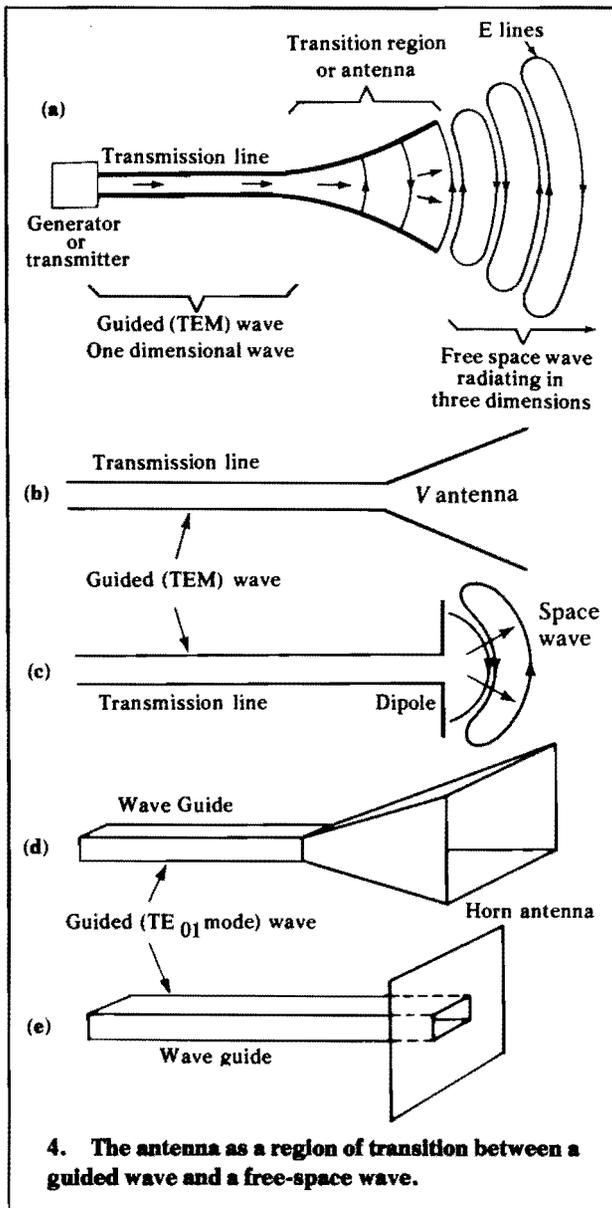
If the wires separate gradually, as in Fig. 4a, to a maximum separation greater than one wavelength, the arrangement will be an efficient radiator with maximum power beamed to the right as suggested. Other antenna shapes are the V or the simple dipole (Figs. 4b and 4c, respectively). The transition from a guided wave to a space wave is more abrupt with the dipole antenna and there is more stored energy in its vicinity.

Antennas, as we see, can take many forms. All that is necessary is a source of energy and a waveguide whose dimensions are first smaller and finally larger than the length of the traveling wave. For a receiving antenna, we just replace the energy source by a detector/amplifier system. The human body has an energy source—the autonomic, or sympathetic, nervous system (influencing secretion, smooth muscle, and contraction of blood vessels)—and an excellent waveguide—the myelin sheath surrounding each nerve axon—which conducts a traveling spiral wave to its endpoint just under the surface of the skin. This same marvelous nervous system functions also in a detector capacity.

Individual antennas can operate over a wide band of frequencies, and their characteristics are determined fairly directly by their form. But when we combine them into an antenna array—as would of course happen in humans, with their billions of nerve endings—things get more complex. The individual elements couple to and influence each other, and the performance of the entire array depends greatly on the arrangement and orientation of its individual elements. The details need not concern us here, though of course we should note that when one element in the array is not working properly, it can affect the performance of the whole.

The important things to know are that the human





body's antenna system could function over a wide range of wavelengths (because the particular arrangement of its individual antenna elements would preserve that ability), and could produce a directed scanning beam of circularly polarized radiation. (The wave would be circularly polarized at launching because its myelin-sheath waveguide would act as a spiral waveguide does.) And since adult humans contain about 600,000 miles of autonomic nerve fibers, there is plenty of "wire" for an antenna system of exquisite richness for transmitting and receiving information.

(b) *External Radiation Fields:* The most common example of human response to external radiation fields is dowsing (finding underground water without digging—sometimes called water-witching). Harvalik (8) reports that one Mr. de Boer was extraordinarily sensitive. As de Boer walked over a test course, his "Y" rod yielded a weak dowsing

response even when the electrical current in a wire several feet underground was reduced to 10^{-6} amperes (or a magnetic field strength at hand height of 10^{-10} gauss—earth's field strength = 0.5 gauss). Two conditions caused de Boer to get no signal as he walked over the wire: having his heart side face the positive electrode and having metal rods attached to his right forearm.

In the early afternoon Mr. de Boer's sensitivity dropped by a factor of 1000 because of the sun's position—early morning and late afternoon are best. Mr. de Boer was most sensitive after he drank two glasses of water (increase by a factor of 5-10).

He responded fairly uniformly to A.C. signals over the entire range from 1 cycle/second to 1 million cycles/second. Electromagnetic wave generators operating in the 7-m and 5-cm bands (1 watt and 0.2 watts respectively) were used to show that he reacts to the magnetic vector of the E.M. wave and to horizontally polarized E.M. radiation. He reacted regardless of whether the beam struck him directly or by reflection and from all sides of his body.

When a metal belt covered his adrenals, no dowsing signal was observed as he walked through the high-frequency beam. The signal was also suppressed when he wore a metal crown around his head even though the beam reached his waist, which was not shielded by a metal belt. However, when de Boer wore both the metal belt and the metal crown, he not only got a dowsing signal when he crossed the beam (waist high) but seemed to be even more sensitive to the high-frequency field of the beam.

Most recently, Mr. de Boer, using his "Y" rod in the Washington area, has been able to stand on a spot and by rotating himself, locate the angular direction from the spot to specific radio stations, given only their operating frequency. Such results can readily be checked by using a transistor radio set to the frequency and rotating the radio (minimum signal strength occurs perpendicular to the transmission beam).

Maby (15) has pointed out that one of the most convincing proofs of the reflex physiological nature of traditional radiesthetic and dowsing responses is to be seen in the consistent numerical relationship between a randomly varied physical stimulus and the neuromuscular response to it. The radiesthetic reactions nicely obey Weber and Fechner's classical (logarithmic) law for ordinary physiological sensations; whereas, if the response were psychological (e.g., imaginary or auto-suggested), we would find no such precise numerical relationship.

In ordinary field dowsing, it is always discontinuities in the generalized surrounding medium and sharp changes in the local field that cause the traditional rod reactions. In a state of rest, nothing much normally happens. One has to move through the local "field of manifestation" of the selected objective or else the field has to move or alter in strength or polarity. Otherwise, to get clear responses, the radiesthetist must be confronted by, say, intermittent alternating currents, pulsating magnetic fields, impinging corpuscular radiations, etc.

There are basically two categories of dowsing, (1) local field dowsing and (2) remote dowsing. In the former, a sensitive human takes a rod or pendulum out into the field and obtains a motion reaction to a spot under the

earth while located over it. Such a person could be walking, riding in a car, flying in an airplane, etc., but would still react when located over the spot. Remote dowsing has three subclassification, (1) remote field dowsing, (2) map dowsing and (3) information dowsing. In remote field dowsing, the sensitive individual operates while sitting in a truck on the edge of the area being dowsed. In map dowsing the dowser may be sitting at home by the kitchen table, working from a good map of the area to be dowsed. Information dowsing resembles map dowsing except that no map is used. Here, the dowser asks specific questions and codes the answers by the nature of the wand or pendulum motion (Edgar Cayce's procedure could be considered a very exalted form of information dowsing).

The "Vivaxis" (34, 22) concept has several things in common with dowsing, but involves not only information transfer but also energy transfer at power levels. Vivaxis teaches (22, 21) that all living organisms have a built-in antenna system through which they exchange energy and information with their environment. In the human species, and probably in all other species, one major antenna system is the acupuncture meridian and point network. At least one main component of human energy needs comes from an *external energy source*, and our well-being is highly dependent upon the continuous supply of this energy. This external energy source for an individual has been called one's Vivaxis and it seems to be located at the site of one's birth. Thus, a two-way energy link exists between the fixed Vivaxis source and the moving human on the earth. Such an orientation, altitude, and distance tracking might function much as TACAN* does for aircraft.

This Vivaxis energy source appears to be an energy vortex operating at the negative space-time level. The amount of energy received for use by the human energy system depends upon (1) the transmitting rate of the V-source, (2) the propagation characteristics and disturbances of the intervening media and (3) the receiving characteristics of the human antenna system. Unless these antenna elements are working properly, they will not receive the correct frequency spectrum of energy at a high enough power level to keep the body's internal organs functioning. Thus, many of the Vivaxis techniques deal with correcting malfunctions in these array elements. Such corrections have ended crippling paralyses, cleared up clouded thinking processes, etc.—all leading to greatly changed behavior and personality (21).

Vivaxis is concerned with whatever harms or enhances the functioning (21) of any element in the human antenna array—chemicals, fields, radiation, shock, drugs, hypnosis, meditation, etc. It is also concerned with the magnetic polarization of bone and tissue structure (at the negative space-time level) and with the propagation of a helical wave field that is strongly polarized when people are aligned with their Vivaxis. It deals with receptors on the head and body, especially with communication centers on the head (a grouping of receptors). All chronic troubles are thought to be traceable to disrupted code receptors

(and thus neurons) in the cortex of the skull (plus hands and feet where reflexes terminate). Finally, it deals with creating experimental Vivaxes, with the effects of chemical combinations on controlling the V-field, and with the effects of wave linkages between one person and others or between the person and substances, etc. Observations that the V-field fluctuates just before major earthquakes support its primarily negative space-time character (22).

Further, my studies of bio-mechanical transducers (38) and other studies on kinesiology (31) attest to a strong interaction between a body antenna system and the environment.

(c) *Connection with the Inside of the Body:* We now generally accept that stimulating specific surface acupuncture points affects specific body organs. Conversely, stimulating these body organs directly causes a response in the corresponding elements of this skin network (16). Recently the Soviets have discovered "the semiconductor effect," (35, 36) wherein they measure the difference in skin resistance between an acupuncture point on the left side of the body and the analogous point on the right side. Normal difference is zero. Any significant difference, then, seems to mean pathology for that particular meridian, especially at the corresponding body organ or gland. The greater the difference the worse the trouble. Motoyama has used this effect to develop a medical diagnostic technique with almost unlimited potential (20).

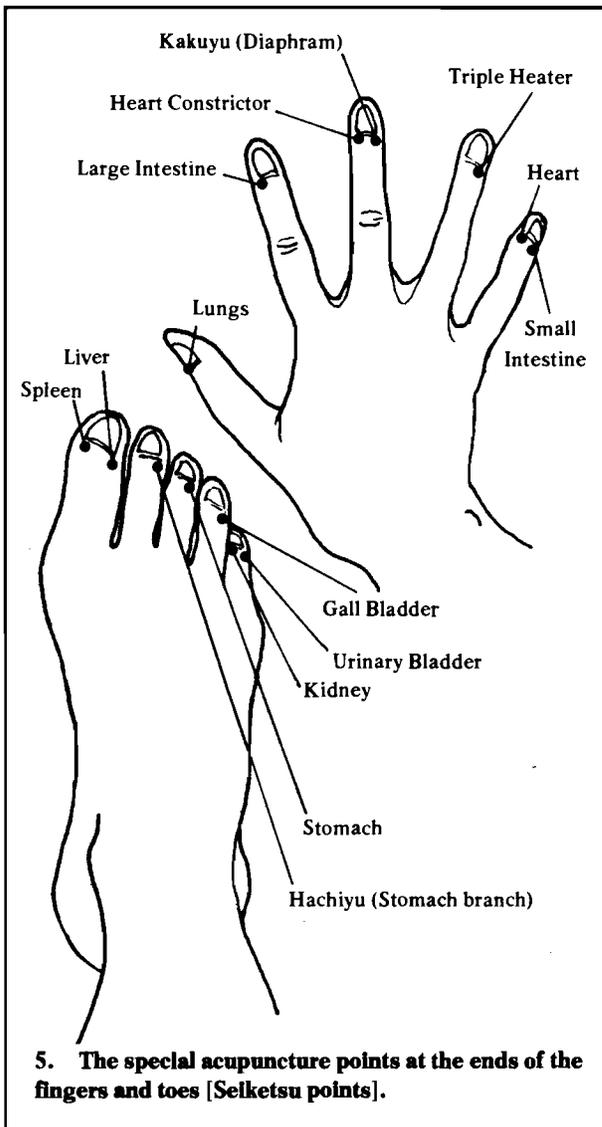
Motoyama's technique involves applying electrodes (with electrode paste) to the ends of 14 meridians (the Japanese have two more meridians than the Chinese) on the fingers and toes as illustrated in Fig. 5. He uses a single large indifferent electrode on the wrist and consecutively applies a 3-volt D.C. battery between this large electrode and one of the 28 at the ends of the meridians. He measures the initial current, i_0 , and the final current, i_{∞} , of the typical current wave shown in Fig. 6 and stores these values in a small on-line computer. Within seven minutes, all measurements can be made and the computer can print out the standard deviation of changes between left and right-sided values for all the meridians of the body. When the values fall within the allowed range, they are printed out in black; when they lie above or below the range, they are printed out in red indicating that the autonomic nervous system is in an unstable or excited state. Too-high values mean the whole body is excited, often signaling the beginning stage of disease. Too-low values mean the whole autonomic nervous function is reduced, generally through a chronic disease.

Acupuncturists have noticed that, when a needle is placed in a point to be treated, a suction-like or muscle contraction force holds it in against mild pulling pressure. But when the treatment has been completed, the needle is automatically released and can be withdrawn very easily. In addition, it has been noticed that one often finds an electrical potential difference, $\Delta\phi = \phi_L - \phi_R$, in such symmetrically located points so that joining them leads to a

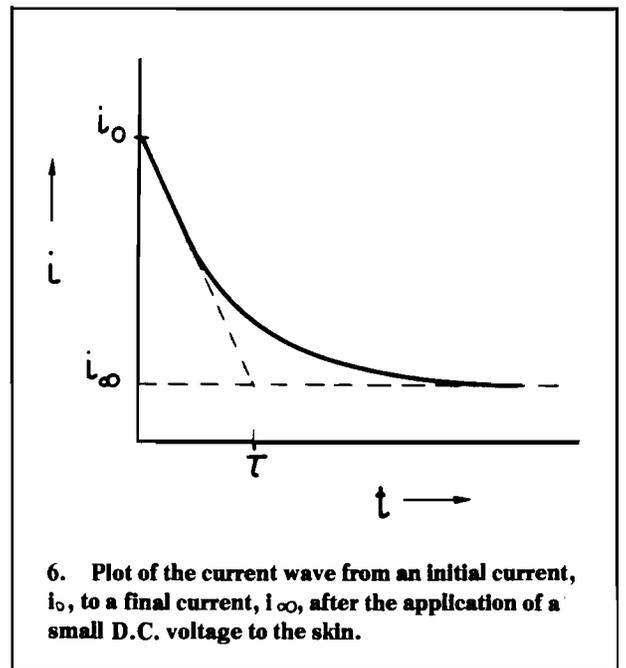
*Terrestrial Aircraft Communication and Navigation

current flow. Finally, we need to recall that acupuncture treatment uses all the following techniques: pressure, chemicals (moxa), needles (pressure plus electrical), electric current and laser light pulses (generates electrical stimuli). We will see how these fit into a consistent explanation.

All of the foregoing influences can arise from an imbalance of the electrochemical potential, μ^j , of the tissue fluids between the left and right sides of the body. Equation 5 shows us that a chemical, an electrical and a pressure counterpart should be expected. A magnetic counterpart should be anticipated as well—and very recently it has been observed. If we look at acupuncture treatment, we see that all of its aspects change the difference in electrochemical potential between two analogous points: application of a pressure or a needle, the application of chemicals (moxa), the application of electric current pulses, and the application of laser light. In addition, since the electrochemical potential contains a term associated with stored magnetic energy, we should expect that applying small magnets to acupuncture points may help to restore the body to a condition of balance and health.



5. The special acupuncture points at the ends of the fingers and toes [Selketsu points].



6. Plot of the current wave from an initial current, i_0 , to a final current, i_∞ , after the application of a small D.C. voltage to the skin.

The argument developed here leads us to the idea that physical pathology in the body shows up as a change in the electrochemical potential of the tissue fluid molecules of the stratum corneum (perhaps the pH of the tissue fluid changes also). This must be caused by a left-right imbalance in the autonomic nervous system. But how could such an asymmetry occur in this system since no apparent polarities exist at the electromagnetic level? However, such polarities do exist in the biomechanical transducer measurements of the body which are thought to deal with magnetolectric energy at the negative space-time level (37). If an imbalance (developing pathology) occurred at this level, then, as suggested in section 3, it would produce an imbalance in the deltron potential between the left and right sides of the body. Thus, in response to the left-right imbalance of μ^j via the deltron factor, changes in osmotic pressure, electrostatic potential and ionic concentration will occur between the left and right sides of the body to try to restore homeostasis.

Note that if the fibers of the autonomic nervous system do act as wave guides for circularly polarized electromagnetic or deltron waves, they would irradiate the skin at the locations of the acupuncture points and very likely reduce the local measured resistance without any histological (structural) change in the cells at that point. This behavior might account for (1) the lack of any observable histological difference between the acupuncture point cells and neighboring cells and (2) the observation that the acupuncture points may move about by a millimeter or so from day to day.

Controlled Energy Fields

In the past we have depended on chemicals and surgery for healing, but eqs. 4 and 5 show us what looks like a better way. Controlled physical energy fields offering us control of electrochemical potentials can give us effective healing techniques without violating the body by surgery or upsetting its chemical balance. Thus, we can expect to see the development of techniques based on electrostatic, magnetostatic, electromagnetic, sonic, static pressure and optical energies, among others. Of course, the techniques will need to function over a specific range of frequencies, deliver specific energy intensity at a specific frequency and deliver it to the body antenna system in a specific pattern. These will be the first fields to be practically developed.

Next (following quickly upon proof of the deltron's existence) we can anticipate the development of deltron field techniques. Eventually, negative space-time energies will be discovered and put to use therapeutically. And ultimately, we will deal with energies at the mind level and recognize that, no matter what type of device is created to administer healing energies, patients can frustrate the cure by inputs from their own mind energies. For the near future, I am focusing on detecting the deltron.

Acknowledgement

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References

1. Backster, C. "Evidence of Primary Perception in Plant Life." In *International Journal of Parapsychology*, 10:6 (Winter, 1968).
2. Becker, R. D. and D. G. Murray "The Electrical Control System Regulating Fracture Healing in Amphibians." In *Clin. Orthop. and Rel. Res.* 75, 169 (1970).
3. Brown, B. B. *New Mind, New Body—Biofeedback: New Directions for the Mind*. Harper and Row: New York, 1975.
4. Day, L. and G. de la Warr *Matter in the Making*. Vincent Stuart, London: 1966.
5. Day, L. and G. de la Warr *New Worlds Beyond the Atom*. Vincent Stuart, London: 1958.
6. Forwald, H. *Mind, Matter and Gravitation*. Parapsychology Foundation: New York, 1969.
7. Green, E. "Biofeedback for Mind-Body Self Regulation: Healing and Creativity." In *Academy of Parapsychology and Medicine, Varieties of Healing Experience Symposium*: De Anza College, California, Oct. 1971.
8. Harvalik, Z. V. "Sensitivity Tests on a Dowser Exposed to Artificial D.C. Magnetic Fields." In *American Dowser* 13:3, 85 (1973). Ibid 14:1, 4 (1974).

9. Hawkins, D. and L. Pauling *Orthomolecular Psychiatry*. W. H. Freeman and Co.: San Francisco, 1973.
10. Justa-Smith, Sister "The Influence of Enzyme Growth by the 'Laying-On-of-Hands'." In *Academy of Parapsychology and Medicine, Dimensions of Healing Symposium Proceedings*: Los Altos, California, 1972.
11. Karagulla, S. *Breakthrough to Creativity*. De Vorss and Co., Inc.: Los Angeles, 1967.
12. Konig, H. "Biological Effects of Extremely Low Frequency (EFL) Electrical Phenomena in the Atmosphere." In *J. Interdiscipl. Cycle Res.* 2:3, 317 (1971).
13. Kraus, J. D. and Carver, K. R. *Electromagnetics, 2nd Ed.* McGraw-Hill: New York, 1973.
14. Lipkin, H. J. *Quantum Mechanics*. North Holland Publishing Co.: Amsterdam, 1973.
15. Maby, J. C. "Radiesthesia and Wave Theory." In *The American Dowser* 14:2, 69 (1974).
16. Mann, F. *Acupuncture*. Vintage Books, Random House: N.Y., 1972.
17. Miller, R. N., P. B. Reinhart and A. Kern *Thought as Energy*, ed. W. Kinnear. Science of Mind Publications: Los Angeles, California, 1975.
18. Milne, G. *The Pyramid Guide* 18, 5 (1975).
19. Motoyama, H. "The Mechanism by which PSI-Ability Manifests Itself." In *Impact of Science on Society* 24, 321 (1974).
20. Motoyama, H. "How to Measure and Diagnose the Functions of Meridians." In *Intl. Assoc. for Religion and Parapsychology* 1:2, 1 (Sept. 1975).
21. Nixon, F. *Born to be Magnetic, Vols. I and II*. Magnetic Publishers: P.O. Box 718, Chemainus, British Columbia, Canada.
22. Nixon, F. and B. O'Connor *Vivaxis: The Spiral of Life*. Magnetic Publishers: P.O. Box 718, Chemainus, British Columbia, Canada.
23. Ostrander, S. and L. Schroeder *Psychic Discoveries Behind the Iron Curtain*. Prentice Hall: New York, 1970.
24. Puharich, A. "The Search For a Common Denominator in Medicine and Healing." In *Academy of Parapsychology and Medicine, Dimensions of Healing Symposium Proceedings*: Los Altos, California, 1972.
25. Puthoff, H. and R. Targ "Psychic Research and Modern Physics." In *Psychic Explorations*, editors E. D. Mitchell and J. White. G. P. Putnam's Sons: New York, 1974.
26. Reichmanis, M., A. A. Marino and R. O. Becker "Electrical Correlates of Acupuncture Points." To be published in *IEEE, Trans. on Biomed. Eng.* (1975).
27. Schumann, W. O. "Über die Strahlungslosen Eigenschwingungen einer leitenden Kugel die von einer Luftschicht und einer Ionosphärenhülle umgeben ist." In *Z. Naturforsch* 7a, 149 (1952).
28. Swann, I. *To Kiss Earth Good-bye*. Hawthorne Books, Inc.: New York, 1975.

29. Targ, R. and H. Putoff "Information Transmission Under Conditions of Sensory Shielding." In *Nature* 252, 602 (1974).
30. Taylor, J. *Superminds*. Macmillan: London, 1975.
31. Thie, J. F. *Touch for Health*. De Vorss & Co.: Santa Monica, California, 1973.
32. Tiller, W. A. "A.R.E. Fact Finding Trip to the Societ Union." In *A.R.E. Journal* 7, 68 (1972). [A.R.E. = Association for Research and Enlightenment, Virginia Beach, Va.]
33. Tiller, W. A. "Consciousness, Radiation and the Developing Sensory System." In *Academy of Parapsychology and Medicine, Dimensions of Healing Symposium Proceedings*: Los Altos, California, 1972.
34. Tiller, W. A. "Radionics, Radiesthesia and Physics." In *Academy of Parapsychology and Medicine, The Varieties of Healing Experience Symposium Proceedings*: Los Altos, California, 1972.
35. Tiller, W. A. "Some Physical Network Characteristics of Acupuncture Points and Meridians." In *Academy of Parapsychology and Medicine, Acupuncture Symposium*. Stanford University, California, June 1972.
36. Tiller, W. A. "Some Psychoenergetic Devices." In *A.R.E. Journal* 7, 81 (1972).
37. Tiller, W. A. "The Positive and Negative Space-Time Frames as Conjugate Systems." *A.R.E. Medical Symposium*: Phoenix, Arizona, January, 1975. In *Future Science*, eds. Stanley Krippner and John White. Doubleday-Anchor: 1976.
38. Tiller, W. A. and W. Cook "Psychoenergetic Field Studies Using a Biomechanical Transducer." In *Proceedings of A.R.E. Medical Symposium on New Horizons in Healing*: Phoenix, Arizona, January 1974.
39. Tompkins, P. and C. Bird *The Secret Life of Plants*. Harper and Row: New York, 1972.
40. Vogel, M. "Man-Plant Communication." In *Psychic Exploration*, eds. E. D. Mitchell and J. White. G. P. Putnam's Sons: New York, 1974.
41. Woolridge, D. E. *The Machinery of the Brain*. McGraw-Hill Book Co., Inc.: New York, 1963.