

We consider the next paper of primary importance in positioning biofeedback and self-regulation with its philosophical and scientific progenitors. It provides us with an overarching conceptual framework that integrates the Greens' self-regulation concepts with concepts from ethology, Freudian psychodynamics, perception theory, psycho-neuroanatomy, Autogenic Training, yogic theory and Jungian psychology.

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BIOFEEDBACK, CONSCIOUSNESS, AND HUMAN POTENTIAL¹

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In 1939, shortly after my wife, Alyce, and I became acquainted with a man by the name of Will J. Erwood, a person I began to think yogi an Irish yogi, we began talking together about the how of autonomic self-regulation. Erwood could demonstrate some of the unusual psychophysiological skills that we have since observed in yogis, both in India and in the United States. Even though I was only an undergraduate student at the time, in the Department of Physics, University of Minnesota, I still knew enough biology to understand that the autonomic self-control he demonstrated was not possible but he was doing it, and from him I learned a few simple psychophysiological self-regulation controls. For one thing, I learned how to control my blood pressure.

That control developed as a side effect of a meditative exercise. The purpose of the exercise was to become conscious of certain aspects of the unconscious. In order to do that, it was necessary to first put the body into a trance state, a state of deep striate and autonomic quietness. At the same time it was necessary to remain mentally alert but free of thoughts. I was learning to go beyond relaxation, though relaxation was a necessary first step.

It was only later that I learned, during physical examinations, that my blood pressure was under my control. The first experience was when I was working as a physicist in the guided-missile business at the Naval Ordnance Test Station (China Lake, California). I was rather tense in the doctor's office, wondering

if the pressure would be too high, so I directed into my right arm the feeling of deep quietness that I had learned in preparation for meditation, and the puzzled doctor said, “Something is wrong. I can’t get a reading.”

It occurred to me then that maybe I had overdone it. So I said, “Take it again, I believe it is OK.” And it was. A similar event occurred ten years later during my physical entrance exam as a graduate student at the University of Chicago.

I mention these events because experience of this kind shaped my view of psychology, biology, and consciousness. The effect of experiential knowledge on one’s view of the world is difficult to overestimate. Without being analytical, I knew that a degree of psychophysiological self regulation in the autonomic nervous system was possible. Those early existential events made it easy to develop, much later, in a laboratory setting, useful hypotheses about psychophysiological self regulation.

After becoming well acquainted with Will Erwood, my question as a student in a scientific discipline changed from, “*Is* he doing it?”, to, “*How* is he doing it?” Personal experience saved twenty years of left-brain questioning of the type, “is this a fact?” The question was, “*How* is this a fact?”

And the focus of this paper is on the *how*, on the rationale of psychophysiological self regulation, on the relation of body control to states of consciousness. For an East Indian yogi, to know *how* in neurological terminology may not be necessary. He has a cosmological and anthropological view that satisfies his need for theory. But we are of a different mythology, and if we wish to interest rational, logical, discursive, intellectual people in the need for psychophysiological self regulation in a modern world, we need a modern explanation—or at least a modern metaphor.

Mystically oriented people sometimes say, “Who needs a rationale? *Being* is what is important, not thinking.” Nevertheless, the left brain rationale is very important in our culture. For instance, fifteen years ago I gave a lecture on “biofeedback theory and clinical practice” to a medical society. Afraid of “bringing coals to Newcastle,” I presented the neurological aspects of brain/mind coordination in a thumbnail sketch. I was embarrassed to be lecturing to physicians about cortical-subcortical coordination, describing how

our perceptions and visualizations made neurohumoral changes in the central nervous system. With the mistaken idea that it would make my presentation more acceptable and less insulting to their intelligence, two or three times I used the phrase, “As you know. . . .” After the lecture, a physician came up from the audience and said, “You made a serious error.” While I was wondering if I had made a technological slip, he said, “You said, ‘as you know.’ Actually, neither I nor anyone else here has heard of perception theory and its brain correlates. The closest I have come to this is a one-hour lecture on psychosomatic disorders in medical school, twenty years ago. If you want me to understand how physiologic self regulation works, you are going to have to spell it out in detail. Otherwise I can’t believe it.”

He was saying, using modern facts and a bit of metaphor, that a more complete theory of “how it is,” would make it possible for his left cortex to relax and let the right cortex create a few visualizations of the overall picture. The left cortex seems to be in charge of rationality, and it never wants to appear foolish. If it has a satisfactory rationale, however, hypothesis creation and testing become possible. (Then the left cortex can consider itself flexible, and forward-looking.)

The need to know *how*, is not peculiar just to physicians. Patients have the same need. If the patient does not understand what lies behind what he or she is doing during self regulation training, then that procedure is not much better than a placebo. And it then behaves like a placebo, with good effects at first, gradually fading away to zero. Not all biofeedback therapists are clear about this. Many are only no beginning to realize the patient’s need for understanding.

Providing an adequate explanation to a grade-school student is much simpler than providing an adequate explanation to a neurologist who may be a patient, but in both cases it is necessary for them to understand *how* they can do what they are trying to. As training progresses, they begin to *know* that the power to effect change is in them, not in the machine and not in the therapist. When these two conditions of successful self regulation are fulfilled, *understanding* and *knowing*, then the self regulation skills which are being learned tend to become permanent acquisitions, and can be generalized to many problems in life, not merely psychosomatic disorders.

Even when the left cortex is not very bright, it has veto power over almost everything the right cortex wants to do, or to try, or to visualize. How remarkable. The part of our brain which knows very little on an experiential basis (except the recording and analysis of facts, and thinking, giving learned opinions, and talking), has executive control over the part of ourselves that intuitively but a-rationally knows things. The left cortex, by itself seems never to be happy until it either knows everything, or is defended against everything it does not know. Within bounds, that is a virtue, of course. If correct true-to-natural-law understanding is achieved (and that is certainly the goal of science), then genuine self control becomes easier.

In addition to wanting to know, humans have another important attribute. We want to be able to *make things happen*, at will. This is our Western orientation, and it seems to have usefully accelerated world evolution. For us as individuals, if we are able to synthesize appropriate knowledge and put it to use, we both understand and can make things happen.

In honor, then, of the “rationale of self regulation,” and the need to understand, I would like to focus on seven converging lines of thought which in my experience absorb most scientific facts and experiential data in the field of mind-body relationships. I apologize for possibly giving an authoritative impression in the following. I am limiting the focus of this paper mainly to conclusions, and it is not possible to cite, in our traditional left cortex manner, the hundreds of germane references.

The converging lines which have been most important to my own standing are *ethology* (the comparative study of learning and instinct in animals and humans, including behavioral genetics, physiological genetics, conditioning, and general learning theory), classical *Freudian psychodynamics*, *perception* in animals and in human, *psycho-neuroanatomy* (neuroanatomy, neurophysiology, and the neurological and hormonal correlates of perception), *autogenic training* (as developed by Johannes Schultz, and extended by Wolfgang Luthe), yogic theory (of mind-body coordination), and Jungian psychology.

1. **ETHOLOGY.** In Chapter II of W. H. Thorpe’s book, *Learning and Instinct in Animals*, there is a comprehensive summary of the mechanisms of perception, learning, and behavior in animals.² It concludes with the thought that ethological research provides “a very strong a priori case for explanation of animal behavior

in terms of 'expectancies.' Expectancies, it should be noted, appear in humans as correlates of autogenic (self generated) visualization, and are responsible for much of our behavior.

Until 1940, or at least until the days of ethologists Tinburgen and Lorenz, the concept of instinct in animals was avoided by biologists and psychologists. As Thorpe points out, instinct, as a scientific puzzle, was considered disreputable because of its postulation of forces which now are known as biochemical gradients, but which then were not understood. Ethologists (accompanied by Lashley and others who focussed on brain structure and learning theory), were beginning to express the idea that drives are essentially the activity of specific neurological and hormonal mechanisms, and that a general drive of some kind is actually the partial expression of a very specific sensory-motor mechanism of the central nervous system (CNS). Ethologists began talking about *fixed action patterns* and the fact that at least in humans, "habit mechanisms may become drives." Such action patterns are, according to Thorpe, "items of behavior in every way as constant as anatomical structures." Some action patterns known as *consummatory acts*, when an end point or climax of a major or minor chain of instinctive behavior comes about.

Based purely on observation, Lorenz pointed out that the coordination mechanism of each fixed pattern seemed to build up a kind of specific tension in the CNS, and "if the animal does not find itself in the appropriate situation for the action pattern to be released, the specific action potential is, as it were, 'dammed up.' The damming up process results in a lowering of the threshold for the stimuli effective in releasing that particular action pattern. Indeed, if continued long enough, the tension may accumulate to the point at which the action pattern goes off" without any external stimulus at all, as if it were forcing its way out and giving rise to what is called "vacuum activity," but for which a more descriptive term is *overflow activity*. Without much effort we can find parallels in our own behavior.

Then the idea began to develop that drive originates from specific patterns, not the patterns from the drive, and researchers began to talk of *Action Specific Energy*. In addition to action specific energy, there arose another group of ideas related to *action specific exhaustibility*, biochemical exhaustion of a specific nervous coordination mechanism, and whether we look at the problem from the psychological side as exhaustion of *psychic energy*, or exhaustion of neuro-chemicals, behaviorally we have the same thing, and we begin to understand the relationships between brain processes and psychological processes.

In addition, from the study of animals, it seemed that even though neurochemical potentials were built up that involved appetite behavior, some sort of internal blocks (or thresholds that prevented continuous discharge of potential) existed, and Lorenz postulated the existence of an *innate releasing mechanism*, which is *triggered* by an appropriate *releaser* (the biologically right stimulus in the environment), thus allowing behavior to take place. Also, if one kind of behavior is blocked, then a phenomenon called *displacement* often occurs, transformation of a normal specific action pattern into some other kind of activity.

What is learned from ethology is that there is a continuous inter-play between the perception of the environment and the kinds of behavior displayed. For instance, nest building in birds seems to involve trigger-releaser mechanisms in which twenty to thirty different perceptions result in twenty to thirty kinds of specific actions.

Using Thorpe's phraseology, "perception of the environment" is correlated with what appears to be "the potential for specific kinds of behavior," which we can sometimes identify as associated with specific changes in concentration levels of neuro-humors. One of the earliest examples was a hormonal and behavioral analysis of the Siamese fighting fish, *Beta Splendens*, in response to perceptual stimuli.

2. FREUDIAN PSYCHODYNAMICS. In a uniquely insightful article called "Behavior Correlates of Neural Function," psychiatrist Mortimer Ostow discusses the similarities of theory in ethology and psychoanalysis.³ The beginnings of brain and behavior correlations resulted from the many brain damage studies which began to appear after World War I. Then came Penfield's work with epileptic seizures. Bilateral temporal lobectomies and frontal lobotomies also added to the brain-behavior data bank. It was Ostow, though, who first pointed out that the empirical discipline of ethology and the theory generated from those observations, correlated remarkably with the behavioral observations made by psychoanalysts, and with the psychodynamic theory that sprang from those observations. As Ostow points out:⁴

. . . The responsiveness of instincts to symbolic stimuli are formulated quite similarly in ethology and psychoanalysis despite their completely independent evolution . . . in a sense, this result must be inevitable if both disciplines are based upon precise description of behavior in the natural state rather than in laboratory isolation . . . it would be disappointing if there were really significant divergences between the principles of ethology and the principles of psychoanalysis. The differences that do exist arise from the fact that ethologists do not assume the existence

of any kind of psyche whereas the psychoanalysts attempt to account for the behavior they observe by antecedent psychic calculations. They are in a position to do this because they possess reports of these psychic changes which they can correlate closely with overt behavior. What may seem to be abstruse psychoanalytic theory is merely a set of hypotheses constructed for the purpose of explaining and predicting overt behavior.

Ostow points out that anticipation which we may not be conscious of (as in unconscious visualization in the use of placebos), has psychic and somatic mobilizing or demobilizing effects, often “mediated by the autonomic nervous system.” In other words, Ostow realized three decades ago that there is a *psychophysiology of visualization*, and in animals it depends on perception, but in humans it depends not only on perception but also on non-perceptual symbolic processes.

I will add no more on psychodynamics, for that field is well known, but the striking similarity between ethologic theory and Freudian theory is an important conjunction in the search for explanations of our own behavior.

3. PERCEPTION. This is one of the most fascinating subjects in the field of psychology, and I would like to be able to go into depth, starting with Helmholtz and Fechner, over 100 years ago, but there is no space. Only conclusions can be reviewed.

Many writers have pointed out a pure image of the world, as it is presumably registered in the sensory apparatus, does *not* come to consciousness. What does become conscious, is the internal image resulting from the fusion of sensory percept and the fantasy which represents the emotion or the instinct. As Ostow has put it, “To the fused image the sensory percept contributes the conviction of reality and the fantasy contributes the affect. In fact, consciousness may be thought of as the organ of apperception. Apperception, please note, is defined as “the relating of new to previous knowledge.” That is one of the goals of this paper.

4. PSYCHO-NEUROANATOMY. To the best of my knowledge, the first modern paper in the field of neuroanatomy, behavior, and states of consciousness, is Papez’ 1937 article titled, “A Proposed Mechanism of Emotion.”⁴ Sigmund Freud was originally interested in neurology and its correlates in the psyche, but his mid-life position regarding neuroanatomy was that he could think of nothing more useless for understanding psychodynamic mechanisms than an understanding of the brain but that was when brain knowledge was rudimentary. Later, when neurotransmitters began to come into scientific view, his earlier interest in neurology returned. During the Forties and Fifties, the main features of brain-mind interrelationships

began to be seen, and relationships began to be delineated between the cortex and subcortical structures, voluntary and involuntary, conscious and unconscious. Finally, through years of continuous neuroanatomical studies, the most critical aspects of motivation and emotion focused directly on the limbic system, indicated in the lower left corner of the Rationale Diagram.

New data on limbic structures continuously come into the picture, of course, involving neurotransmitters, biochemical gradients, glial electro-potentials, and solid-state, diode-like behavior of living membranes, but the early view of the limbic system as the visceral-emotional brain involved in every kind of behavior, has not significantly changed.⁵

Of particular significance in the theory of self regulation training is the fact that the major difference between humans and animals seems to be that animals appear locked into the machinery of objective sensory systems and into the tightly correlated limbic-hypothalamic-pituitary behaviors, whereas humans are able to inject, through self-generated imagery and visualization, biochemical and neurological perturbations into these CNS structures. In other words, animals are controlled mainly by what they sense but humans are controlled not only by what they sense, but also by what they visualize. This is the neuroanatomical and theoretical basis, of course, of visualization training, of biofeedback and psychophysiological self regulation training.

Visualization coupled with volition seems to function through the box in the Rationale Diagram (see Section 3, page 52, Figure 3.2) called “Emotional and Mental Response to Inside-the-Skin Events.”⁶ In humans, visualization enters the nervous system as a self-induced psychological event, and often initiates physiological change just as effectively as if it were an outside-the-skin sensory event.

Reductionists may argue that what is really going on inside-the-skin is only a biochemical process having epiphenomenal correlates. That is, a person only imagines that he or she is visualizing something *at will*. What is referred to as self created visualization, they say, is actually the involuntary, though conscious, psychological correlate of endogenous biochemical and neurological processes. They maintain it is impossible to do anything volitionally because there is no such thing as volition.

To holders of that banal and self-defeating theory we say, “As soon as colitis, or hypertension, or migraine begins to ruin your life, let us know. We can show you how to get out of that bind, if you *will*. We can help you: (1) formulate specifically what you want to have happen in the autonomic nervous system, (2) train you how to visualize what you want, and (3) help you learn how “to

let it happen.” In consequence, your ‘uncontrollable’ physiological dysfunctions will begin to come under your voluntary control. If a left-cortex theory is the only thing standing in the way of your return to good health, then give it up.

5. **AUTOGENIC TRAINING.** The psychological side of physiological self regulation was known to Johannes Schultz early in this century, though his handbook, *Autogenic Training*, was not translated into English until 1959.⁷ In Autogenic Training there are six standard exercises, involving the feeling of heaviness throughout the body, peripheral warmth, heart rate regulation, respiration control, abdominal warmth, and cooling of the forehead. When the standard exercises are mastered, the trainee experiences the body as a “resting mass which is heavy and warm, the heart slows, deep and slow respiration is perceived, and the head is sometimes experienced as being separated from the rest of the body. After learning the basic standard exercises, a series of meditative formulas are sometimes used, ending with one called, “Answers from the Unconscious.” Schultz was ahead of his time.

The parts of Autogenic Training (Figure 3.2) I wish to draw especial attention to are called “organ specific formulas,” and “intentional formulas.” They are far beyond simple deep relaxation. After total relaxation can be quickly achieved by a patient, and he or she can move easily into the deeply quiet state, then target-oriented visualization can be used. The chapter called “Biofeedback and States of Consciousness” includes some useful examples of this kind of visualization training and its physiological correlates.⁸

With the information of the Rationale Diagram in mind, it is clear how biofeedback training works. Inside-the-skin information that was previously known only to the hypothalamus and other deep-brain structures, is fed back to the cortex via outside-the-skin biofeedback devices. This feedback tells the cortex how to change its visualization so as to bring about changes in the physiology. Biofeedback accelerates Autogenic Training because the cortex finally is able to find out, rather than just imagine, what is going on “down below” in the limbic-hypothalamic-pituitary domain. We must remember that the body is a puppet of the CNS, and feedback from the body is really feedback of subcortical processes in the CNS. Thus, biofeedback implements, at least partially, the dictum “Know thyself.” And that knowing sets us free of subcortical distortions of homeostasis, and the inevitable psychosomatic consequences. For some patients, freedom from subcortical distortion leads, often unexpectedly, to transpersonal experience, to a far deeper knowing of themselves.⁹

6. YOGIC THEORY. But how is it possible for an idea in mind (a visualization) to become an enzyme in the body? Here Western science is at a loss. An interesting theory which may help solve this puzzle, comes from yoga. Namely, "The body is a special case of the mind. Every cell of the body is a cell of the mind." Further, "The body is the space-time percept of the human energy structure as projected into 'consciousness' by a space-time organ, the brain."¹⁰ Data for our physiological study of yogis tends to support their theory. For instance, in 1971 we had a chance to examine some of the psychophysiological skill; of Swami Rama of Rishikesh, India. Consider the following, excerpted from *Beyond Biofeedback*.⁷

. . . as I was taking Swami Rama with wires draped over his shoulders into the experimental room, he turned and said to Alyce, "When my heart stops, call over the intercom and say, 'That is all.'" I asked why he wanted that, and he said, "Since I am not prepared in the ordinary way for this experiment, I do not want to do it too long. I want to be reminded to stop so that I will not forget what I want to do. I do not want to damage my subtle heart." I asked him to explain that, and he said that the heart seen in surgery is only the physical appearance of the heart. The way he described it, the real heart is a large energy structure, of which the physical heart is only the dense section.

In yogic description, the "subtle heart" is only one organ of a "subtle energy body," which many yogis claim to be able to see. According to their description, this energy body is our "true" physical self. It is made of *prana* (a relatively dense form of mind, which itself has many gradations of density). The human space-time brain perceives this "subtle body" with sensory systems which detect only a small slice of the total spectrum of substance, so the open-heart surgeon naturally sees only the "dense" physical heart when the chest is opened, unless he has had specialized yogic training and is able to "see" the entire heart.

Since *prana* is a form of mind in this theory, it is not difficult to understand why yogis find nothing miraculous in the Biblical events called "miracles." To them, everything is natural, under natural law, and all natural law is, in their estimation, Divine law, whether it pertains to gravity, electromagnetism, body, mind, or spirit. With this "subtle energy" theory as a base, yogis are not surprised by the idea that a single cell of the physical body can be manipulated by mind (by visualization), as in single-motor-unit firing.¹¹ This control of a single nerve fiber, a single nerve cell, is simply the control of a cell of the mind, a single pranic entity. And that entity responds to visualization because it *is* mind.

Rev. Jack Schwarz, founder and director of the Aletheia Foundation, Grant's Pass, Oregon, was another early research subject in our psychophysiology lab at The Menninger Foundation. He demonstrated voluntary control of bleeding and pain (at least, control of the craniospinal and autonomic correlates of pain) when he pushed a sail maker's needle through his biceps, and held burning cigarettes against his forearm until the skin sizzled. And when asked to explain his physiological control he said, "The body reflects the mind, and when I make up my mind that something either is not going to happen in the body, or is going to happen, then that is what the body does." When questioned about the body as a reflection of mind, Jack's explanation was identical with the yogic view—mind and body are not separate. It is an error, he said, to think of the body as a "physical" structure rather than as a subtle energy structure, a part of mind. In his view, this error forces us, binds us as in hypnotic trance, to see the world in a distorted way, that is, forces us to see the world in our usual down-to-earth common-sense way.

Over a period lasting three months, in 1974, our Voluntary Controls research team had a chance to measure, with a portable psychophysiological lab (packed into suitcases), the physiological self regulation prowess of seventeen yogis in India. The explanations they gave of their body-mind skills were in no essential way different from those given by Jack Schwarz. And it is of interest that when we had a chance to study an American Indian medicineman, Rolling Thunder (Doug Boyd's work in the field, rather than in our Topeka laboratory), he gave mindbody explanations which translate well into Jack Schwarz' idiom and yogic concepts.

7. JUNGIAN PSYCHOLOGY. Although we went to India in 1973 in order to contact yogis, and to test as many as possible with our psychophysiological recording devices, we took the opportunity (as we traveled 7000 miles in a minibus, with nine people and thirty suitcases), to photograph many ancient and modern temples. And as we did this I was struck by the juxtaposition, in temples of different religions, of the Jungian archetypal symbols of good and evil.

At Bodhigaya, where the Buddha is said to have attained Enlightenment while meditating under the Bo tree, the main temple is surrounded by a spacious courtyard containing many small statues. Some of the carvings are of demons rather than devas (angels). In some of the Buddhist temples the demonic aspect was highly accented.

In old Hindu temples in the jungle, almost cut off from view by foliage, there were devil figures scattered among angels. And in Visakaputnam, where we had a chance to study the physiological performance of a yogi who meditated in an

airtight box for seven and one-half hours, in the laboratory of Professor K. Ramakrishna Rao, I had opportunity to photograph a relatively modern temple (at least it had some recent restoration), and was impressed to see that malevolent demons had been given a prominent position in a melange of divine, semi-divine, and hellish figures.

While I was taking telephoto shots of these forms, an Indian in an orange robe walked up and said, earnestly, in flawless British English, "I hope you understand that when the peasants who live around here come to meditate or pray, they think they are praying to those beings out there. But those of us who know something understand that those beings represent the various parts of our own nature, and we must integrate them before we can be whole, and blend with spirit." Neatly put, that is the essence of Jungian psychology.¹²

What a clear, straight, uncluttered idea. As he spoke, my mind began spinning through Greek myths. This stone temple was Mount Olympus. Zeus was at the peak. The gods and goddesses, demigods, and forces of every kind were arrayed below. At the bottom was earth. Below that was Hades. This hierarchy of immortal divine and anti-divine beings was in each of us. The temple is us. Recently it has seemed appropriate to posit, "The edge of the temple against the sky is the cortex; the central part with the gods, goddesses, and demigods, is the limbic system; the formalized base is the hypothalamus and pituitary; and the earth is the body." Where Hades is, I cannot say. The old idea of the body as the "temple of the spirit" may have been a useful way of thinking about human structure, an intuition which we are just now beginning to consider with the left cortex.

A problem arises for many, however, with the word "spirit." Some feel that there is no such thing, or that in the absence of scientific evidence, we should not refer to spirit. Others say, the world is the world, the spirit is the spirit, and never the twain shall meet. To speak of the central nervous system as the abode of the gods is, in their view, sacrilegious.

The late Indian existentialist and philosopher, Aurobindo, resolved the difficulty simply, however. According to yogic theory there is no problem because the infinite unknowable God (Brahman), which lies behind all manifestation, can be known only by His body (Brahma), which is all manifestation. And Brahma is composed, says Aurobindo, of a continuum of energies of densest physical matter to most rarified spirit.¹³ The "twain" meet because they were never separate. Aurobindo suggests that if we are embarrassed by the "spirit," then we should not use that word. Instead, we should speak of the subtlest form of matter. On the

other hand, if we are not embarrassed by the word, then we can think of matter as the densest form of spirit. Aurobindo's view is not inconceivable to many modern physicists, who, as we know, have seen the "solid earth" disappear in a complex dance of quantized energies.

Returning to the familiar, our problems in life (which are mainly problems within our own nervous systems, if we go deeply enough into the theory of perception, motivation, and action), are problems of integration and transformation of our human/animal nature, or our cortical, limbic, hypothalamic, pituitary nature. And unintelligent identification with the limbic system's fight-or-flight reaction, with its genetic fear-first response to unexpected change, and our identification with the limbic brain's me-first orientation, is a major cause of misery of this planet.

Since humans are the highest form of planetary life, this world can be characterized as a limbic planet. It is certainly not a rational planet, as many people like to believe. Most of our proud, civilized, scientific societies are governed by our leader's limbic responses. And their subsequent cortical explanations of "weapons needs," is a justification of limbic "survival" decisions of which they are not fully conscious. I am not saying that weapons do not have a place, but the weapons plus lack of consciousness are immensely counterproductive.

In the context of the temple, the solution of our own individual problem is to become conscious of cortical-subcortical relationships, and become someone "who knows something" about the gods and goddesses. The solution to the global problem, unlikely though it may seem, is for this enlightenment to pervade society.

The idea that the forces of the temple are simply "projections" of human nature, is not the full concept, however. Hindus and Tibetan Buddhists, alike, say the forces in us are representations of subtle planetary energies which are "real." That is, the gods are real, and we are the projections of the gods, not the reverse. What we *perceive* of them, though, and what we perceive of ourselves, are projections. So, they say, we *are* the gods. Carl Jung had some useful ideas about this paradoxical other-dimensional reality, which he gleaned from translations of Tibetan manuscripts.¹⁴

For years, ever since it was first published, the Bardo Thodol¹⁵ has been my constant companion, and to it I owe not only many stimulating ideas and discoveries, but also many fundamental insights . . . Not only the “wrathful” but also the “peaceful” deities are conceived as sangsaric (substance) projections of the human psyche, an idea that seems all too obvious to the enlightened European, because it reminds him of his own banal simplifications. But though the European can easily explain away these deities as projection, he would be quire incapable of positing them at the same time as real . . . The ever-present, unspoken assumption of the Bardo Thodol is the antinominal character of all metaphysical assertions, and also the idea of the qualitative difference of the various levels of consciousness and of the metaphysical realities conditioned by them. The background of this unusual book is not the niggardly European “either-or,” but a magnificently affirmative “both-and.”

With this, my synthesis ends. These basic lines of thought, however incomplete, outline a picture of human nature which, no doubt, will be much clearer by the end of the century, but will not be changed in broad outline, I believe. In the meantime, it is good to know that even if we do not know everything, at least we know “something.” And that knowing makes it easier to breathe and live in a cluttered world. It gives us hope, and belief, that humans have great expectations.

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Even though the following article appeared recently in **Bridges** (Volume 10 #2, 1999, the Magazine of the International Society for the Study of Subtle Energies and Energy Medicine), we have chosen to include it here for two reasons. First, the self-reliance aspect of human potential is the goal of all of the Greens' work. Second, we envision this volume as being a keepsake and reprise of seminal ideas that gave birth to much of what is happening today in the field of subtle energies and complementary medicine.

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SELF-RELIANCE: NOW

Elmer Green, Ph.D.

It is interesting that we're talking about discrimination today, because a crisis is coming up, soon, not just in medical realms, but in the world as a whole. And it's important, I believe, that we realize that *Self Reliance* is the key to meeting change. We have the power to take charge of ourselves—and if we begin to do it *now*, things will go a lot better in our future.

Self Reliance Versus Intervention. Concerning dependence on *Intervention*, some of our clients are so afraid that they will **fail** in the attempt to control their psychosomatic disorders when taking a course in biofeedback training, that they can hardly make the effort. And the brainwashing they get on TV and in magazines to try the latest, “miracle” drugs, weakens their resolve to become drug free. But to them I say, “*Give Self Reliance a Try. Drugs can always be fallen back on later. And remember, even though acupuncture can manipulate chi, it doesn't teach you how to do it yourself. But, if you learn a few visualization techniques you will find that you can get the same effects yourself, directly. And when you do, your life on Earth and your future life, after Earth, will be highly improved. Acupuncture now will do nothing for you then.*” More on this subject later.

Loving Kindness Versus Non-Caring. Physicians and therapists who are only moderately technically skillful, but who are compassionate and caring, have a far better batting average than their superior-trained colleagues. Reason: The patient's *subconscious* self-healing power (the placebo power) is activated by love, and turned off by an indifferent mechanical non-caring ambiance.