



Institute of Noetic Sciences

Newsletter

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Institute Funds Exciting New Research Project



Norm Kohn

The Resonating Brain: Fine Tuning the Hemispheres

by Brendan O'Regan

At first glance, it seems like the stuff of science-fiction . . . the idea of brain resonance. It probably conjures up images of some future humans adding a whole new regimen to their morning exercise program. Instead of beginning with the usually imagined morning run or exercises to tone the muscles of the awakening body, the first act on awakening is a set of exercises to re-align brain function for a new day. A kind of toning up of the hemispheres in order to make it possible to have maximum access to the resources of mind and body for the day ahead. Such an idea has in one form or another often been envisaged by science fiction writers, who in their special way often presage things to come with more accuracy than even they expect to achieve.

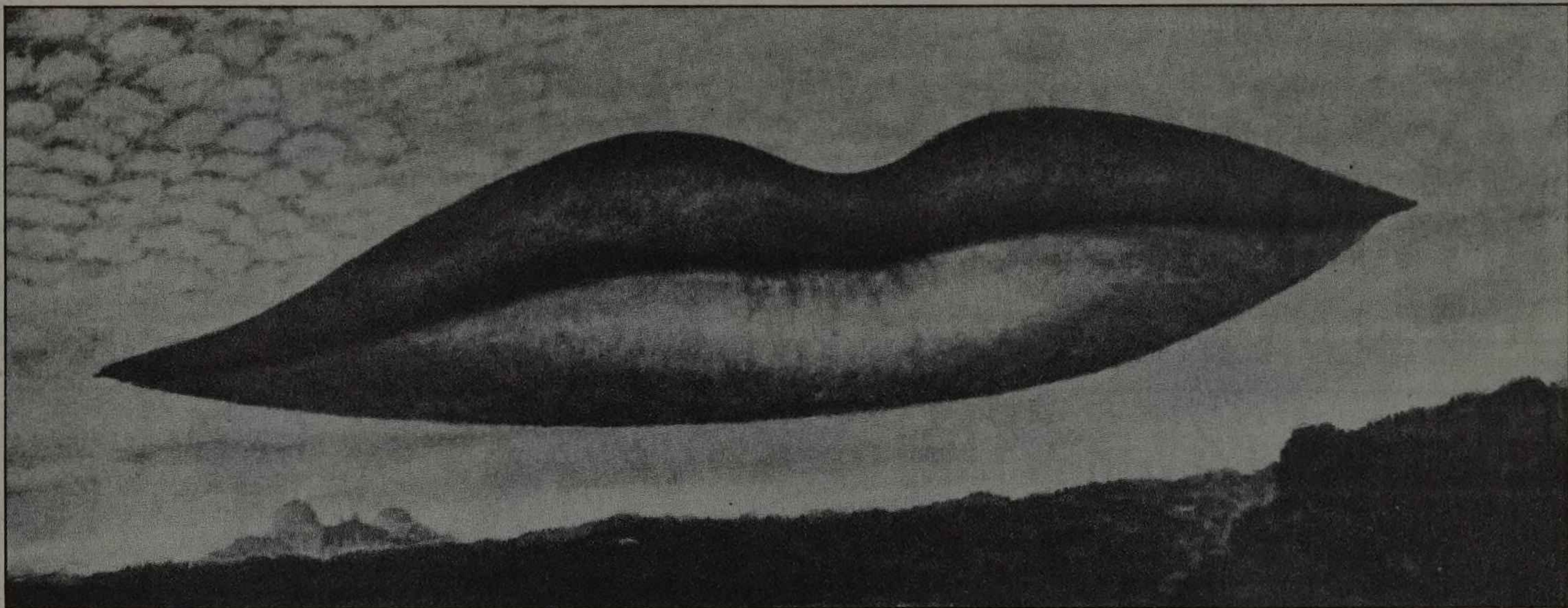
The notion that conscious tuning of brain function could become a reality is no longer quite so science-fiction, however. Some

would argue that the idea is as old as meditation itself, which with its exercises, postures and techniques has provided for just such a result over thousands of years. What is new is the idea that these possibilities can become incorporated into the language of science and perhaps refined in ways never before possible. Why should such an idea seem possible now, you may wonder? In the early days of biofeedback research, the biggest rush of excitement—or rash of scepticism (depending on where you stood at the time)—came from the implication that suddenly we could learn to gain conscious control over parts of ourselves that previously seemed totally inaccessible. Now that this possibility has been repeatedly demonstrated, it has been amusing to observe the sceptics retreat to a sort of irritated "Well, so what if it's true anyway" attitude. In the meantime, the excitement of researchers has focused on exploring the variety of

ways in which the discovery of conscious control can be applied to an enormous range of medical problems (see previous *Newsletter*).

As is so often the case, it is the natural preoccupation with disease that has shaped the progress of research and applications. This has meant that it is in the quiet world of personal conquest of pain, migraine headache, restoration of limb function that biofeedback has found its natural place in the scheme of things. What were initially touted as the potential benefits of the so-called "alpha state"—in which people would presumably benefit in obvious ways from learning how to produce higher percentages of the brain's alpha rhythm—have tended to fade as it was discovered that if there were real benefits, they were hard to pin down. Further, as so often happens with information that can lead even to genuine

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Man Ray

Time For A "Whispering Campaign"

Editorial comment by the President of IONS

by Willis W. Harman

We think it is time for us to join in a campaign—a sort of "whispering campaign". What we have in mind is a bit like the whispering that went out from the little child who first spoke the words, "But the emperor has nothing on at all!"

This is a very simple and constructive campaign we propose. It involves only asking a few very innocent questions, but it could change the world. These questions are essentially:

- Isn't it strange that our scientific knowledge is so selective, focusing on knowledge of the "outer" world and neglecting the world of immediate, "inner" experience?
- Couldn't we learn more about that part of our experience if we shared and examined it systematically?
- Isn't it important that we do?

Practically every society on the globe and throughout history has regarded knowledge of our inner nature and spiritual center to be the core of cultural wisdom. The Founding Fathers were clear in their insistence that the United States of America is a spiritually based nation. The most basic value commitments of all societies come in some way from the deep inner experience of some individuals, perhaps embodied in an ancient religious tradition and presumably re-verified in the experience of successive generations. Yet modern scientific research has given this realm relatively little attention, thus contributing to the impression that knowledge of it either can't exist or isn't important. Isn't that strange!

Isn't it strange that we as a nation are unstinting in providing financial support that

will lead to more horrendous biological and nuclear weapons; that we are enthusiastic in our pursuit of all knowledge that will increase our ability to manipulate the physical environment, biological systems, climate, information flow, thus adding further uncertainty to a future we can't manage as it is—and yet we are investing almost nothing in research on creativity, intuitive choosing, basic knowledge in holistic health care, optimum conditions for personal growth and development, and enhancement of human performance in a host of dimensions.

There are indications that far more of our illness is caused by our individual and cultural beliefs and attitudes than is ordinarily recognized. We need to know. There are indications that healing can be greatly facilitated by changing one's mind. We need to know. There are indications that our human potentialities are to a large extent unrecognized and underused. We need to know. There are indications that we are capable of fooling ourselves, individually and collectively—through distortions unconsciously introduced into our perceptions by our wishes and our fears, through repressing awareness of knowledge that would threaten our pre-existing belief systems. How much is the conventional world view and our concept of our own nature affected by such unconscious deception? We need to know.

With regard to the crucial question of our basically spiritual nature and some inherently valid sense of values, one might be tempted to think that perhaps there is nothing there to be discovered, since generations of psychologists and other scientists have searched and come up with so little.

But we must recall the story by the British physicist Sir Arthur Eddington of the ichthyologist who, after combing the seas with a net of one-inch mesh, arrived at the astounding conclusion that there are no creatures in the sea with a diameter less than one inch!

The quantitative emphasis of most contemporary science, tending to equate what is physically measurable with what is "real", is like the one-inch-mesh net—it captures some aspects of reality and misses others. Lord Kelvin's dictum, that only if you can measure it can you talk about it, perhaps needs to be replaced with the dictum of the French poet St. Exupery: "Truth is not that which is demonstrable. Truth is that which is *ineluctable*"—which cannot be escaped.

It is understandable that the predominately measuring kind of science should develop first. To validate publicly the sort of knowledge that can be expressed in terms of measurables is inherently simpler than public validation of knowledge that is more subjective. It is also understandable that scientific knowledge might temporarily have come to be strongly biased toward that knowledge which generates technology—i.e., which leads toward the ability to predict and control.

But now as we look toward the end of the 20th century we are able to see the hazards of excessive emphasis on technology-generating knowledge while neglecting the kind of understanding of our inner experience that has been supposedly provided by the humanities and religions. As society's "know-how" has increased at exponentially growing rates our understanding of what

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Letter from Chairman Edgar D. Mitchell

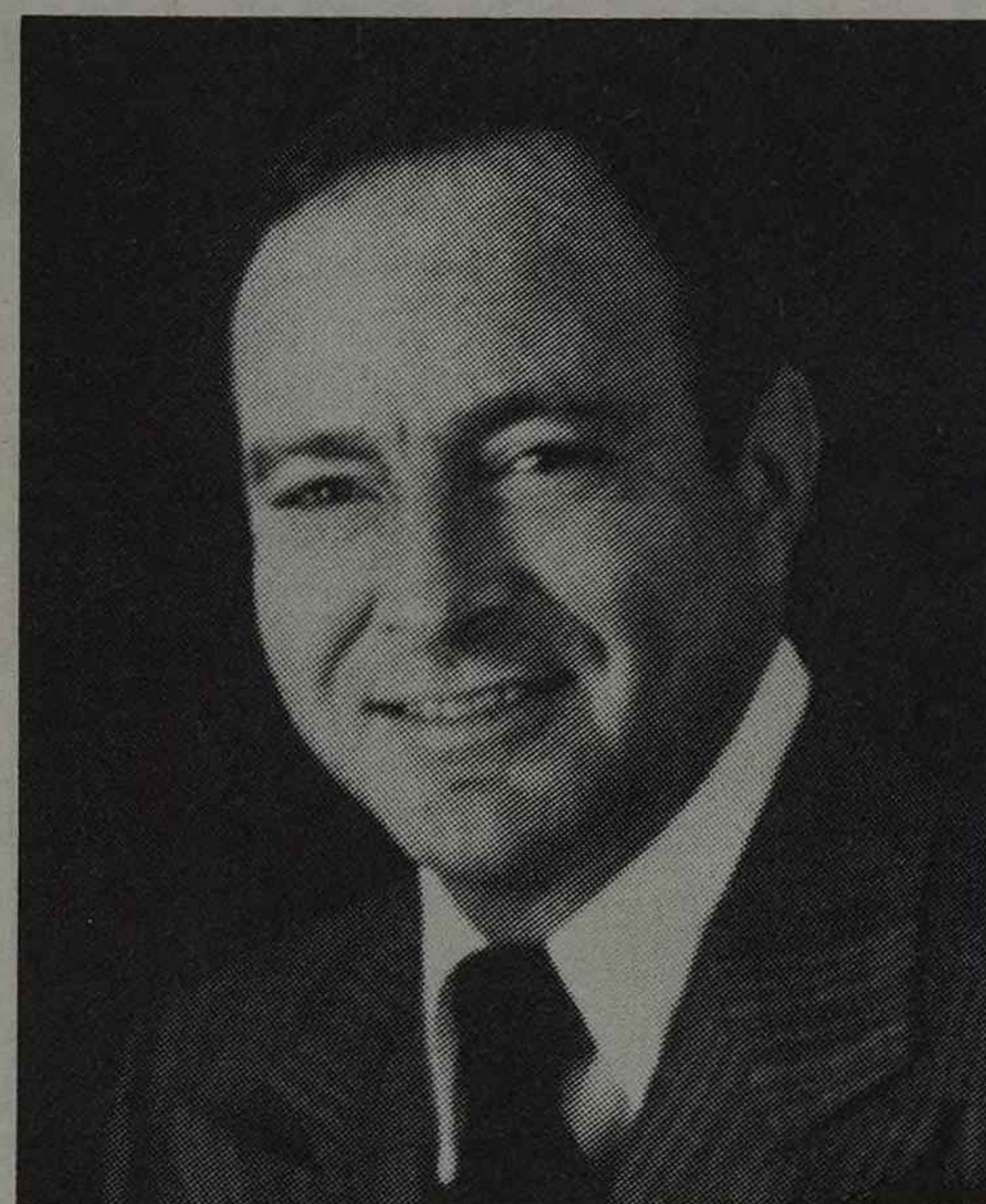
We have watched the past few months as an insistent spirit of excitement and accomplishment has lifted IONS into a new phase of growth. This spirit seems to be a reflection of the public at large becoming increasingly interested in and eager for information about the noetic sciences which in turn has caused the Institute officers and directors to gain a renewed sense of purpose and synergy.

For a number of years the Institute staff and directors have struggled with advanced ideas about human potential and have used our own lives as laboratories in order to experience changing belief systems and to learn to use inner awareness as the guide for self-directed growth. Along with many associates in related organizations, we now recognize that many thousands have joined the journey and are experiencing broader horizons and enhanced satisfaction with their lives as a result.

The past forty years of technological advance, which have seen nuclear develop-

ment, computers, space travel, global communication, etc., have forced all of us to see ourselves in new ways and to radically alter our priorities in order to maintain balance and satisfaction in our lives. The Institute of Noetic Sciences has been privileged to be a part of the pioneering work designed to ease the transition to this new age of rapid change in society and in our lives.

The exciting development we have all discovered is that the answers have always been with us as part of the "perennial wisdom" handed down in the ancient mystical traditions and passed from generation to generation. These ideas, values and self discovery techniques are constant and only needed expressing in the vocabulary and technological setting of today's world to be as effective as ever. As we have individually and collectively learned to give form to this expression, large numbers of people have joined with us in creating an energy for maintaining a balance in the midst of



change that provides hope for restoring sanity to a chaotic world.

We are excited by the new vigor and the sense of achievement that IONS and the faithful public that has supported us is now experiencing. Thank you all for your faith and endeavors in this undertaking.

Edgar D. Mitchell Cassette Library

When Apollo 14 astronaut Edgar D. Mitchell founded the Institute in 1973 to study the nature of consciousness he was pioneering ideas that were clearly ahead of their time, but not by much. Earlier in this century the great scientist and electrical wizard Charles Steinmetz said that the greatest discovery in the twentieth century would be the discovery of spiritual power. In those early years of the Institute it was a frustrating battle to meet a general lack of understanding of why the development of a noetic science was important. Nonetheless, the Institute moved steadily ahead and supported a number of critical cutting-edge projects. Partly in response to these efforts, partly because the uncertainty of our times has created a recognition of the need for a broader perspective on things, but mainly because noetic sciences are simply "an idea whose time has come," there is today a rapidly exploding interest in and demand for information in these areas.

In response to this growing need, Dr. Mitchell has recently agreed to share his wide range of knowledge and years of experience as a scientist, businessman, author/lecturer, astronaut and student of philosophy in a series of cassette tapes. In these tapes he integrates the gifts of twentieth-century science and psychology with the ancient mystical traditions which are the basis of the world's great religions. The tapes

are designed to help persons meet the challenges of living in an ever accelerating and more complex world by expanding awareness and releasing potentials buried within the human psyche.

The Institute is pleased to make these tapes available at a special introductory rate which includes postage, tax and handling.

One tape: \$6.95

Two tapes: \$13.50

Three or more tapes: \$6.50 each

An order form is provided below. Partial proceeds will help support the continuing work of IONS.

Send your check to the Edgar D. Mitchell Cassette Library, 1655 Palm Beach Lakes Blvd., Suite 616, West Palm Beach, FL 33401. Allow 6-8 weeks for delivery.

☐ **1. The View from Space.** 20 Minutes. An inspirational and philosophical account of Dr. Mitchell's view from space and its meaning to him which led to his founding the Institute of Noetic Sciences.

☐ **2. Deep Relaxation (Prior to Sleep).** 15 Minutes. How to achieve deep, stress-free sleep easily and comfortably.

☐ **3. Relax and Be Refreshed (During a Busy Day).** 18 Minutes. How to overcome the stresses of a demanding work environment and achieve renewed vigor, energy and proficiency.

☐ **4. Create Your Own Success.** 40 Minutes. A lecture on how early-life conditioning programs our self-concept and how to overcome a limited self-image through techniques of imaging and affirmation, thereby creating a new reality.

☐ **5. Psychic Facts and Fiction.** 54 Minutes. An introductory lecture of what's known in the psychic world and how that applies to the everyday experience of all people.

☐ **6. To the Moon and Back, Cassette I.** 45 Minutes.

☐ **7. To the Moon and Back, Cassette II.** 45 Minutes. This double cassette offers a non-technical narrative and experiential account of Dr. Mitchell's flight to the moon and back in January of 1971. This may be the closest any of you can ever come to experiencing what a trip to the moon is like as Dr. Mitchell guides your imagination through lift-off, orbiting and landing on the moon, and the ineffable, mind-altering perception of viewing Earth from 240,000 miles in space.

Please send me _____ tapes. I have enclosed my check for \$ _____. Send tapes to:

Name _____ City _____

Address _____ State _____ Zip _____

IONS I

Foundations Support Institute Consciousness Assessment Project



Well, it is true that we have learned a vast amount about multiple aspects of our nature, but some worry: are we learning anything fundamental about those qualities that make us truly human? Or is it that we are learning most about the more mechanistic aspects of biological systems and hardly anything at all about those qualities that distinguish living systems from their inanimate components? Is consciousness something that more or less falls between the cracks and gets included more by default than design in the majority of scientific investigations?

In the past ten years, concern for the meaning and nature of human consciousness has risen in the public domain. There has been more and more demand from a growing public audience for some answers to questions about our human nature and the sense that a science sensitive to this need could and should emerge now. The Institute has been uniquely about these concerns and has for some time wished to launch an activity which could in some way assess "where we are" in these matters. Discussions along these lines have been conducted by the Institute with a number of

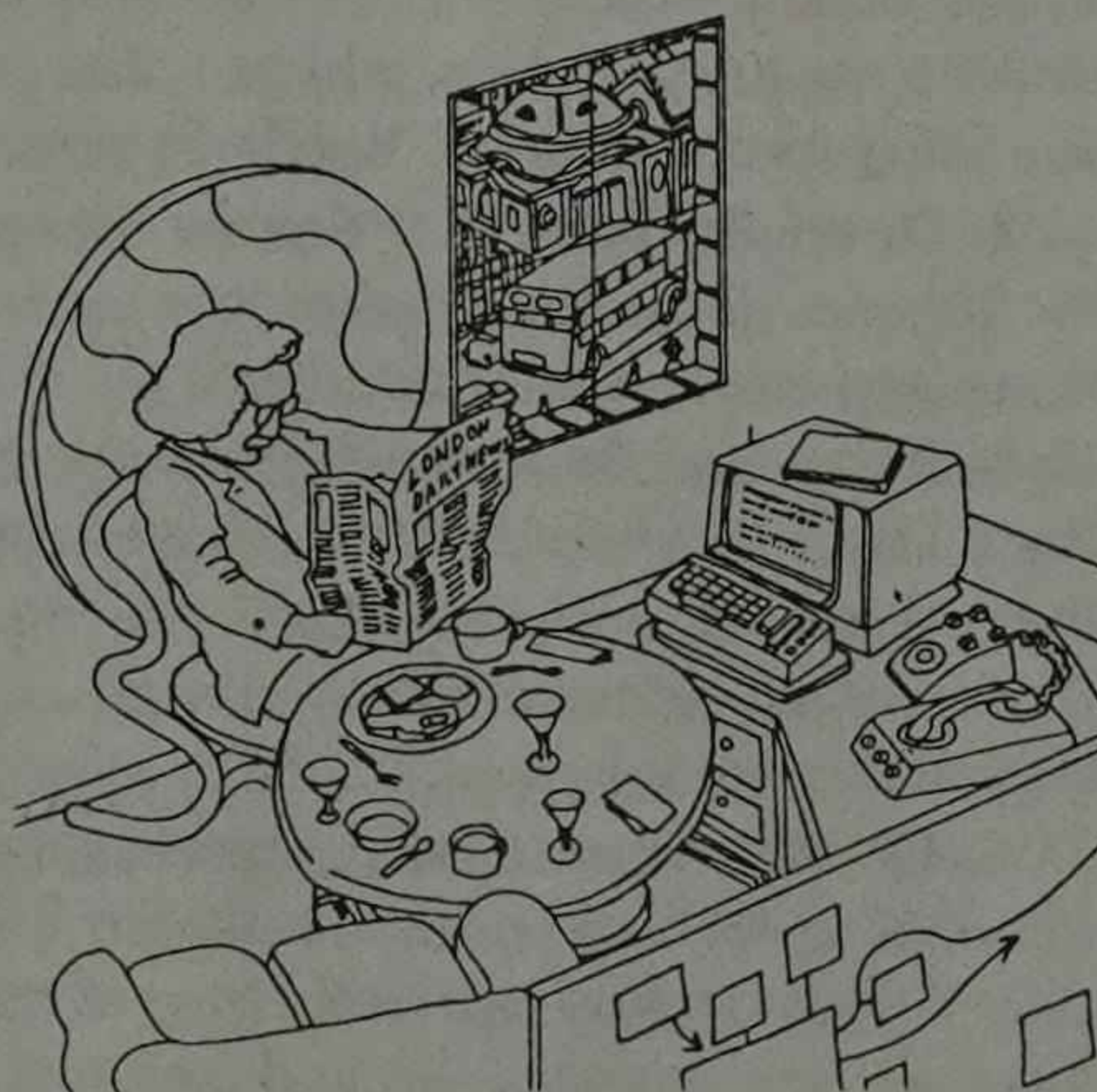
The optimist's view of science has always been that it will one day produce the basics of a profound understanding of humankind. If the proper study of mankind is man, then surely the proper tools for the job are those created by the science of the 20th century?

foundations and individuals for some time and now we are pleased to announce that they have finally led to the first step: a major conference of researchers from all the major disciplines in one way or another concerned with consciousness, the role of the mind and human nature.

In October of 1980, the Institute will hold its first meeting of minds on the subject of consciousness research in Minneapolis at the Spring Hill Conference Center. The conference and all the activities leading up to it (contacting researchers, preparing background papers and nourishing a network of concerned individuals in the funding community) have been made possible through grants from the Charles F. Kettering Foundation, the Minneapolis Foundation, the Threshold Foundation and a number of generous grants from private individuals. The Institute is therefore pleased to formally announce this first stage of what we have termed the Consciousness Assessment Project. The meeting of researchers, scientists, anthropologists, psychologists, neuroscientists and others will have as its goal the creation of an overview of what we know now, a summary of the methodological problems involved in studying consciousness and a list of both the most critical experiments and the probably beneficial outcomes for us all if we were to undertake this work. We will be reporting to you in greater depth regarding our plans for this ambitious project in the next issue of the *Newsletter*.

Institute Joins Electronic Information Exchange System [EIES]

In these days where the overload of conferences to travel to, research reports to read and colleagues to stay in touch with has grown to proportions that have begun to exceed the capacity of many of us to respond, it is always interesting to find something that promises to simplify some of these same tasks. Some years ago, the New Jersey Institute of Technology started a project to involve members of the university communities in computer conferencing as a means of allowing networks of people to easily communicate through the new technology of computer teleconferencing. Today that system has grown to include more than 700 people located at universities, government agencies and corporations all over the U.S. and in other parts of the world. The system began on an experimental basis in October 1976 under the direction of Dr. Murray Turroff and Dr. Starr Roxanne Hiltz with support from the National Science Foundation, Division of Science Information Services.



Today there are so many different kinds of activities going on on the system that to describe them all would take pages more space than we have here. There are conferences on the future of almost every conceivable subject, including, ironically enough, information overload! The beauty

of the system is that it acts as a much more effective "bulletin board" between people located in different parts of the country than the mail or the telephone ever seem to be capable of being. It becomes a simple matter to set up a conference with people in, say, ten different parts of the country. Since the Institute is now also making extensive use of computer systems to access research literature, handle mailing list and membership and other services, the step toward linking up on the EIES system did not seem as great now as it would have some years ago. With the growth of our own work inside the organization, we are hoping that on-going communication with the growing number of people now involved with IONS will be easier and more efficient. In fact, if there are any members who are interested in participating with us here through membership in an EIES link, please contact us for more information.

—Brendan O'Regan

Implications of Mind Research

by Edgar D. Mitchell

Editor's Note: The following is an address given by Dr. Edgar D. Mitchell recently to members of Congress and Congressional staff on behalf of the Congressional Clearinghouse on the Future.

First, I believe that the least legislation is the best legislation. Second, if it isn't broken, don't fix it. So I can't talk best about legislative implications, and also we're not sure of all the implications in general. We only faintly know what we're doing scientifically, not to mention socially, so legislative implications are premature. So I will talk about implications in general.

The whole science of psychology and psychiatry is a product of this century. We know very little about the way our brains work. But we do have several thousands of years of people living—folklore and religions and traditions to call upon. We get hints of psychic functioning and expanded awareness from all corners of the globe.

I don't dismiss science, but I do recognize the reality of the other. I skirt the fine edge of scientific credibility. But it all seems to come together if we start with the idea of the model of the human being. We view ourselves as complex compilations of organic molecules and we think and we are highly evolved animals. If this model is correct, how can we explain psychic functioning?

If we are evolving, we only evolve what we need at a particular time—we do not develop excess capability. Perhaps the model is wrong, or maybe we could learn from taking another model—even as a working hypothesis. The best model that we seem to have comes out of mystical literature. It's a place to start. The most accomplished psychics in the world seem to be those steeped in mysticism, so we should not discard lightly what they say. It is not anathema to me, as to many scientists, to speak of the spiritual realm.

Puthoff's presentation touches on three classic areas: (1) telepathy—mind to mind, (2) clairvoyance—matter to mind, and (3) precognition—the mental function takes place ahead of the event, adding a time element and raising questions of causation. All these events are information flow. Another event is most difficult for us to handle—the psychokinetic—or mind over matter. Using our minds to control our bodies is the essence of it. We can expand the range of our mental control beyond that which we assume. The notion has come that our conscious mental activity is only a fraction of



Adam Lewis

our total mental activity. Most is hidden below the surface. If it is mostly hidden, our ability to examine that activity is important in these investigations. Biofeedback has taught us that we can control what we thought was autonomic. We can expand conscious control. Our hidden areas are subject to conscious control, with enormous implications for emotional and physical well-being.

In a few years, we will look back and say why didn't we do this sooner. We will have a totally different approach to health care in this country. Our physical and emotional well-being is totally under our control and we can train ourselves to control ourselves. It puts responsibility for health and well-being on the individual. I am not a victim. I choose, on some level, whatever happens to me. Within ten years, the AMA will endorse this viewpoint. One of the implications is the cost of health care. I must not choose situations that will destroy me.

We're talking about cause and effect. We have deadly germs in our bodies now—why don't they take over? It has to do with our mental well being. We need to study correlatives between attitudes and physical well-being; this is most important. Regarding mental health: this has been a bugaboo for years. We've said it's an illness. But we find that the mind is a central control and so we'd better understand what is going on in our minds.

Is it possible to exert mind force over the external world? It is not significantly different than controlling the inner world and functions, and there is evidence to suggest the truth of this. There are experiments going on in Princeton that will mean a

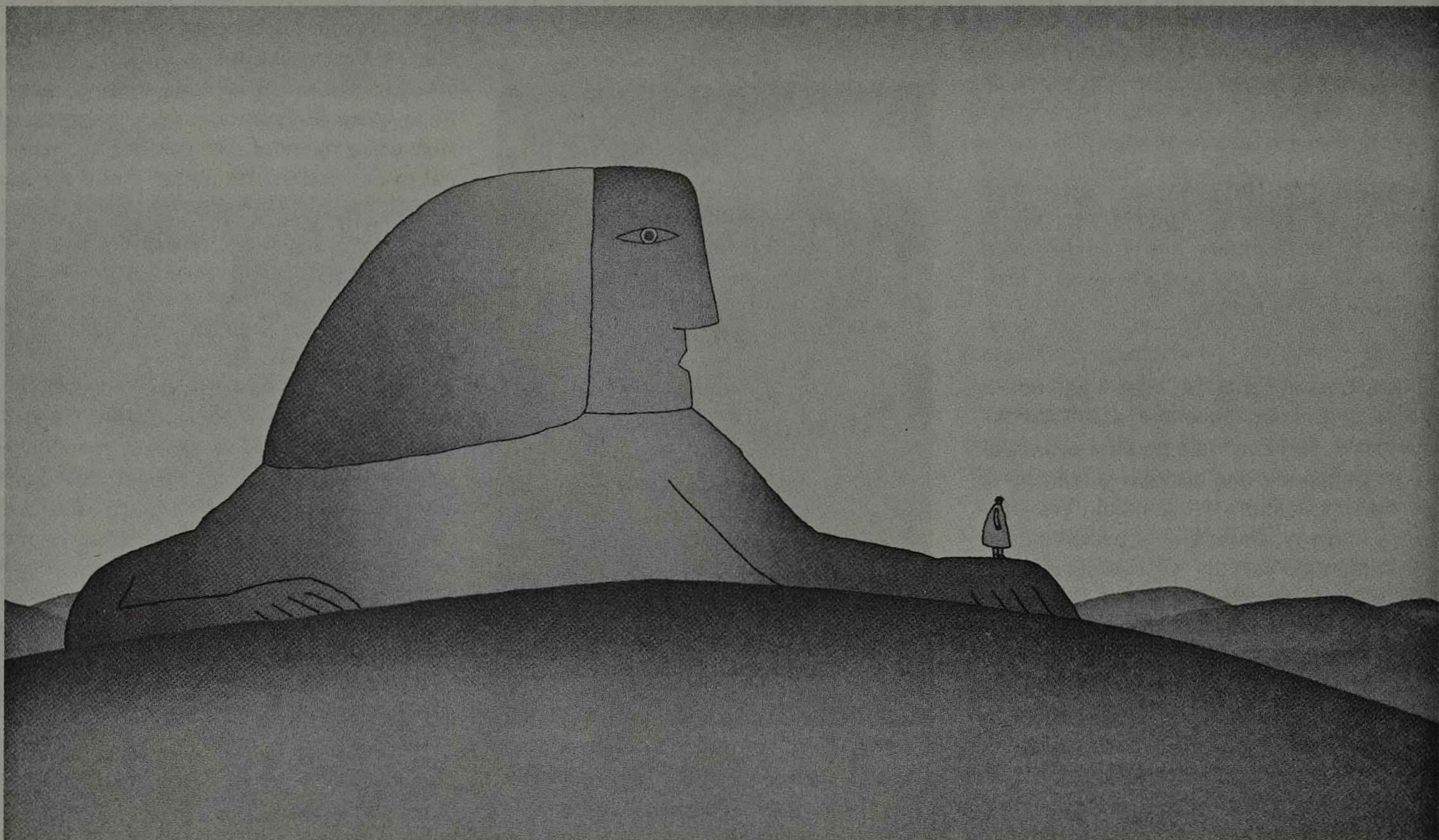
breakthrough in this area. Within ten years, psychokinetic functioning will be reasonably well accepted. It knocks down the previous model of the human; there is something more fundamental than the material stuff we're made of. We can control, external to our bodies, the matter that is around us, and control internally the functioning of our bodies, by the way we think.

For further implications, the mystic can give us the words. Man is a creating entity, and that may be the difference between us and lower animals. Why is the world so unjust? We are creating the unjust world, the chaos, the unhappiness, probably because we don't know how to use our mental capability correctly. This model will gain greater and greater acceptance over the next decade or two, until it is an accepted model. Why is all this happening now? Necessity is the mother of invention. Our world is chaotic and inhumane; it is time to recognize that we are doing this. We operate out of a stress made individually, and this moves outward from us.

A few more implications: Telepathic and clairvoyant modalities suggest one powerful idea: all our brains are connected at some level. There is a connectedness of human beings and information flow that happens at a subconscious level. It influences what we do and often is contradictory to our conscious decision making. Specifically, if we're connected, (the former model says that individuals are complete, distinct and separate entities) the greater the empathy, the easier the untrained can get tuned in. Once people are trained, it doesn't seem to matter. There is no way for deception to occur; we can't progress beyond a certain level with deception since we're talking about connected human beings. Is this model for connectedness between people, with empathy and honesty, setting the stage for a different type of world and human functioning? A new utopia?

In this institution of the Congress, truth is determined by oratory and adversary proceedings. At this new level, adversary proceedings block the flow of information.

We have been extrapolating a little bit of data to its logical conclusion and we could go on with this process. What we have done rings a familiar bell from the teachings of all great mystical religions. All we're doing is getting ourselves back on track, different from the mechanical physical model of the last 200 years. It has taken us down unproductive paths; I believe that the model based on different concepts will do better. If this is a created universe, as opposed to a mechanically evolved one, then we have been assuming the wrong model, and we are not getting very far. Our present views may be shortsighted. The human mind is capable of greater things than we can guess.



WHAT CAN I DO?

Folon

by Willis W. Harman

Few of us today doubt that this nation, and with it the whole creative thrust of Western civilization, are in serious trouble. Most of us sense that some sort of profound transformation of society is in process and is needed. We ask: What can I do to help?

We tend to experience great difficulty in dealing with that question. The whole net of problems seems so vast and complex; there are so many varying interpretations; we need more facts; we aren't in the right position to do much; we don't have the power to change much of anything; it's all so bewildering. Now there are two possibilities. One is that we are correct in the above assessment—the whole thing *is* too complex, and we are too impotent. The other possibility is that that, as we so often observe in psychotherapy, the individual unconsciously blurs conscious awareness because at some level of himself he doesn't want to know the answer to his question.

Perhaps we do know the answer to the question after all, and we are not as impotent as we make out. This note will be brief, because assuming we already know the answer only a brief reminder is required if we seriously want to bring that knowledge into awareness—and no lengthy argument will be effective if we don't. Let me suggest, then, three preparatory awareness steps and two action steps to lead toward answering "What can I do?"

First, the steps in awareness:

A. *Recognize that the many problems and dilemmas of modern industrial society have deep roots in the past, and will defy superficial "solutions".* Technological and legislative approaches of the usual sorts will promise much, but fail to resolve the problems. That is essentially because these problems are complexly interconnected manifestations of an underlying "macro-dilemma". That fundamental dilemma, probably impossible to state precisely, is related to our rampant and powerful technological "know-how" and our lost sense of what is ultimately important to do. In the last IONS Newsletter I indicated some aspects of this picture, in an article entitled "Where is Our Positive Image of the Future?" It is not easy to be honest with ourselves about how deep in the intrinsic characteristics of "the system" are the origins of these problems.

B. *Recognize that there is another way.* The problems and dilemmas are of human origin; there *is* a resolution possible, which the deep intuitive part of our minds can lead us to. This "other way" involves a fundamental transformation, probably of a sort somewhat like that described by Marilyn Ferguson in her book *The Aquarian Conspiracy* (see review in the last IONS Newsletter).

C. *Realize this other way involves a fundamental change of mind.* It involves per-

ceiving our culture, our institutions, our science, ourselves, the planet, differently. Particularly, that is what the Institute of Noetic Sciences has been about for eight years. For at the core is a re-perception of the human mind. Two recent books with powerful insight on central aspects of this are Theodore Roszak's *Person Planet* (see review in this issue) and Mark Satin's *New Age Politics*.

And now the two action steps:

1. *Will.* Will in the sense of Kierkegaard's "Purity of heart is to will one thing"—to choose with the whole of one's being, so that conscious choice, supraconscious, and subconscious urges are all in alignment. Will to get in more contact with, and pay heed to, the creative/intuitive part of one's mind. (Not "right-brain", but right-mindedness.)

2. *Join.* Join with others (not necessarily in an organization) to perceive differently together, to recognize that minds are already joined, to—in the theme words of the forthcoming "First Global Conference on the Future"—"think globally and act locally" (For example, join in our "whispering campaign" described in an editorial comment in this issue.)

Think about those five steps. Perhaps you will discover that you already know the answer to the question: What can I do?

NOETICS:

The Word and Its Origins

by Brendan O'Regan

When people hear about the Institute of Noetic Sciences for the first time, their first question to us is usually: But what does Noetics mean? It can be a curious experience to be the reason people come to learn an entirely new word but it happens so often for us that we have gotten used to the experience by now. It means, however, that we ourselves are being continually reminded that it is a word which has receded from daily use and this raises a somewhat deeper question about our culture in general. Why, for instance, one might wonder, that certain words do indeed recede from common usage, particularly if the word is one which is not connected to an aspect of life that has ceased to be important. In addition to this, there are the additional questions involved in trying to understand what it is that happens for each of us when we try to create meaning in our minds for a word that is new to us.

The number of people we have encountered over the years who have previously encountered the word "noetic" is small indeed. To begin with, the number of people who study Greek as part of their traditional education in the U.S. is tiny and the only other way the word "noetics" ever seems to be discovered is by those who have studied certain branches of philosophy or perhaps the psychology of William James. Since a culture's blind spots can be as revealing as its major focus, it is interesting to speculate as to why the kinds of meaning represented by the word "noetic" have declined in significance for us. Is it that we simply have other words that convey its meaning more succinctly? Have we become more sophisticated in our understanding so that the word has become obsolete? To try and answer these kinds of questions, the first thing to do is to try and go back to discover from history just what the word seemed to mean when it was part of the language that generated it. Stated like this, that would seem like a fairly easy task. However, it turns out to be a little more complicated than that in the case of the root word for "noetic" which is the Greek word "nous". In fact it turns out to be rather like opening a linguistic Pandora's box—at least if you wish to infer something about just where the term fit into the overall Greek world-view of mind, body and spirit. As with any word, its meaning is ultimately decided upon through study of how it was used by the writers of the time. That in itself however tends to mean that unless there was very clear consensus, some

words end up resembling a billiard ball that is bounced around so much that it begins to appear as though each time it is used in a significant way turns out to be part of an attempt to re-define it. This seems to be especially true of the word "nous" if one wishes to go beyond just its literal translation as "mind".

If we look at the Greek dictionary for our first level of interpretation, it turns out that it takes up a whole column of entries to give the basic history of the usage of the word "nous". In contrast, other words take up just a few lines. In one sense this is to be expected since the whole question of any culture's understanding of mind might be expected to always be in flux. However, what began as a simple task suddenly transforms into a search through a whole labyrinth of meanings, philosophical arguments and debates between major Greek historical figures such as Homer, Plato, Anaxagoras, Epimenides and Pythagoras. The first entry leads us to the simplest definition: "Mind, as employed in perceiving and thinking, sense, wit." Then we later find that it connects to "being sensible" which leads in the direction of its usage to identify what appear to be the rational components of mind. These seem to be the major meanings that have survived and been handed down to us today. A closer look at the actual history of the word reveals some more intriguing aspects however. Specifically, when we note that as we progress on through the six major categories of definition of the word in the dictionary references, there seems to be a transition from the simple use of the word mind toward activities of mind, culminating with Anaxagoras' so-called Theory of Nous in which we enter the realm of "Mind as the Active Principle of the Universe". On the way to this more complex interpretation, we see that a good part of the debates about the meaning of "nous" has to do with just which aspects of mind the word should include; for example, should it include the world of feeling, deciding on the basis of emotional factors and so forth? Here we encounter the basic debate amongst the Greeks about the rational nature of man and which aspects of the human being should be regarded as essential components of "being sensible". The debate is perhaps best placed in context when we contrast the meanings of "nous" with what the word "psyche" was used to indicate. This then poises the issue between the Greek view of the nature of the rational as opposed to their

notions regarding the irrational.

As E.R. Dodds, in his book *The Greeks and the Irrational* points out:

The intellectualist approach to the explanation of behavior set a lasting stamp on the Greek mind . . . When (a person) acts in a manner contrary to the system of conscious dispositions which he is said to "know", his action is not properly his own, but has been dictated to him. In other words, unsystematised, nonrational impulses, and the acts resulting from them, tend to be excluded from the self and ascribed to an alien origin.

Whether nonrational phenomena should be thought of as part of the nous or part of the psyche then becomes a fascinating problem since, as Dodds also points out, the "psyche appears on occasion as the organ of conscience, and is credited with a kind of nonrational intuition." In this regard, Dodds further points out that:

A child can apprehend something in its psyche without knowing it intellectually. Helenus has a "divine psyche" not because he is cleverer or more virtuous than other men, but because he is a seer. The psyche is imagined as dwelling somewhere in the depths of the organism, and out of these depths it can speak to its owner with a voice of its own.

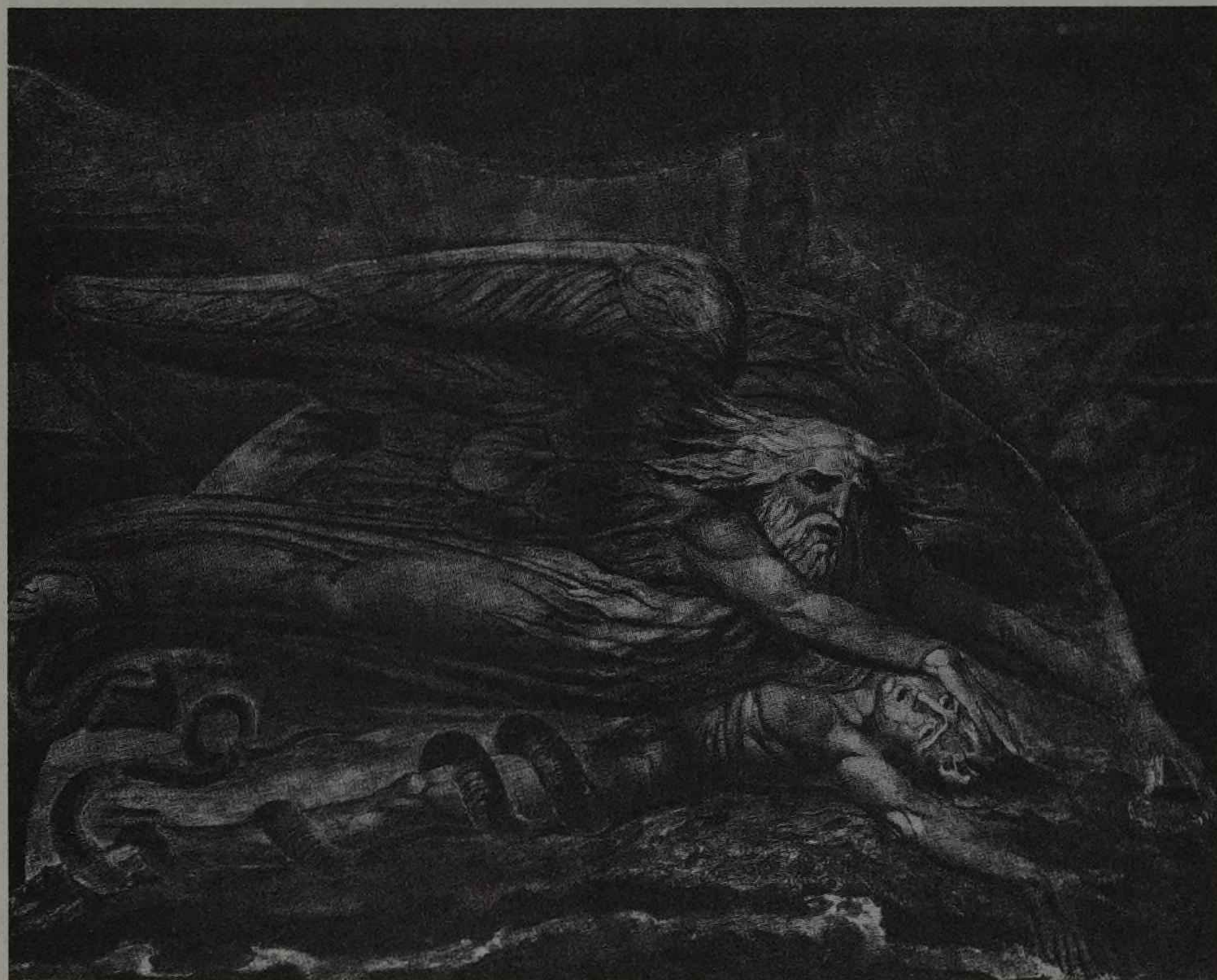
And herein lies the contradiction between viewing the nonrational as only a source of negative components of behavior and at the same time as a source of "divine knowledge" which could not be otherwise known, and which played an important guiding role in Greek culture. Ironically, we don't seem to be very far past this today and here we are stretching back to the Greek debate about body, mind and spirit as it occurred over 1000 years before Descartes even existed.

The picture's complexity increases further when we try to probe Anaxagoras' notions of "Mind as the Active Principle in the Universe". Here the volitional aspects of mind take center stage in a way that seems to closely resemble contemporary debates between both members of the psychosomatic medicine research community and also the more radical fringes of psychic research. Here the question seems to be just where to draw the line in deciding how much the mind is an active causal element in the Universe. As those of us familiar with remote viewing and its implications know (see last issue of the *Newsletter*) and also the recent work on dowsing (see review on page), the debate about what we should regard as the "valid" ways of knowing is still quite an active controversy, to say the least! In a future issue of the *Newsletter*, we will probe further into just what Anaxagoras' "Theory of Nous" was about, and we will perhaps sense some more of what noetics was to the Greeks and maybe learn something about what it could ultimately mean today.

Project Update: Holistic Medicine

Alternative Forms of Diagnosis

by Arthur Hastings



William Blake

*Editor's Note: The Institute of Noetic Sciences has prepared a comprehensive reference book and bibliography on holistic medicine, funded by a grant from the National Institute of Mental Health. The book is titled *Health for the Whole Person: The Complete Guide to Holistic Medicine* and will be available in July from the Institute. It will also be published by the U.S. government to be distributed to health professionals and members of Congress. Following is an excerpt from the book, "Alternative Forms of Diagnosis" by Arthur Hastings, Ph.D. Copies of the book can be ordered from the Institute of Noetic Sciences (see box in this Newsletter, page 13).*

Diagnosis in medicine refers to the process of identifying a disease or pathology from symptoms and from a study of origin and course of the patient's condition. In Western medicine, diagnosis is both an art and a science and ranges from simple visual observation to sophisticated technology. Standard diagnostic techniques include taking a case history, observing the patient's physical symptoms and mental and emotional state, touching, feeling, palpating, and running tests designed to measure phys-

iological conditions ranging from temperature, blood pressure, and pulse rate to blood chemistry, hormone levels, and cellular metabolism. These techniques provide information leading to the identification of the disease or abnormality on which basis treatment is made.

Recently, additional approaches to diagnosis have received increased attention in the health professions. The resurgence of interest in medical systems like acupuncture and homoeopathy has stimulated interest in their diagnostic approaches. Other techniques, such as the use of mental imagery, are being developed as adjuncts to standard medical and psychiatric treatment. Procedures like close physical observation and so-called "clairvoyant" diagnosis may be refinements of diagnostic skills already familiar to physicians and therapists. Some of these alternative diagnostic techniques are now being examined experimentally with standard research methods, and we have some evidence of their reliability. Others rest on clinical claims made by practitioners or on uncontrolled anecdotal reports. At this time, it is too early to draw conclusions about many of these approaches, but it is useful to discuss those that appear to have

credible or plausible effectiveness based on research or clinical claims.

Several features of these systems make them of particular interest to those involved in holistic approaches to medicine. Many of these systems are claimed characteristically by the diagnosticians to have the ability to diagnose the condition of many parts of the body and physiological systems from one location. These locations include the radial pulse, the tongue, the ear, the sole of the foot (foot reflexology), and the iris of the eye (iridology). Some of these locations are familiar to Western medicine (i.e., the pulse and the tongue), but a diagnostician trained in alternative systems can apparently obtain a richer amount of information than the typical physician trained in Western techniques. In addition, these procedures are presumed to identify a broad range of conditions throughout the body, often with mental and emotional components, including the state of certain organs, endocrine balances, circulatory and other systems, as well as predispositions to specific illness and the general health level. Another important aspect of these diagnostic procedures is that they are nonintrusive. They do no harm to the patient, they minimally alter the conditions that they observe, and of themselves they produce little stress.

Thus these systems, where found to be reliable and valid, may enable the physician and staff to work with patients in a more holistic context. Such diagnostic systems can encourage the evaluation of treatment in terms of many health components rather than on the basis of its effects on the limited symptoms presented by the patient.

Validity of Alternative Systems

There are four stages of reasonable verification of the efficacy of these systems. The first is observation of apparent correlations—the kind of observations that are case-by-case occurrences but suggest a diagnostic principle. The systematic development and clinical testing of such principles in a variety of individuals represent the second stage. This is usually done by individuals or small groups, sometimes innovators and followers, who begin to develop reliability and consensus through communication and shared experience. The third stage is to treat the principles thus developed as hypotheses and to test them experimentally or clinically under controlled conditions of observation. This leads to principles and applications that can be replicated by anyone with the requisite training and experience.

A fourth stage of verification is to formulate a theory to account for the diagnostic principles or system—that is, to place the system in a framework of descriptive principles and causes and effects. This process

often is carried on concomitantly with the second and third stages. A theory appears to be a prerequisite for a diagnostic system to be accepted; further, it has to be a theory that is in agreement with currently accepted medical beliefs (Stent, 1972). This is unfortunate for some of the alternative diagnostic or treatment modalities that are not described in Western medical terms. Chinese medicine, for example, has a consistent theoretical structure, described in terms of systems of "energy" that encompass various organs and vital systems. Acupuncture diagnosis and treatment are based on this theory (or perhaps the theory is derived from acupuncture diagnosis and experiences). However, the theory is ignored by many Western theorists, who have industriously attempted to explain the admitted effects of acupuncture in terms of pain-gate theory, neurohormones, DC fields, suggestion, and other Western concepts. Most of these systems are in the second stage of clinical testing and systematization. Only a few, such as acupuncture, are moving into the third stage of study with controlled methodology.

The remainder of this chapter describes selected systems of diagnosis that appear relevant to holistic medicine, health, and mental health. These have been selected with three criteria in mind. First, they appear to diagnose a wide spectrum of conditions, often including emotional and mental states. Second, those selected appear plausible on the basis of the literature and reported experiments or clinical claims. They are thus amenable to further testing and validation. Finally, these are diagnostic procedures that are accessible to interested Western physicians and health care professionals.

Observation

Close observation of the patient is an essential part of diagnosis. The skilled physician can observe a sunken chest that relates to respiratory insufficiency, atrophied muscles, the lowered head and shoulders of depression, specific injuries and fractures, muscle tone and skin color, and other signs of health or illness. It is, unfortunately, a skill that is often neglected. Cardiologists Friedman and Rosenman (1974, p. 70) regret that they did not observe their patients more closely:

We could have done far more in those earlier years. We could have surveyed each patient *in his entirety, as an individual*. We could have studied his face, his gestures, listened intently to the quality of his voice and to the content of his informal speech. . . . You see, we hadn't realized then that each of our coronary patients was actually sending us signals, trying to tell us—albeit unconsciously—of the rather odd behavior pattern he possessed.

Body language is a mode of nonverbal

communication that takes place through posture, facial expression, and gesture. It has been studied in anthropology (Birdwhistell, 1970) and in communication (Knapp, 1972). Friedman and Rosenman say that it can even indicate life-style and attitudes, including what they categorize as Type-A behavior.

Physicians and psychologists have long been interested in this level of information—how the language of the body relates to personality and character. Ernst Kretschmer in Germany and William Sheldon in the United States postulated in the 1920s that body types were related to personality, and Sheldon's classifications of body types as ectomorph, mesomorph, and endomorph yielded low, slight correlations with character traits. Some current physical therapy systems are also interested in the language of the body, linking observations to diagnosis and treatment techniques. These contemporary systems include rolfing (structural integration), massage, bioenergetics, Reichian therapy, and other "body therapies" (Brown, 1973). These systems accept the premise that the body, mind, and personality interface and that close, detailed observation of the person's body—its structure, posture, and patterns—gives information that can be used for diagnosis and therapy. What is essential is the specificity of observation that is required. One must learn to see the shapes, postures, balances, variations, and arrangements of the body and learn how to infer additional diagnostic information from these conditions.

The practitioners of these techniques say that the postural and tension patterns of the body reflect not only physical and mechanical stress but also regular behavioral patterns, physical and emotional traumas, and the psychological character of the person. Such specifics as the stance of the feet, the angle of the legs, the tilt of pelvis, the expansion of the rib cage, and the jut of the jaw may reflect feelings, personality, and chronic psychological or emotional responses. In other words, the body "speaks clearly, revealing character and a person's way of being in the world. It reveals past trauma and present personality, feelings expressed and feelings unexpressed. The trained eye sees this and much more" (Kurtz and Pretera, 1976).

In the matter of drawing psychological inferences from observation of the shape and structure of the body, some might object that these characteristics are determined by heredity or physical factors and are not psychologically relevant. However, it is becoming evident that much of our posture, body shape, and appearance are learned or developed, including flat feet, muscular development, pelvis tilt, height of the rib cage, shoulder posture, width of mouth, and level

of hairline (Dychtwald, 1978; Birdwhistell, 1968, 1970). Given these facts, it seems likely that psychological and emotional traits may strongly influence body development, albeit in unconscious ways, and the form of the body can thus provide valuable diagnostic information. Fortunately the literature that is beginning to appear on this topic is heavily illustrated. The basic book on structural integration (Rolf, 1977) contains hundreds of illustrations, photographs, and drawings, and Dychtwald (1978) and Kurtz and Pretera (1976) use illustrations, silhouettes, and diagrams, making it possible for the reader to develop a discerning eye.

The literature is often overgeneralized, as was the work of Sheldon and Kretschmer, but there is potential in these systems for developing a more refined and specific ability to observe patients. The literature, applied to and tested with real life observation, may enable the health professional to develop a trained eye that both sees and observes.

Homoeopathy

Diagnosis in homoeopathy involves eliciting a total picture of the patient's condition, rather than just the symptoms around an admitting complaint. "Symptoms" are defined far more broadly than in mainstream medical practice. The homoeopath is interested not only in the location of a physical symptom but what time of day it is better or worse, if it is ameliorated when lying down, the type of pain (bursting, cutting, stitching, etc.), the effect of pressure or rubbing, and other "peculiar" characteristics. Physical conditions far removed from the site of a symptom are inquired after. Of course, any physician who is a good diagnostician will ask many of these questions in a given case, particularly when a disease with some particular symptomatology is suspected. But the good homoeopath will ask these and additional detailed questions in every case, taking the history very carefully.

From physical signs, the homoeopath moves to emotional and mental conditions, for they are also relevant to the selection of the remedy. Such concerns as fear of crowds or other phobias, how the patient handles changes of weather, preferences for closed or open windows, quality of sleep, emotional anxieties or limitations, and relations with others are all relevant and must be made specific and concrete to build the case picture. A distinction is made between the common symptoms, which might be expected of any patient with a similar complaint, and the peculiar symptoms, which are the patient's unusual and individual responses. Symptoms are weighted in terms of their intensity and peculiarity but always in

(continued on page 10)

the context of the common symptom and the totality of the patient's case. To obtain this information, there is a great emphasis in homoeopathy on encouraging and allowing the patient to provide full information about himself or herself, including discussion of thoughts, feelings, and sensations that the patient or an orthodox physician might not consider related to major symptoms.

This diagnostic picture leads to the selection of a remedy from the materia medica—the enumeration of homoeopathic remedies and their effects. In principle, the remedy to be used is the one whose listed effects match the totality of symptoms of the patient. The treatment is linked directly to the diagnostic information, and as a result the practicing homoeopath may make use of some eight hundred remedies in his everyday practice, whereas an allopathic physician may use only thirty to forty medicines (Coulter, 1975).

Learning homoeopathic case taking and diagnosis is best accomplished through personal experience and training with a practicing homoeopath (Vithoulkas, 1978). Reading the literature will indicate the range of questions and the approach, but observation of a good model and personal experience will provide the experiential component. Further, since the relevant symptoms are defined by the effects of remedies, the diagnostician needs to be familiar with the materia medica of homoeopathy, with its extensive cataloging of mental, emotional, and physical responses. Most homoeopathic physicians today are also medical doctors, so their practice may involve not only homoeopathic case-taking but also standard medical tests and diagnostic procedures. Diagnosis may also begin with identifying a disease entity and then eliciting a patient report of the individual and peculiar symptoms to develop a total picture from which a remedy can be deduced.

Imagery

A diagnostic method that appears to be useful for both physical ailments and mental conditions is the use of guided or evoked mental imagery. For example, Achterberg and Lawlis (1978) have developed IMAGE-CA, a formalized procedure that asks cancer patients to draw and also verbally describe images of their cancer cells, their white blood cells, and the treatment of the malignancy. The drawings and interview dialogue are scored along fourteen dimensions for vividness, activity, strength, and other characteristics. The preliminary studies indicate that the imagery scores can predict favorable and unfavorable progress in the patient's disease. The IMAGE-CA was developed in relation to the cancer-therapy

approach of Carl and Stephanie Simonton (Simonton, Simonton, and Creighton, 1978), which uses imagery as an adjunct to standard medical treatment.

A variety of similar techniques have been developed recently, and they apparently enable the patient's subconscious mind to communicate information about the patient's condition. This information is usually in picture or images with literal or symbolic meanings. In the *Well Body Book*, Samuels and Bennett (1973) give directions on how to create one's own imaginary healer or doctor, who then can give information about one's health. Masters and Houston (1972) have developed a series of mental exercises that include visualizations providing information about the visualizer's health.

In the realm of mental health, imagery and visualization techniques have been used extensively for diagnostic and therapeutic purposes. In most of these techniques, the person is directed to visualize a particular scene or image. The therapist provides a general direction of the scene and the patient fills in specifics and details. The visualization, as constructed by the patient, can be discussed and interpreted to provide diagnostic information about the personality, problems, and needs of the individuals. For example, Happich (Kretschmer, 1962) and Leuner (1965, 1969) ask patients to construct scenes of meadows and mountains in their initial visualizations. The form and contents of the meadow may reflect the patient's relation to nature, a fresh start, the current mood of the patient, elements of the personality, or the mother-child relationship. The mountain visualization may give information about obstacles in the patient's life, achievement needs, career goals, or spiritual elevation. Other imagery themes used by Happich, Leuner, Desoille (1966), and others are finding a stream in the meadow and following it, entering a chapel, visualizing a house and exploring it, entering a cave or forest, or observing the cave or forest from a safe distance and waiting for a creature to emerge.

These scenes can be diagnostically interpreted in a similar manner as dreams or fantasies but are perhaps more reliable because of their structured origin. Beyond their information value, they can be worked with therapeutically by having the patient alter or revisualize aspects of the scene (e.g., removing a rotting log from the meadow or finding a way past a barrier in the path up the mountain). In addition, patients may be directed to visualize scenes, colors, symbols (like stars or mandalas), objects (such as a sword or cup), and other beings (a relative, an animal). The response of the patient to these situations provides information in the same way as does a projective test. The im-

ages are also assumed to be therapeutically valuable in their effects on personality structures, subconscious feelings, and personal understanding. Assagioli (1965) has integrated many of these imagery techniques into his system of psychosynthesis, and they are surveyed in Singer (1964), Kretschmer (1962), and Samuels and Samuels (1975).

Traditional Chinese Medical Diagnosis

As a highly developed system, Chinese medicine has a multitude of diagnostic approaches. They include observation and questioning of the patient (one must look, see, smell, touch, and palpate); consideration of the seasons, winds, weather, and geographical area; pulse taking; and tongue diagnosis. The patient is seen in context with life and the universe not in the context of a symptom.

The Chinese theory of health and disease involves basic complementary forms. Yang energy is like the sunny side of the hill—positive, assertive, active. Yin is the shady side—receptive, passive, quiet. These are assumed to be present in the balances of forces in the body, as are five basic forms of life energy, conceptualized as earth, metal, water, wood, and fire. In health they are balanced, in disease they are deficient or excessive. In addition, there are twelve functional organic energy systems, called meridians, each associated with organs (e.g., the liver or the small intestine), and areas of the body. However, these meridians go beyond the organ for which they are named. Each extends over wide areas of the body and is associated with physical symptoms and emotional states. Each organ meridian is either yin or yang and is identified with one of the five elements, along with specific skin colors, tastes, smells, and other signs. For example, the heart meridian is yin and the stomach meridian, yang. Greenish tones of the skin are associated with the "wood" element and relate to anger, the will, the liver, the ligaments, and the eyes. The Chinese physician evaluates diseases and symptoms in terms of this framework. Any one symptom may direct the physician to look at the rest of the associated elements in the system. Treatment is then prescribed through nutrition, exercise, herbal remedies, or acupuncture to harmonize and rebalance the energy levels and flows of the meridians.

The most highly developed method of diagnosis—and the cornerstone of traditional analysis—is pulse diagnosis (Vieth, 1972). Each of the twelve meridians or energy channels is reflected in the pulse when taken appropriately (Mann, 1973; Wallnofer and von Rottauscher, 1965). The pulse is taken at three locations on each wrist. To take the pulses, the middle finger is placed on the radial artery at the level of the styloid



The Complete Guide to Holistic Medicine

HEALTH for the WHOLE PERSON

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process, with the first and third fingers on the pulse at either side. At each site, the quality of the pulse is felt first at the superficial level with minimal pressure and then at the deeper level with increased pressure.

There are twelve different pulses — three locations on each wrist both at a superficial and at a deep level. Each of the pulses is associated with one of the twelve meridians (e.g., the distal — first — superficial pulse on the left wrist reflects the small intestine meridian, while the deep pulse reflects the heart meridian). The physician studies each pulse for its strength, evenness of flow, fullness, speed, resilience, and other qualities. There are twenty-three different qualities that are discriminated and defined (Mann, 1973), each implying certain imbalances and diseases related to organs and energy flow meridians (Leger, 1978). In the hands of a sensitive practitioner this is said to provide a highly accurate diagnosis, including indications of previous illnesses that have lingering effects and predispositions toward illness. Such sensitivity is only learned under the training of an experienced practitioner.

Another location for diagnosis is the tongue. There are more than one hundred varieties of tongue conditions described in Chinese medicine, and in addition specific areas of the tongue indicate certain parts of the body — e.g., the root of the tongue is correlated with the kidneys (Lu, 1977; Wallnoefer and von Rottauscher, 1965). The Chinese physician also is attentive to characteristics of the patient's breathing, perspiration, voice, vocal quality, and skin color.

One further diagnostic technique from traditional Chinese medicine is the use of auricular acupuncture points, called auricular diagnosis (Nogier, 1972; Huang, 1974; Wexu, 1975). The traditional Chinese texts say that the ear is closely associated with the organs, viscera, and energy channels. There are approximately two hundred points in and on the ear relating to other parts of the body,

and acupuncture needling can be performed on these points to affect the corresponding part of the body.

Huang (1974) states that diagnostically, "when a certain internal organ or a certain part of the human body suffers an ailment, especially organic disease, in most cases the corresponding part of specific area of the auricle will show a yang (positive) reaction. The pathological development is reflected in skin discoloration, deformation, peeling, and appearance of papules. For example, most patients of gastric ulcer will have a small, round-shaped point at the stomach acupuncture point area of auricle, a pathological reaction distinguishable from the normal skin around it."

The techniques for identifying these sensitized areas are observation, the use of a probe to test for sensitivity or pain in the area, and the use of electrical instruments that indicate lowered resistance and increased conductivity in the reactive point (Academy of Traditional Chinese Medicine, 1975). Huang (1974) shows a schematic diagram of such an instrument, and Bresler, Oleson, and Kroening (1978) give a brief description of one. The points that are most sensitive are considered indicators for diagnosis. According to Chinese diagnosticians, it is possible to diagnose abdominal diseases such as ovarian cysts, renal stones, appendicitis, and gallstones prior to acute stages (Huang, 1974).

Auriculodiagnosis to identify pain sites has been tested in the United States by Bresler, Oleson, and Kroening (1978) at the UCLA Pain Control Clinic using thirty-four volunteer patients with musculoskeletal pain from fractures of arms and legs, chronic headaches, backaches, arthritis, and other causes. During examination the patients were draped so that only the head was visible, and sixteen prespecified points were examined on each ear using an electrical instrument to test conductivity, a probe to test dermal tenderness, and visual inspection for the condition of the skin. The examiner did not know the patients or the locations of their injuries or pain. The body areas of pain and nonpain were correctly identified by the ear points 73 percent of the time — active points indicating painful areas, inactive points indicating nonpainful areas. Correct identifications of areas were in the majority for thirty-two of the thirty-four patients (probability less than .01). The electrical conductivity and the tenderness test were the most significant, and the side of the body on which the pain occurred was often indicated by which ear had the more sensitive point. While the authors report their study only as a preliminary investigation, the high level of success surely indicates that we can take seriously this technique as an effective, nonintrusive diagnostic

procedure.

The diagnostic procedures of Tibetan medicine are closely related to those of traditional Chinese medicine. Observation and interrogation of the patient are important. Pulse diagnosis is given high significance, and a Tibetan text says that the veins that pulsate "are like messengers between the doctor and the patient" (Rechung, 1973). Three pulses are felt on each wrist (at superficial and deep levels), and their location and characteristics are interpreted in relation to organs and ailments, corresponding to the organs associated with the meridians in Chinese medicine. Of special significance in Tibetan diagnosis is examination of the urine of the patient. This is usually collected in the morning, kept in a clean white container, and stirred or whipped by the doctor with a straw or stick. It is then examined in terms of sediment, foam, color, smell, density, and other characteristics that indicate various ailments or categories of disease (Rechung, 1973).

Many of the diagnostic techniques of traditional Chinese medicine are not foreign to Western physicians — such techniques as observation and questioning of the patient provide similar information about illness. It should be noted that Chinese medicine also diagnoses on the basis of disease identification — most acupuncture references that have been translated into English include lists of diseases by name and specify the acupuncture points to be used for their treatment, usually with the comment that they are the commonly used points. The use of pulse diagnosis and especially auricular diagnosis is unconventional and might be expected to produce skepticism. However, some Westerners claim to have learned the ability to diagnose via the pulse (Mann, 1973), and the experiment on diagnosis of pain through ear acupuncture points appears to verify that technique. With the documented efficacy of acupuncture as a therapeutic treatment, it appears that the diagnostic procedures associated with Chinese medicine are likely to hold genuine potential for use in health care. Their value in detecting incipient illness, predispositions, and subclinical conditions may be particularly useful in preventive medicine and health improvement.

Psychic or Clairvoyant Diagnosis

One of the more unorthodox diagnostic techniques is based on the claim that some individuals can identify disease or pathology through psychic abilities. Given a patient or even in some cases only a patient's name, the psychic generally or specifically describes the medical or health problems of the individual without using a diagnostic interview or standard medical diagnostic tests. This may correspond to what can be

(continued on page 12)

called "diagnostic intuition," a deduction that may be based on clinical experience and a sensitivity to body posture, expressions, voice, and other clues. These non-verbal communications can be picked up subconsciously and processed by the mind to manifest themselves as a hunch, hypothesis, or "gut feeling" without the process of conscious reasoning. It is well established that information can be received subliminally and can affect conscious feelings, ideas, and actions (Dixon, 1971). This suggests that we should not discount diagnostic hunches, even when there is no apparent rational reason for the idea or hypothesis.

Psychic diagnosis, however—whatever it owes to subliminal perception and subconscious processing—appears to provide information from beyond the normal range of observation and inference.

Karagulla (1967), a neurologist, studied a clairvoyant individual who claimed to see directly the energy fields of the physical organs of a patient's body and to observe directly any pathology or disturbance of their functioning. In several dozen observational tests the clairvoyant was able to accurately diagnose health problems of patients simply by observing them, fully clothed, in the waiting room of a clinic. The identifications, given in descriptive terms rather than medical language, included a hip disorder predicted a year before it developed, surgically removed brain tissue (for treatment of epilepsy), colon blockage, Paget's disease, kidney stones, malfunctioning of specific endocrine glands, even to the lobes on a particular gland, absence of ovaries and uterus (patient had had a hysterectomy), Graves disease, and other conditions that were verified by the medical history of the patient.

Shealy (1975), director of the Pain and Health Rehabilitation Center in La Crosse, Wisconsin, conducted tests with psychics who attempted to diagnose the locations and causes of pain in his patients. In a preliminary trial, seventeen patients were directly observed, and the diagnoses of the psychics were 80 percent correct. In a second trial with seventy-eight patients, the psychics were allowed only to see a photo of the patient. They scored with 70 to 75 percent accuracy on the site of the pain and 60 to 65 percent accuracy on the cause. Shealy suggests that many doctors and health practitioners may have this ability and that physicians who have a high success rate with difficult medical and psychiatric diagnoses may be using this type of awareness in addition to their textbook diagnostic procedures.

One form of diagnosis often reported by psychics is that of seeing the human aura. The aura is described as an envelope or band of light around the body several

inches or feet in width. This is seen in various colors and varies in its form and intensity. Psychics who can see this interpret it as a form of energy and claim that the colors, shape, and intensity provide information about the health of the individual (Karagulla, 1967; Kilner, 1973; Bagnall, 1975; Regush, 1974). Of course, not everyone sees such bands of light around persons, and it is not known whether this is a highly sensitive perception of some type of physical energy field or a psychic or imaginative projection from the mind of the viewer (Tart, 1972).

Psychic or clairvoyant abilities have been investigated scientifically by parapsychologists using standard methodology drawn from psychology and physics, attempting to establish if some form of extrasensory abilities exists—that is, if information can be perceived without known channels of sensory information. A significant number of controlled experiments have been successful (Wolman, 1977; Mitchell, 1974), and researchers have named the modality "psi," identifying four forms. They are telepathy (mind-to-mind communication), clairvoyance (direct knowledge of objects and events, including disease conditions), precognition (awareness of future events), and psychokinesis (mental influence on matter, such as healing). These findings have become more accepted in the last few years but are still controversial because of the lack of any theoretical explanation for psi and because the phenomena apparently violate currently accepted scientific laws (Hansel, 1966).

Some commercial organizations in the United States and abroad have recently been offering training programs in mind control, which claim to develop ability at clairvoyant medical diagnosis. Graduates of one of these programs have been tested by parapsychologists in double-blind studies with mixed results. In one study (Brier, Savits, and Schmeidler, 1974) two out of seven subjects scored at a low but statistically significant ($p = .05$) level in diagnosing ailments of twenty-five patients. In other studies (Brier, Savits, and Schmeidler, 1974; Vaughan, 1974; Jacobson and Wiklund, 1976), the diagnoses were not above a chance level. Certainly this and the variable reliability of extrasensory perception in other parapsychological studies suggest that there are more claims than actual abilities and that reliability of any individual psychic diagnosis should be tested empirically with standard medical procedures.

In perspective, the possibility of diagnosis using clairvoyant or psychic sensitivities has plausibility based on case reports and is bolstered by the research studies of parapsychologists. It has not yet moved into the realm of systematic study in medicine. The various components of subliminal percep-

tion, psi, and heightened standard diagnostic skills have yet to be separated. Whether these are abilities that can be trained in persons other than already gifted individuals is not certain, although most practitioners believe the ability is more widespread than is presently accepted. Diagnostic information from intuition or possibly psychic sources of awareness is easily amenable to confirmation or disconfirmation through standard tests; thus, if reliable, it could be of use in improving diagnostic efficiency, accuracy, and comprehensiveness.

Iridology or Iridiagnosis

Originating in Europe in the late 1800s, this technique uses the condition of the iris and the eyes as an indicator of the health of the rest of the body (Jensen, 1952; Brint, 1978; Kriege, 1969). Several aspects of the iris are used in diagnosis. The clarity or brightness of the color is relevant, and shades within the basic color of the eye reflect the state of health of body tissues—e.g., high yellow in the basically brown eye is indicative of acute inflammation (Jensen, 1978). The texture of the iris and the characteristics of the fibers and rings are all used as indicators of systemic conditions, such as the state of the autonomic nervous system, the lymphatic system, circulation, and muscle tone. Spots and small colored areas in the iris are interpreted as indicating deposits of drugs or minerals in parts of the body.

The most unconventional aspect of iridology is the assertion that specific areas in the iris correspond to internal and external parts of the body, and changes in the corresponding part of the iris reflect or diagnose conditions in that part of the body. There are some ninety areas of the iris that indicate such body areas as the heart, stomach, ear, neck, axilla, upper and lower parts of the lung, and extremities. By examining the areas of the iris for texture, color, spots, changes in capillaries, surface and subsurface irregularities, lesions, layers of tissue, the fibers, and other aspects, the diagnostician identifies internal and external disease and ailments in the part of the body associated with the area. This includes pain, toxic conditions, tensions, malfunctioning of the organs, predispositions, the activity of circulatory, digestive, and other systems. The particular areas of the iris are specified in the literature (illustrated profusely), and the iris conditions corresponding to bodily conditions are precisely described. There is general—but not universal—agreement among practitioners on the locations of the areas and zones of the iris.

This premise—that each organ of the body is represented by an area of the iris—has understandably led one leading medical journal to classify this technique as part of the irrational side of the holistic movement

Relman, 1979). Without agreeing or disagreeing, I have included iridology because it is an unusually well-developed and objective system and hence may be useful to examine with regard to experimental confirmation or disconfirmation and potential compatibility with orthodox diagnostic procedures. Evaluating this diagnostic technique is difficult because it goes against many of our preconceptions, which give us little ground for believing that all parts of the body are reflected in a small area in such specific detail. The same difficulty exists with the similar claims made for Chinese pulse diagnosis, auriculodiagnosis, or even foot reflexology, in which parts of the body are asserted to be represented on the sole of the foot (Dychtwald, 1978). With iris diagnosis, the theory is that the representation is due to the action of the nervous and circulatory systems, though no specific mechanism is given to account for the details.

About 1,000 persons in the United States and 10,000 in Europe are practicing iridology (Brint, 1978), which is often linked with some form of natural healing, chiropractic, or naturopathy. It appears not to have been investigated by orthodox physicians, although the literature indicates that it can be used in conjunction with orthodox medical diagnosis and therapy. Most of the evidence for the effectiveness of iridodiagnosis is in the form of individual case reports by practitioners. Conventional medicine accepts that many pathological conditions can be diagnosed from the condition of the eye, but the specificity claimed by iridology is not yet established. Nevertheless, such a comprehensive, yet nonintrusive procedure may deserve more careful attention.

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self-improvement, many people's reaction to or interest in it tended to be somewhat transient. Whatever the real facts of this situation may turn out to be, it will surely include the fact that throughout, it may well have been the case that the kind of equipment being used and the level of sophistication of the feedback process left much to be desired. In the future we may find that only very specific kinds of feedback, from precisely located regions of the brain, can produce the kinds of beneficial effects hoped for in the early days of the research.

At the same time as the onset of research into biofeedback, there was a sudden rush of new information about the two halves of the brain. Almost overnight, people who previously hardly knew what brain hemispheres were, suddenly were talking about people they knew as "left-brained" or as "rather right-hemisphere." What few people have tried to do, however, was to explore the implications of using biofeedback to directly synchronize the electrical activity of both hemispheres. Even less explored has been the notion of using linked biofeedback equipment to synchronize the hemispheres of pairs of individuals. What might this do both for the individual separately as well as the nature of communication between two people? The implications seem exciting and we are about to find out the answers thanks to a grant from Institute Board Member Dorothy Lyddon to support initial work into exactly these questions at Langley Porter Neuropsychiatric Institute in San Francisco.

At Langley Porter, Drs. Jean Millay and James Johnston will shortly begin a project to train a pilot group to synchronize the brain-wave output of their left and right hemispheres and also to synchronize the brain-wave activity of two people working as a pair. In writing up their ideas for this they stated:

New ideas often come into being by the free application of old concepts to new domains, for which they were not originally intended. This process is intuitive, and "metaphoric" in nature. Given the concept of "resonance" as understood in electrical, magnetic, mechanical and acoustical phenomena, the experimenters will pursue the notion that "resonance" in human physiology (phase synchronization in brain-waves, specifically) ought to be related to "resonance" in human interaction (feelings of rapport and communication skills).

There are some indications from preliminary work that this is not only possible but potentially connected with creative and so-called "healing" states of mind. Earlier work, funded in part by the Institute, at Stanford Research Institute indicated that signals in the brain of a telepathic "sender" could

impact on the distant brain of a "receiver." This work was later replicated at Langley Porter Neuropsychiatric Institute by another research team. In a related area, Drs. Elmer Green and Norman Shealy found evidence of "resonance" of a more general kind between healer and subject when filming part of a show broadcast on NBC television in 1977. Healer Olga Worrall and a patient in a distant room were wired up for EEG (brain waves), skin temperature, heart rate, and other variables. At just the point in time when Worrall began to "send healing" the brain waves of the patient in the other room began to change and he demonstrated increased relaxation. So there is at least general evidence to suggest that "resonance" phenomena can be measured, though the sophistication of the equipment in the Langley Porter study will allow a much deeper level of analysis than has been possible before now.

There are already some indications that the experience of synchronizing the electrical activity of the left and right hemispheres can have highly intriguing effects on personal creativity and self-esteem, though these need further elaborations and confirmation through further research. The possibilities in terms of interpersonal communication between two people linked up for simultaneous production of synchronous hemispheric activity seem even more exciting. One could imagine that the fundamental relationship between therapist and patient might be radically altered if each were in resonance with the other. It remains to be seen if such techniques may augment telepathic communication also—though as we know, that still seems to be rather *outré* in more conservative scientific circles. It would be ironic if interpersonal brain synchronization turned out to be the means of making telepathic communication repeatable and reliable as a communication channel. There are already indications that subjects who are successful at achieving high levels of left-right synchrony achieve higher scores in telepathy tests. These results need to be repeated on larger samples and ideally replicated by other research groups. However, the preliminary results look quite promising.

This new experimental program at Langley Porter Neuropsychiatric Institute will undoubtedly generate more questions than it answers, but that is the excitement of it all. If the work can lead to some new understanding of the untapped potentials of the human being, then we will have taken one more step toward our major goal—helping to stimulate research designed to learn more about the advanced capabilities of each human being.

—Brendan O'Regan

is ultimately worth doing has weakened. Modern society resembles nothing so much as a ship whose engines turn ever more powerfully, but whose navigator has mislaid his compass and chart.

We have all had a good laugh over the story of the drunk who had lost his house key in the dark alley and was looking for it under a streetlamp— "because the light is better here". The story applies to society's search for the key of knowledge. In our scientific obsession with the quantifiable we have been looking where the light was better. Except unlike the story, a lot of very useful things have been discovered under the streetlamp. But now it is time to attend to illuminating the darker areas too.

This "other kind" of science would have the same insistence on public validation of knowledge that was essential to the great achievement of modern science. But the validation would be less a matter of agreeing on pointer readings and more a matter of sharing deep inner experiences in an environment of trust and acceptance. The "other kind" of science would be less reductionistic in its explanations, and more characterized by holistic models. It would be less deterministic, and more tolerant of explanations in terms of some sense of purpose exhibited by living organisms. We do not know the eventual form of what astronaut Edgar Mitchell termed the "noetic sciences". But one characteristic we can assume they must have. Doesn't it seem probable that if such an open, systematic inquiry into the mysteries of consciousness is seriously undertaken, that eventually it leads to the same sort of global consensus we already approach in the physical and biological sciences? And wouldn't that consensus be an important step toward a just and peace-fostering global order?

And that's why we think it is time for a "whispering campaign", to legitimate the idea that there is another kind of knowledge— no less discoverable and universal than conventional science— about the nature of human consciousness, growth and development, and innate sense of "right direction" in life. One of the most immediate results could be to free people to recognize their own deepest experiences as most authentically themselves, rather than invalidate them by "scientifically" explaining them away. Another consequence could be the rediscovery that the "Novus Ordo Seclorum" of the Great Seal of the United States stands for something far transcending mere technological prowess and an ever-increasing material standard of living. The time is here for such a shift in our awareness. It really is.

—Willis W. Harman

Institute Sponsors National Conference



In Pursuit of Wellness: The Challenges and Opportunities

As we mentioned in the last issue of the *Newsletter*, the Institute has been planning to hold a major national conference entitled: "In Pursuit of Wellness" in conjunction with the Department of Mental Health, Office of Prevention, State of California and with the Division of Continuing Education in the Health Sciences, University of California, San Francisco, California. The conference dates have now been set for October 24 and 25, 1980 in San Francisco at the Sheraton Palace Hotel.

The two-day event will include presentation in four major areas: After considering the overall issue of the Challenge of Wellness in the opening of the conference, participants will be invited to address the field of wellness as a whole in terms of the following four major categories:

(A) Human Biology: Limits and Opportunities

In this section, we will consider what our biological limits are and how research into the nature of wellness might be both guided by these limits as well as the limits themselves expanded by further research. Some of the speakers in this section of the conference include: Dr. Robert Becker of the VA Hospital, Syracuse, New York, to talk about electromagnetic biology and regeneration research; Gretchen Kolsrud, Office of Technology Assessment, Washington D.C., to discuss the current state of genetics and genetic engineering research and Dr. Kenneth Pelletier from the University of California to discuss the limits of voluntary control techniques. Other speakers in this section are still being confirmed.

(B) The Individual: Lifestyle, Choices & Health

In this section the whole area of what the individual can do will be considered, both

from the standpoint of current research as well as what future kinds of research need to be done. Dr. Virginia Satir of Palo Alto, California, will address the issue of self-esteem and its role in the individual's overall health; Dr. Barbara Betz of the Johns Hopkins Medical School will discuss the 30-year Precursor Project being conducted there which has recently published material on health-prone personality; Dr. Arthur Hastings, Research Associate of the Institute of Noetic Sciences, will discuss the range of Holistic Medicine approaches to wellness and its maintenance. Further speakers are being confirmed here also.

(C) The Environment: Healing or Hazardous

It is in this section that we will consider all those factors that are external to the individual, within which a wellness context needs to be created. Buckminster Fuller will bring his unique concern for environmental issues to bear on this question; Dr. Rosalind Lindheim, of the University of California at Berkeley, will discuss the hospital setting as a healing environment and Dr. Michael Lerner of Commonweal, Bolinas, California, will discuss their recent findings in the mapping of environmental hazards on a state-by-state basis. Other speakers are still being confirmed here.

(D) Health Care Organization: Evolving Toward Wellness

The role of health care organizations must be re-thought when it comes to thinking about how they might evolve toward aiding the population in achieving a wellness orientation. In this section, Dr. David Sobel will be considering the politics of self care; Dr. David Hayes Battista will be dealing with the differences in need between the different ethnic populations in the U.S. and Dr. Halsted Homan of Stanford University will be discussing alternative health care systems.

There will then be a final section to the conference entitled: *The Future & Healthy People: The Political and Social Implications of Wellness*, with a major address from Dr. Michael McGinnis, Assistant Secretary for Health in HEW, Washington D.C. There will also be a panel of politicians, educators and futurists to consider the general implications of a wellness orientation in the population as a whole. Speakers here will include Dr. Willis Harman, President of the Institute of Noetic Sciences, Marilyn Ferguson, author of "The Aquarian Conspiracy", Rick Carlson of Health Resources and Communications Inc., Mill Valley, California, with other speakers still being confirmed here. John Vasconcellos, Chairman of the Ways & Means Committee, State of California, will address the conference on "Wellness and the New Politics."

Finally, the closing address on the evening of the second day will be by Governor Jerry Brown on "The Politics of Wellness." We will be publishing the full program of the conference in the next *Newsletter*.

TRANSFORMATION: TOOLS FOR CHANGE

Editor's Note: The following is reprinted from Marilyn Ferguson's new book, The Aquarian Conspiracy. Marilyn is a Board Member of the Institute of Noetic Sciences, author of The Brain Revolution and publisher of The Brain/Mind Bulletin and The Leading Edge.



Robinson

Human Connections: Relationships Changing

by Marilyn Ferguson

The personal paradigm shift is like a sea-crossing to the New World. The immigrant, try as he might, cannot persuade all his friends and loved ones to make the journey. Those who stay behind cannot understand why the familiar did not hold the immigrant. Why did he abandon his accustomed homeland? Saddest of all, how could their affections not hold him?

And the immigrant learns that you cannot

really restore the Old World on the new continent. New England is not England; Nova Scotia is not Scotland. Distance weakens the old reality, and communications become difficult, poignant. Letters to the Old World cannot evoke all the canyons and peaks that pulled the immigrant relentlessly across the unknown.

Ongoing personal transformation moves one away from the Old World—sometimes

abruptly, more often over years. As we have seen in an earlier chapter, people change jobs, even vocations, in the wake of shifting perceptions. If the powerful interest in the transformative process and the search for meaning are not shared by one's marriage partner, the marriage is likely to suffer. Over time, differences may seem more and more pronounced, old schisms widen. Many old friendships and acquaintances fall away; new friendships, even a whole new support network, take their place. Based as they are on shared values and a shared journey, these new relationships are perhaps more intense.

Relatives, colleagues, friends, and marriage partners, understandably threatened by these changes, often exert pressure on the individual to drop the practices or friendships involved in the change. These pressures only widen the gap. You don't stop an immigrant by trying to revive his hopes for the Old World.

In this chapter we will look at changing personal relationships, the nature of transformative relationships, and the effect of the transformative process on life transitions or "passages."

Relationships are the crucible of the transformative process. They are bound to alter, given the individual's greater willingness to risk, trust in intuition, sense of wider connection with others, recognition of cultural conditioning.

We are seeing the subtle power *custom* has wielded over our lives. Cultural norms and mores are the great unexamined assumptions that run our lives. We become *accustomed* to roles; they become *customary* and therefore unchallenged. Custom is like a buildup of smog. We only notice it when it has been swept away on a clear, clean day. We may fail to see the outlines of a new cultural development until its effects are pervasive.

Once-entrenched patterns of marriage, family, sexuality, and social institutions are being shaken by radically new, or radically old, alternatives. There are no formulas and there are many failures, but there are increasing numbers of individuals trying to see more clearly, love more honestly, and do less harm. Attitudes, not answers per se, are the key.

In early chapters we looked at the ways in which a new consensus is emerging in such collective institutions as government, medicine, education, and business. But "the family," "marriage," and social relationships in general cannot be rethought by a committee or reformed by a program. These are not true institutions but millions upon millions

of relationships—connections—that can only be understood at the level of the individual, and then only as a dynamic process. Social custom is perhaps the deepest of cultural trances.

Transcending Cultural Roles

When one begins the transformative process, death and birth are imminent: the death of custom as authority, the birth of the self.

In a sense our simultaneous effort toward autonomy and connection, contradictory as it seems, is an attempt to be real. We are stripping away the trappings and constraints of our culture: false machismo, false eyelashes, barriers, limits.

Several men who filled out the Aquarian Conspiracy questionnaire noted that the women's movement was important in their own change—not only because it focused on the trampled potentials of half the human race but also because it questioned the supremacy of those masculine characteristics valued in the society: competition, manipulation, aggression, objectivity. One said, "Much of the transformation was catalyzed by relationships. Having loving women help me let go of sexist attitudes contributed greatly to the increased 'yin' nature I have acknowledged in myself, which has unified my life and work."

As women in transformation are discovering their sense of self and vocation, men are discovering the rewards of sensitive relationships. During these equalizing shifts, the basis for male-female interaction is being redefined. Men are becoming more feeling and intuitive; women, more autonomous and purposeful.

According to very old wisdom, self-discovery inevitably involves the awakening of the traits usually associated with the opposite sex. All of the gifts of the human mind are available to the conscious self: nurturance and independence, sensitivity and strength. If we complete such qualities within ourselves, we are not as dependent on others for them. Much of what has been labeled love in our culture is infatuation with, and the need for, our missing inner halves.

The transformed self breaks out of the compartments structured by cultural role assignments, not only by acknowledging aspects long suppressed but also by recognizing how the assigned traits can become distorted. Strength may become caricatured as machismo, aggression, taciturnity. Nurturance may be exaggerated into smothering. Whatever short-circuits our spontaneity, be it denial or exaggeration, contributes to unconsciousness and unreality.

Conventional terms of relationship—husband, wife, father, son, daughter, sister, in-law, lover, friend of the family—do not

identify us as persons and, in fact, may mask our authentic selves if we keep trying to match our behavior and feelings to the "job description."

The Threat to Old Relationships

Personal transformation has a greater impact on relationships than on any other realm of life. It may be fairly said that the *first* impact is on relationships; they improve or deteriorate but rarely stay the same.

There are myriad changes: the ways we use power, openness to experience, capacity for intimacy, new values, lowered competition, greater autonomy in the face of social pressures. A formerly authoritarian person may no longer enjoy having power over others, and a passive person may become assertive.

In some cases these changes are welcomed. More often they are threatening. The game-playing inherent in most relationships cannot withstand the departure of one player. Just as the larger cultural trance is shattered in transformation, so is the trance of our miniculture, the relationship. We see that its habits and fences may have kept us from richer, more creative lives, from being ourselves. If one partner now feels that vocation and day-to-day living are more urgent than long-range goals, the partner who still supports the old agenda may feel angry and abandoned.

"Gus is gone, and he's not coming back," one woman said of her husband's new world. Their inability to share the transformative journey had created an ever-widening chasm, and she felt she could not find a bridge.

The most significant force in changing relationships is the transformation of fear. Beneath the surface, most intimate relationships pivot on fear: fear of the unknown, fear of rejection, fear of loss. In their most intimate bonds, many people seek not just sanctuary but a fortress. If, through whatever medium—meditation, a social movement, assertiveness training, quiet reflection, *est*—one partner breaks free of fear and conditioning, the relationship becomes unfamiliar territory.

Reassurances help very little. The threatened partner may show open disapproval, either through anger, mockery, or argument. People want us to change, but to meet their needs, not ours. And the partner who feels threatened cannot see why the other does not just change back ("If you loved me . . .")—or hopes that this is just a passing phase, like adolescent rebellion or midlife crisis.

But you can't quit a new reality the way you might resign from a job, the Democratic party, or the Presbyterian church. This new perspective defuses your fears, electrifies your awareness, links you to the human

company, enlivens your days.

If the fearful partner cannot adjust or join, there will eventually be a rift, either actual or psychological. Those who stay in a relationship hostile to their new world have two choices: to be open about their interests, which may fuel the misunderstanding . . . or to become clandestine. Either way, they can no longer explore, *within the relationship*, the most meaningful developments in their lives.

A New York artist whose husband belittles her spiritual search put it bluntly: "I lead a double life."

This anguish is the dearest price we pay for the New World, as we gradually concede that it cannot be explained, only seen. There is a deep sadness, not only for the loss of what might have been a shared journey but more intensely for what the companion seems to be rejecting: freedom, fulfillment, hope. Yet trying to argue someone into a paradigm shift, telling him to disregard old cynicism or limiting beliefs, is as futile as telling someone blinded by cataracts to open his eyes wider. Our fears, motives, and needs are idiosyncratic. We come to understandings in our own time and in our own ways. We remember that we ourselves initially rejected ideas that later became central to our lives—once we *experienced* them to be true.

Whatever the cost in personal relationships, we discover that our highest responsibility, finally, unavoidably is the stewardship of our potential—being all we can be. We betray this trust at the peril of mental and physical health. At bottom, Theodore Roszak observed, most of us are "sick with guilt at having lived below our authentic level."

If one partner develops a strong sense of vocation and the other has none, that commitment can become a source of jealousy and antagonism, creating, in effect, a triangle.

Relationships have a mathematics of their own, either enriching or destructive. As social critic Norbert Prefontaine described this phenomenon:

When one thing and one thing are added together, the result is two things, be those things oranges, pistons, or buildings. However, if one person is added to another person, the result is always more than two or less than two, but never merely two. That is, persons who genuinely meet and interact either strengthen each other so that they are stronger together than the sum of them separately or they damage each other so that they are weaker together than the sum of them together.

Psychologist Dennis Jaffe pointed out that two people can be a source of growth, support, and health for each other or they can be what he calls "lethal dyads."

(continued on page 18)

A closed relationship, like a closed system in nature, loses energy. A schoolteacher said, "The old conventional relationships, in their exclusivity and ego massage, isolated us even more than if we were alone. The only difference was now it was the two of us, an island."

The transformative process, while making ever more apparent the narrowing aspects of our relationships, also introduces us to new possibilities.

Transformative Relationships

A transformative relationship is a whole that is more than the sum of its parts. It is synergistic, holistic. Like a dissipative structure, it is open to the world—a celebration and exploration, not a hiding place.

As we become more concerned with the essence of relationship and less with the form, the quality of human interaction changes. Experiences of unity, fullness, awakened senses, empathy and acceptance, flow—all of these open us to more possibilities for connection than we had before.

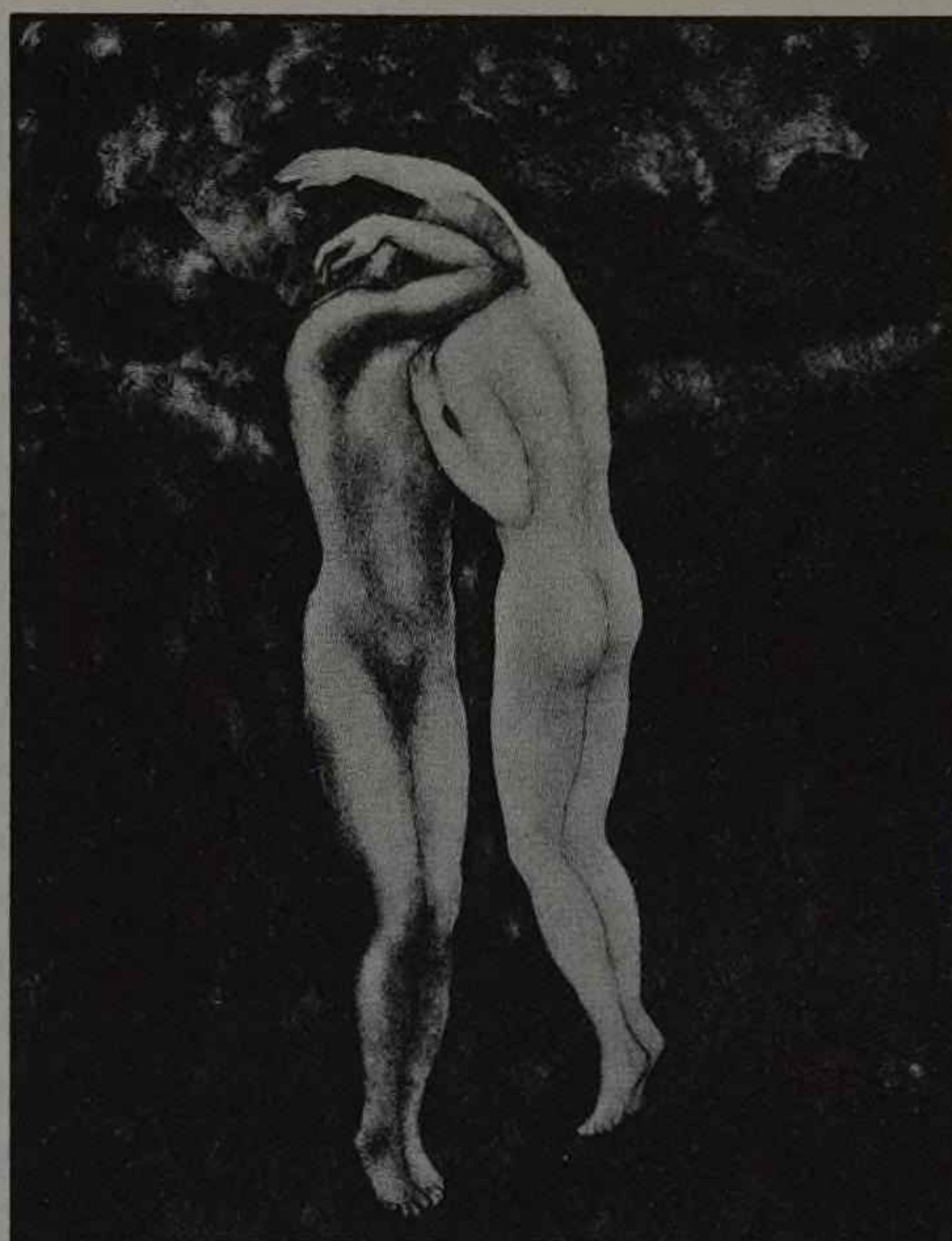
This is the union described by Martin Buber:

In a real conversation, a real lesson, a real embrace . . . in all these, what is essential takes place between them in a dimension which is accessible only to them both. . . . If I and another "happen" to one another, the sum does not exactly divide. There is a remainder somewhere, where the souls end and the world has not yet begun.

This dimension, "the between," the I-Thou, Buber also called "the secrecy without a secret." It is a conspiracy of two, a momentarily polarized circuit of consciousness, an electrified linking of minds. It neither asks nor answers; it simply connects. As Buber said, it may only be a look exchanged on a subway. And at its most complex and dynamic, it is the planet's brain, the accelerating awareness of brotherhood anticipated by Teilhard, Buber, Maslow, and others.

It is strangely impartial, turning frogs into princes, beasts into beauties. As more individuals open up to each other, expressing warmth and encouragement, love is a more available source of approval and energy. This can be a confusing phenomenon if seen through the lenses of the old paradigm.

One who believes in us, who encourages our transformation, whose growth interacts with and enhances our own, is what Milton Mayerhoff called "the appropriate other." Such caring relationships help us to become "in-place." We cannot find our growth alone, Teilhard said. He himself had intense friendships, many of them with women despite church strictures against even platonic closeness between priests and women. "Iso-



Kahil Gibran

lation is a blind alley. . . . Nothing on the planet grows except by convergence."

In his *Aquarian Conspiracy* questionnaire, a politician wrote of "the transforming power of liberating love relationships—occasionally experiencing myself more openly, fully, deeply, innocently than I had heretofore any sense of."

A number of those who responded to the questionnaire commented on the importance of powerful friendships that guided them across new territory. One, herself a therapist, remarked on the importance of "always meeting an essential strong person in my life when I need them. Each takes me to a certain point, then there's a period of integration, and the next one appears. These meetings are always accompanied by a deep sense of recognition and intense 'soul' involvement."

The loving, transformative relationship is a compass to our potential. It frees, fulfills, awakens, empowers. You don't have to "work at it." With its curious blend of intensity, ease, and spiritual connection, the transformative relationship contrasts with all the less rewarding connections in our lives and becomes as vital as oxygen. Each such relationship is also a compass to another kind of society, a model of mutual enrichment that can be extended throughout the fabric of our lives. Yet it requires that we first redefine our terms.

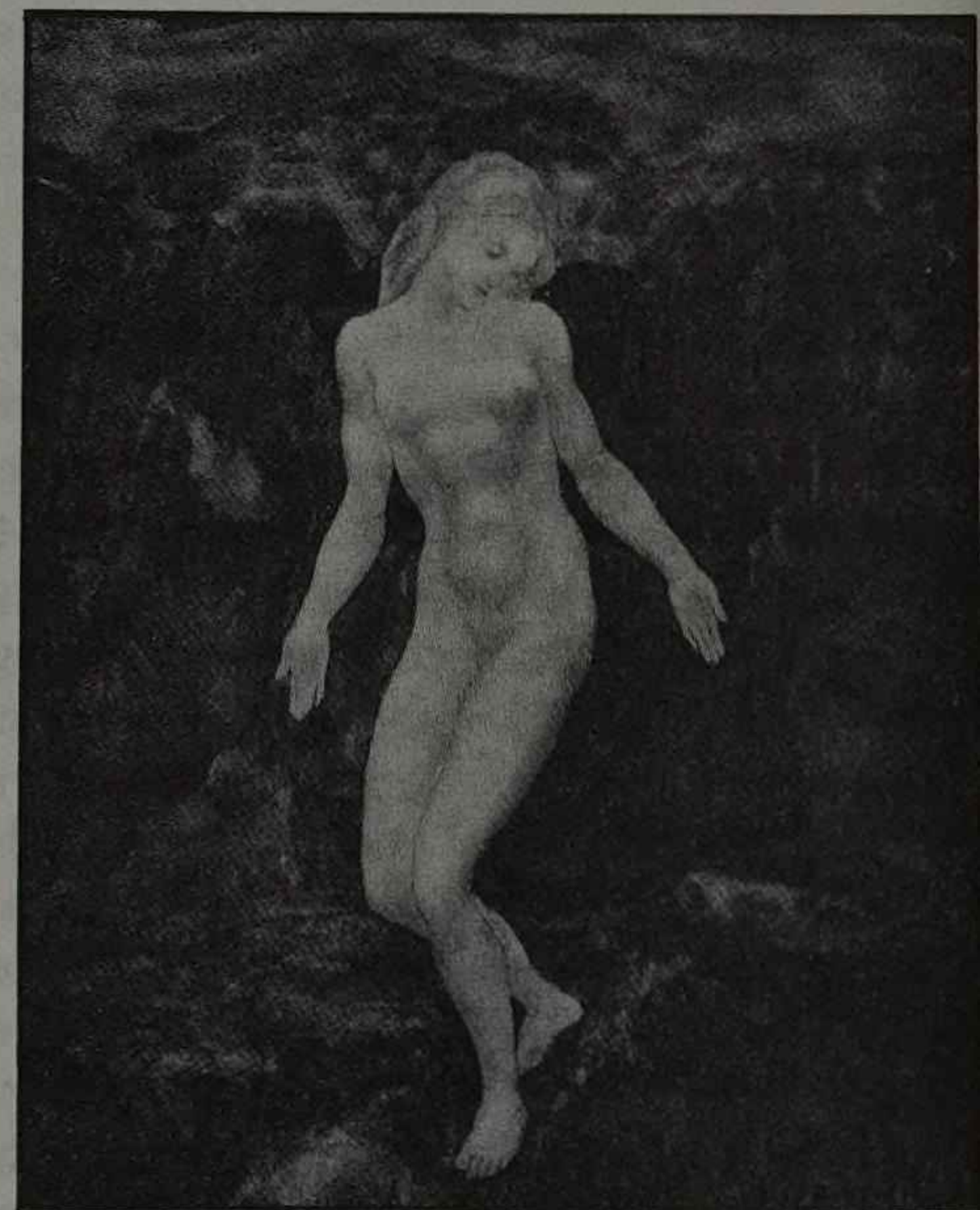
"When you ask what love is," said Krishnamurti, "you may be too frightened to see the answer. . . . You may have to shatter the house you have built, you may never go back to the temple." Love is not fear, he said. It is not dependence, jealousy, possessiveness, domination, responsibility, duty, self-pity, or any of the other things that conventionally pass for love. "If you can eliminate all these, not by forcing them but by washing them away as the rain washes away the dust of many days from a leaf,

then perhaps you will come upon this strange flower man hungers after."

The transformative relationship is more easily described in terms of what it does not include. Our cultural concept of love's possibilities has been so limited that we don't have the proper vocabulary for a holistic experience of love, one that encompasses feeling, knowing, sensing.

To have a transformative relationship you must be open and vulnerable. Most people meet only at their peripheries, Rajneesh, an Indian teacher, said. "To meet a person at his center is to pass through a revolution in yourself. If you want to meet someone at his center, you will have to allow him to reach your center also."

Transformative relationships are characterized by trust. The partners are defenseless, knowing that neither will take advantage or cause needless pain. Each can risk, explore, stumble. There is no pretense, no facade. All aspects of each partner are welcome, not just agreed-upon behaviors. "Love is more important than romance," a magazine editor asserted. "Acceptance is more important than approval."



Kahil Gibran

Past the old conditioning of competition, the partners cooperate; they are more than two. They dare and challenge each other. They take pleasure in each other's capacity to surprise.

The transformative relationship is a shared journey toward meaning. The process itself is paramount and cannot be compromised. One is faithful to a vocation, not a person. "Genuine love," Simone de Beauvoir said, "ought to be founded on the mutual recognition of two liberties; the lovers would then experience themselves both as self and the other; neither would give up transcendence, neither would be mutilated. Together they would manifest values and aims in the world."

Because there is a continuous change in a

transformative relationship, there can be no taking for granted. Each partner is awake to the other. The relationship is always new, an experiment, free to become whatever it will. It rests on the security that comes from giving up absolute certainty.

The transformative relationship defines itself; it does not try to conform to what society says it should be but serves only the needs of the participants. There may be guiding principles, even flexible agreements, but no rules.

Love is a context, not a behavior. It is not a commodity, "won," "lost," "earned," "stolen," "forfeited." The relationship is not diminished by either partner's caring for others. One can easily have more than one transformative relationship at a time.

Both partners feel bonded to the whole, the community. There are new capacities to give and receive love, joy and sympathy for many. This intense communion with the world cannot be pressed into a narrow channel. A physician said, "It's as if you've been withholding your empathy with the world, and suddenly you lose your virginity. You feel as if you want to make love to the cosmos. Now, how are you going to explain that to anybody?"

The Transformation of Romance

At first we may try to fit this new cosmic caring into conventional structures, the kind of romantic expressions conditioned by our culture. We soon learn that the old forms of relationship are inappropriate to the demands of the transformative journey. One woman said of a brief remarriage after the end of a long marriage, "In retrospect, I realize that I was trying one last fling with the Old World, I was running away from my own spiritual drive."

A businessman said that for a time he tried to be more creative in his work and sought out sexual relationships "all trying to fill up the empty hole in the middle—the spiritual hunger. But once you recognize what you're doing, you stop. You can't keep doing it."

As transformative relationships evolve in our lives, we may find in them qualities that evoke the *original* meaning of romance, as it emerged in the nineteenth century. Romance referred then to the infinite and unfathomable, those forces in nature which are ever forming. Although it preferred the natural to the mechanistic, the Romantic movement was by no means anti-intellectual or anti-rational. Ironically, in their eagerness to probe the mysteries of nature, the Romantics generated the scientific curiosity that finally led to the glorification of reason. Romance was then reduced to a cosmetic and trivial role, representing all that is unreal, the guilt that hides the tarnish of life.

In its heyday the Romantic movement

celebrated family, friendship, nature, art, music, literature, drawing on what one historian called "the mystery of the spirit, the larger self, the sense of quest." In a very real sense romance was identical with what we now call the spiritual. It trusted direct experience; it sought meaning.

Our cultural romance, however, is external, the product of conditioning: movies, television, commerce, custom. No wonder we become apostates from conventional romance! It's like second-hand God. And there is the same sense of loss and disillusionment as when we rebel against organized religion. We abandon the adventure; we say it is a sham. Yet the hunger is still there, the haunting suspicion that we are missing something central to life.

In the transformative process, romance—that numinous, spiritual, *inward* quality—is embodied in an adventure that evokes its own symbols and language, that feels like "the real thing," a dream from which you don't awaken. De Beauvoir conceded that certain forms of the sexual adventure would be lost as we became more real, "but this does not mean that love, happiness, poetry, dream will be banished. . . . Our lack of imagination always depopulates the future."

A Taoist meditation says, "Seek no contract, and you shall find union." One of the transformative shifts is an ebbing away of what the Eastern philosophies call "attachment." Nonattachment is a compassion that does not cling, love that accepts reality and is not needy. Non-attachment is the opposite of wishful thinking.

The old familiar emotions like jealousy, fear, insecurity, and guilt are unlikely to evaporate. But the overall patterns are changing. For some this means confronting and transcending internal contradictions, like the desire for freedom for oneself and fidelity in a partner. Coming to terms with

such deep conflict is difficult, painful, and, for many, rewarding.

One woman said in her *Aquarian Conspiracy* questionnaire, "I spent two years learning how to love without possessing. I decided that when I got married it would be that way for me, and it has been for thirteen years. I've learned that you can love more than one person, that you may be jealous, but you can never possess someone, only make desperate tries at it. *We possess nothing, least of all each other.*"

Writing in a Quaker newsletter, one woman envisioned a near future in which everyone is more able to relate to others—husbands and wives not possessing each other, nor parents their children, in the old constricting ways.

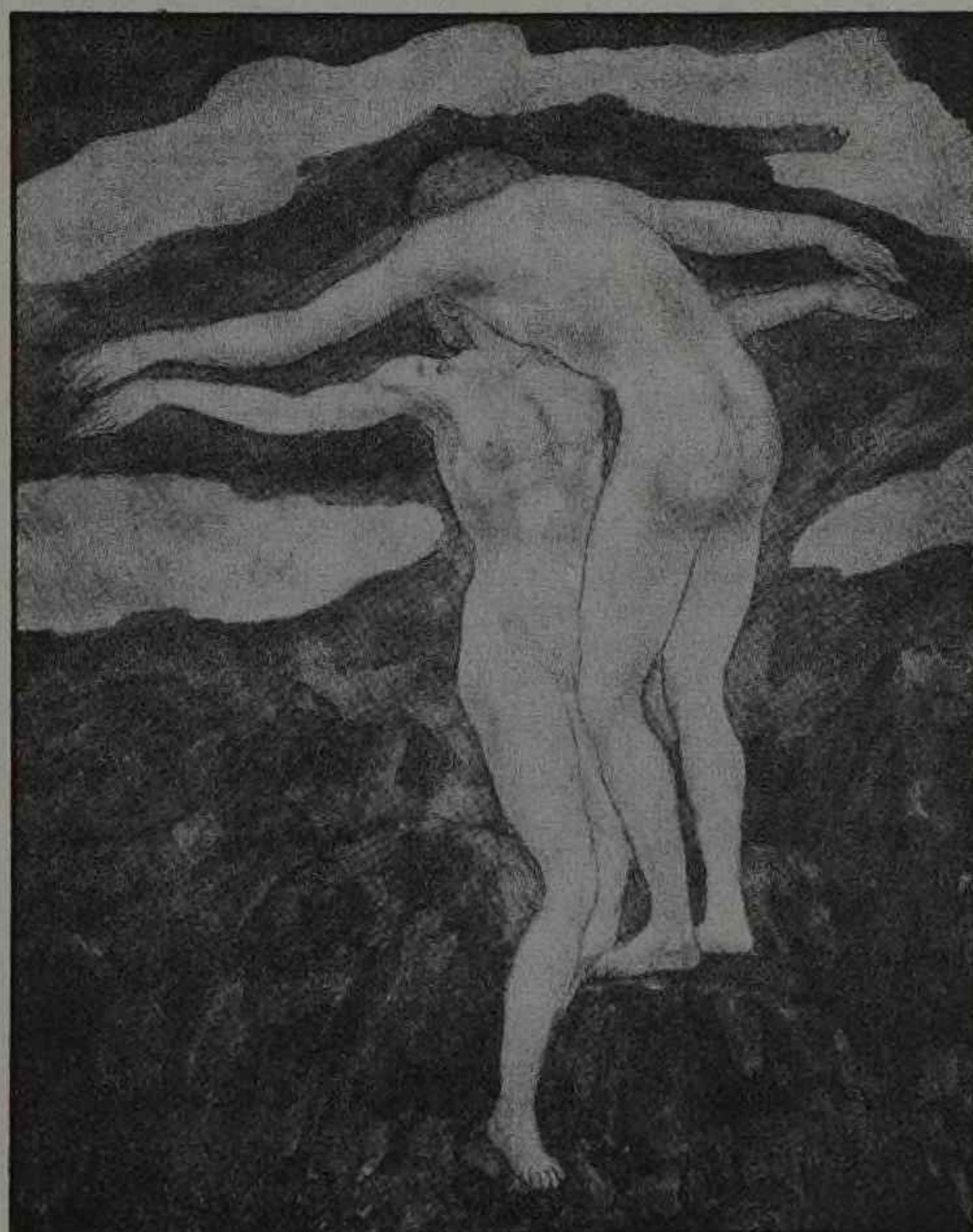
We will recognize that each person needs to nourish and be nourished by many persons, and we will not seek to restrict them through fear. We will know that we can only keep that which we set free. . . . We recognize ourselves as members of the family of human beings. It is right, even necessary, to make yourselves available to one another in new loving, caring, and fulfilling ways—without the spectres of old guilts at loving widely.

In new-paradigm relationships, the emphasis is not so much on sexuality as intimacy. Intimacy is prized for its shared psychic intensity and transformative possibilities, of which sex is only a part—and often a latent part at that.

For many people, giving up the idea of exclusive relationships is the most difficult paradigm shift in their own transformation. Some choose to limit their sexual expression to a primary relationship. Others may give priority but not exclusivity to the primary relationship. The desirability of exclusive relationships is a deep cultural belief, despite contradictory evidence—and behavior. For many people, giving up the old need for exclusivity was the most difficult paradigm shift of all, yet necessary if they were to be true to their own mores.

Trying to analyze the sexual revolution, contemporary sociologists have commented that the difference is in attitudes, not behavior. Our culture's traditional sexual mores have been widely violated in this society since the twenties, if not before. John Cuber, a sociologist at Ohio State University, found that, compared to their counterparts in 1939, young people in 1969 did not accept the old sexual rules. Even if they did not wish to engage in the once "forbidden" behavior, they challenged the validity of the law. Cuber said:

There is a profound difference between someone who breaks the rules and someone who does not accept the rules. One is a transgressor; the other is a revolutionary. No government trembles before the tax



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(continued on page 20)

evader. But no government could brook a Boston Tea Party; that was revolution.

... Will the revolutionaries ever return to the fold, mend their ways, recant? I think not. It is a comfortable cliché among the middle-aged that the restive young when faced with responsibilities will settle into traditional viewpoints. That is not so for this generation. ... As long as the sinner acknowledges his guilt, there is a chance that he may reform and repent. But the key to this generation is precisely its freedom from guilt.

Others are challenging the very context of sexuality in our culture. We have been conditioned to approach all sexual relationships in terms of conquest, they say, and this precludes deep trust and intimacy. We are "turned on" to a surprising degree by that which our culture has programmed us to associate with sexuality. This programming also sets us up for rejection and frustration.

In workshops around the country Joel Kramer and Diana Alstad talk about a sexual paradigm shift—freeing sexuality from "the context of conquest." Conditioned desires and stereotypes have to change, they say, if we are to appreciate the integrated person—a strong woman, a sensitive man. "Men are still sexually turned on to beauty and women to power in very deep ways. What is new is that people are no longer satisfied with this way of relating." The old paradigm automatically puts love and sexuality "out of kilter" with each other. People who are "good for you" are often not those who excite you sexually, they said.

What we are talking about is another way of looking at relationships and sexuality, in which the major interest is in exploring and growing together. We all hunger for solutions, but rather than defining or laying out a new way to be, we must be pioneers if we're going to create a new way to live together.

No real solution can come until both men and women truly see the nature of the problem, which lives in each of us. ... Seeing the patterns changes you.

As long as men and women are hooked into romance, they can never meet each other totally. If we are to open opportunities to meet human beings, we must leave the whole context of conquest. It takes equals to create the possibility of mature love.

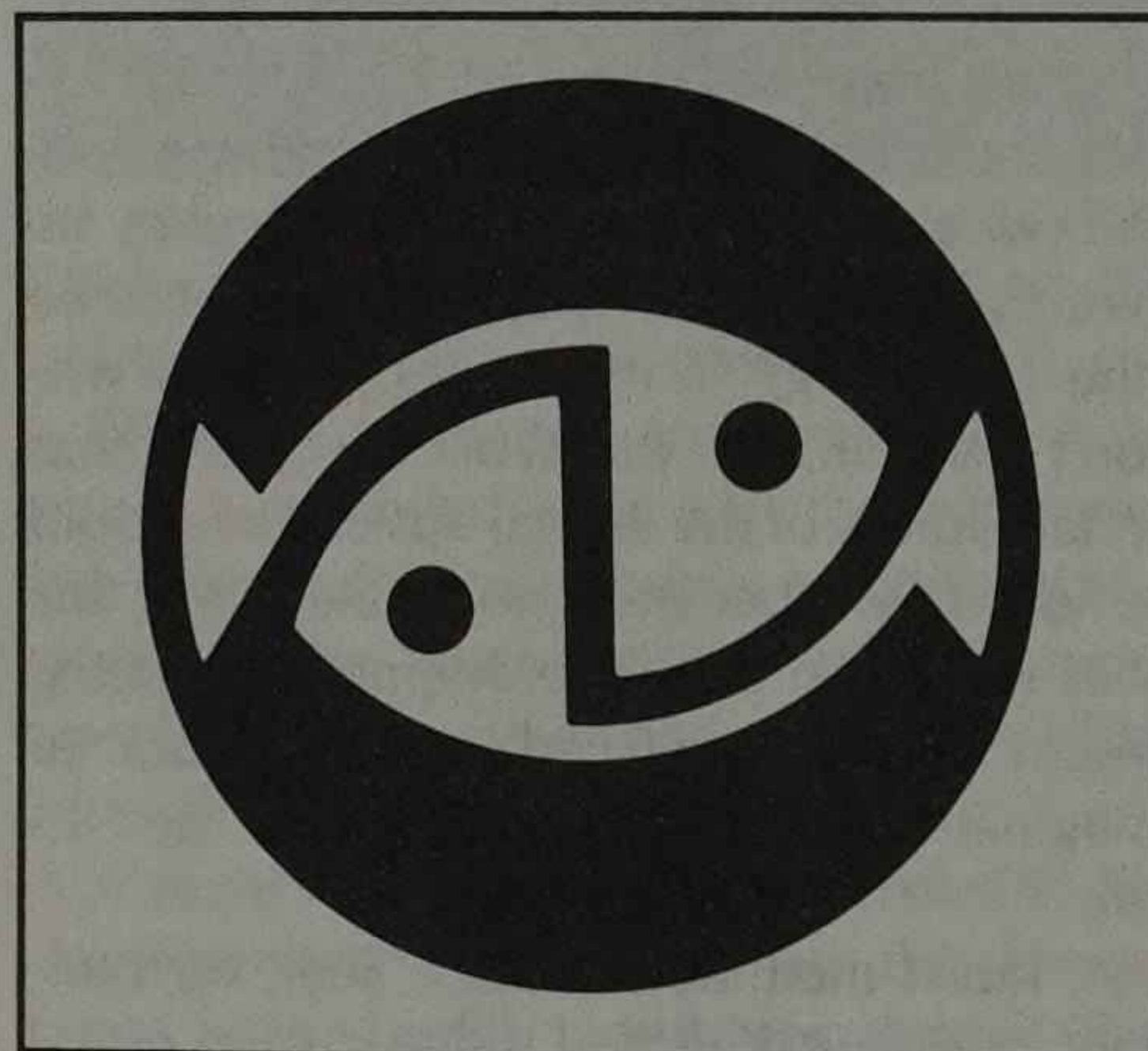
The Transformative Family

The novel *Anna Karenina* begins, "Happy families are all alike; every unhappy family is unhappy in its own way."

Suddenly we aspire to a society in which we may be happy in different ways. As the old social structures break, millions have been cast loose from the conventional support systems of the past. The Carnegie Council on Children estimated in 1978 that as many as four of every ten youngsters born in the 1970s will spend part of their

childhood in a one-parent family. Three out of five women polled recently by the Roper organization preferred divorce to staying with an unsatisfactory marriage. One urban study showed that 40 percent of the city's adults were totally without family ties. Only one of four families fits our stereotype of the breadwinner husband and homemaker mother.

It's ten o'clock, says the public service radio announcement. *Do you know where your child is?* A better question: It's late in the twentieth century. ... Amidst experimentation, changing social structures, broken relationships, new relationships, demands for freedom, demands for security—do we know where our connections are?



The family can nurture the child so effectively, with warmth and stimulation, that we call the result giftedness. But if the family fails to nurture, if the emotional bonds are weak, the child will not thrive. Studies of infants in institutions have shown that the development of normal intelligence requires human interaction. Without love, without input and response from the world, we can make no sense of the world. Retardation is the result for babies who are fed but not played with, safe but not spoken to.

An atmosphere of trust, love, and humor can nourish extraordinary human capacity. One key is authenticity: parents acting as people, not as roles. The poet Adrienne Rich recalled one summer in Vermont when she and her three young sons lived spontaneously, without schedules. Late one night, driving home from a movie, she felt wide awake and elated. "We had broken together all the rules of bedtime, the night rules, rules I myself thought I had to observe in the city or become a 'bad mother.' We were conspirators, outlaws from the institution of motherhood. I felt enormously in charge of my life." She did not want her sons to act for her in the world. "I wanted to act, live, in myself and to love them for their separate selves."

Parents often pretend to endorse rules, institutions, and behavior because they trust authorities more than their own experience and intuitions. This perpetuates hypocrisy

and the power of the institutions from generation to generation. Children, teenagers especially, tend to assume that their own feelings are unacceptable, and so they withdraw from their parents.

"Many, perhaps a majority, of young people are looking for deep, intimate relationships," said Ted Clark and Dennis Jaffe of their experiences counseling youths. "They need a supportive, understanding, and tolerant person for a guide. Nothing has to be 'done.' They just want a place where they can be themselves."

Like the transformative adult relationship, the transformative family is an open system, rich in friends and resources, giving and hospitable. It is flexible, adaptive to the realities of a changing world. It gives its members freedom and autonomy as well as a sense of group unity.

Long before the educational system exacts its psychological costs, the family has defined roles and expectations, teaching a benign, cooperative attitude toward the world or a competitive, paranoid one. The family rewards or punishes innovation. The family is a setting for self-disclosure, for intimacy—or for the repression of feelings, for hypocrisy. In its rigidity or flexibility, its exclusive or inclusive attitudes, the family patterns our later relationships.

The child develops self-esteem in an atmosphere of unconditional caring, mastery in an atmosphere of appropriate challenge.

Insecurity keeps many families from outside relationships that could change them. They are closed systems. Fearful families, said Hossain Danesh, a Canadian psychiatrist, "perceive the world in dichotomies: men and women, old and young, emotions and intellect, power and weakness, self and others." They discourage members from friendships with people different from themselves. The child gains approval only by conforming to the parent's wishes.

The power of parent-child relationships is tragically evident in a phenomenon called emotional dwarfism. A six year old with this syndrome may be the size of a three year old. Typically, when placed in a good foster home, such a child begins to grow normally but stops again if returned to the hostile biological family. Emotional dwarfism is relatively unusual, but a more common stunting of growth occurs in families all the time when children are thwarted in their unfolding as individuals.

Frederick Perls, the famous psychologist, once said that dissociation—the split between emotions and conscious thinking—begins with a parent's *conditional* love. Because many adults were betrayed as children—not rewarded for being themselves, always urged to "do better" however hard they tried—they find it difficult to trust that they are loved. The chain is perpetuated if

they become parents because they may find it hard to accept their own children unconditionally. Not until we have discovered the extent of our own programmed fears can we forgive the imperfections and weaknesses of others. When we have touched the healthy center in ourselves, we know it exists in others, whatever their outward behavior. Consciousness enables us to care about them.

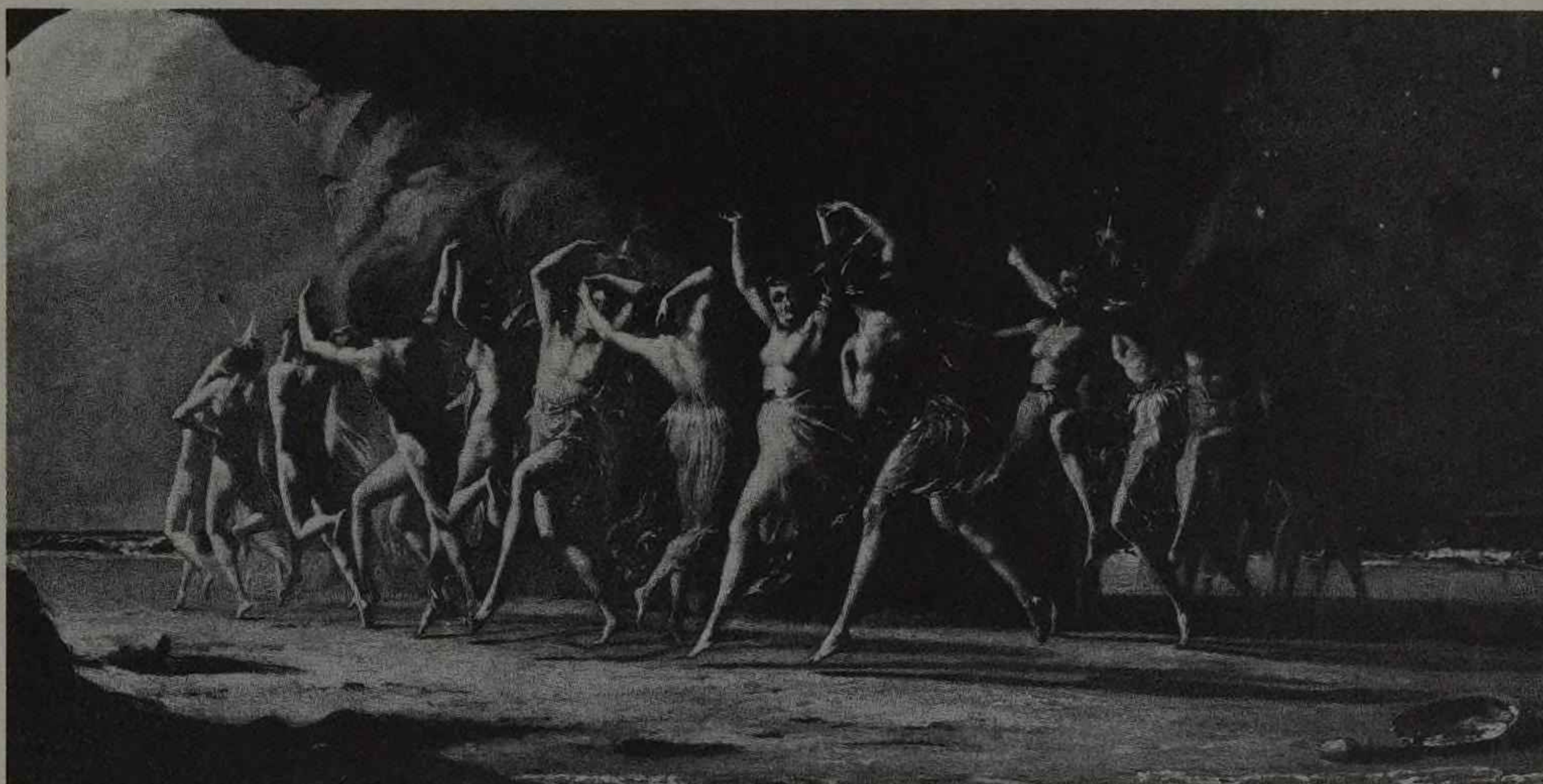
The transformative process is a second chance for many people to achieve the self-esteem they were denied as children. By reaching the center in themselves, the healthy self, they discover their own wholeness.

The Planetary Family

The wider paradigm of relationships and family transcends old group definitions. The discovery of our connection to all other men, women, and children joins us to another family. Indeed, seeing ourselves as a planetary family struggling to solve its problems, rather than as assorted people and nations assessing blame or exporting solutions, could be the ultimate shift in perspective.

If we consider that any child being abused is *our* child, the problem changes. When we see our culture, our social conditioning, or our class as an artifact rather than a universal yardstick, our kinship expands. We are no longer "ethnocentric," centered in our own culture.

A society in flux will have to create its families in new ways. The new family is emerging from networks and communities, experimental and intentional groups, friendships. The American Home Economics Association redefined the family in 1979 as "two or more persons who share resources, share responsibility for decisions, share values and goals, and have commitment to one another over time. The family is



Dadd

that climate that one 'comes home to,' and it is this network of sharing and commitments that most accurately describes the family unit, regardless of blood, legal ties, adoption, or marriage."

Human beings have a kind of optical illusion, Einstein once said. We think ourselves separate rather than part of the whole. This imprisons our affection to those few nearest us. "Our task must be to free ourselves from this prison by widening our circle to embrace all living creatures. . . . Nobody achieves this completely, but the striving itself is part of the liberation."

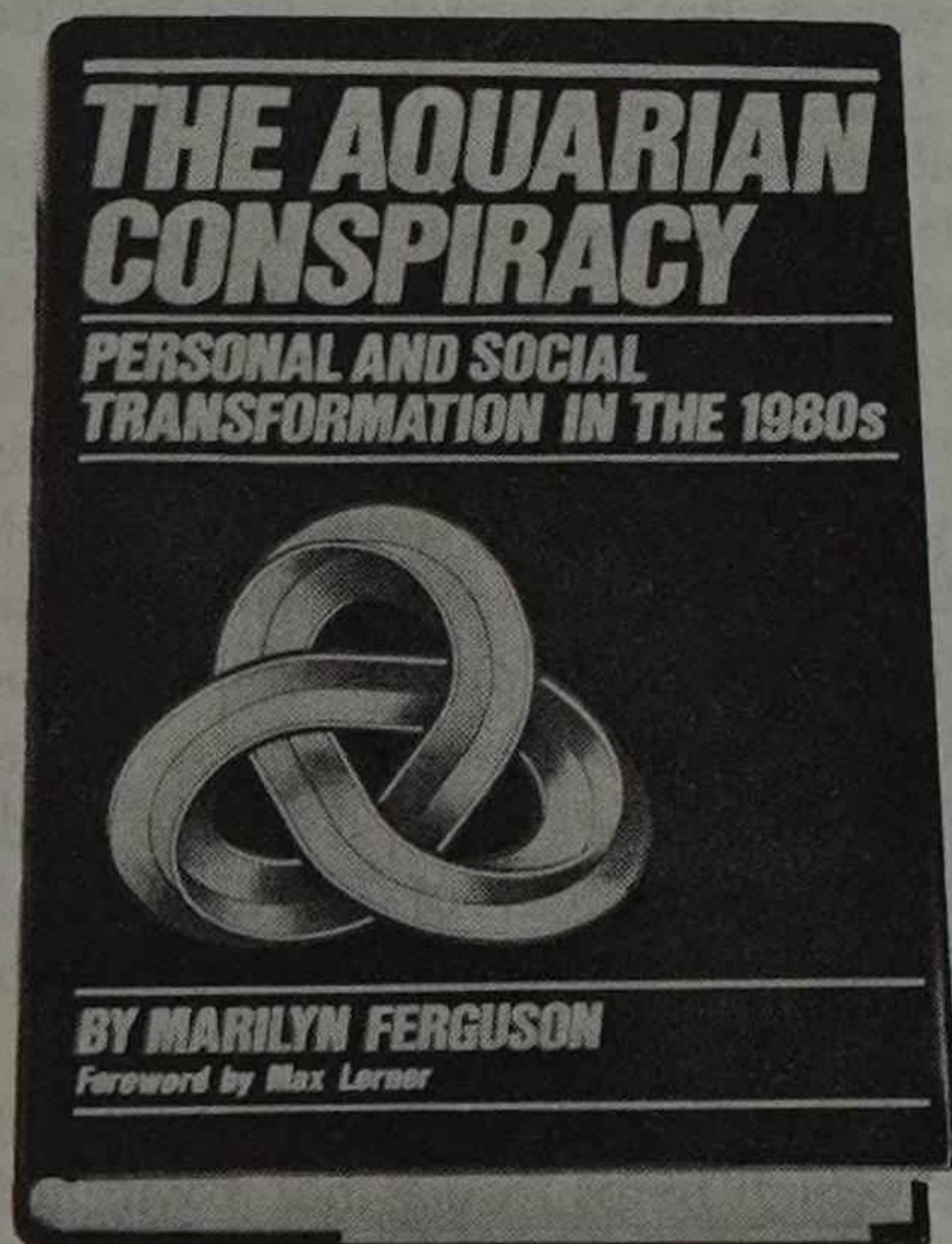
The "transcenders" Maslow studied, Einstein included, seemed sadder than the other healthy, self-actualizing persons; they saw more clearly the gap between potential and reality in human relationships. Any one of them could have written a workable recipe for social transformation in five minutes, Maslow said.

"I have seen the truth," Dostoevski said. "It is not as though I had invented it with my mind. I have seen it, *seen it*, and the living image of it has filled my soul forever. . . . In one day, one hour, everything could be arranged at once! *The chief thing is to love.*"

He said he realized that this truth had been told and retold a billion times, yet it had never transformed human life.

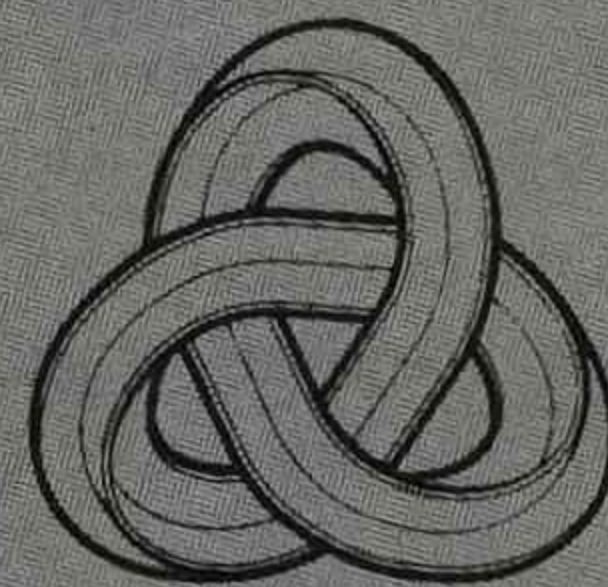
Love and fraternity, once part of an ideal, have become crucial to our survival. Jesus enjoined his followers to love one another; Teilhard added, "or you perish." Without human affection, we become sick, frightened, hostile. Lovelessness is a broken circuit, loss of order. The worldwide quest for community typified by the networks of the Aquarian Conspiracy is an attempt to boost that attenuated power. To cohere. To kindle wider consciousness. When man reclaims this energy source, the sublimation of spiritual-sensual love, Teilhard once said, "for the second time he will have discovered fire."

During the second New York City blackout, while some people were looting, others were beaming their flashlights from apartment-building windows to the sidewalks, "moving" pedestrians from one building to the next, creating a path of light and safety. In this time of uncertainty, when all our old social forms are crumbling, when we cannot easily find our way, we can be lights to each other.



Order form for The Aquarian Conspiracy

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by Theodore Roszak
Anchor Press/Doubleday
New York, 1979
347 pp. \$5.95

This book is perhaps the best and most inspiring discussion to date of how nation-state separatism and the consumption ethic of industrial society are being replaced by, and must be replaced by, a dual gospel — a self-realization ethic placing personal growth and spiritual fulfillment at the core of living, and an ecological ethic emphasizing oneness with all life and with the planet. It is an important book to read even if one violently disagrees with its thesis, namely that "The Creative Disintegration of Industrial Society" (the book's subtitle) would be a good thing. Important because it will help one to understand the expanding group of Americans who are being attracted to such a conclusion.

Roszak summarizes his intent on the first page: "This book concerns itself with the point at which human psychology and natural ecology meet. My purpose is to suggest that the environmental anguish of the Earth has entered our lives as a radical transformation of human identity. The needs of the planet and the needs of the person have become one, and together they have begun to act upon the central institutions of our society with a force that is profoundly subversive, but which carries within it the promise of cultural renewal."

The key political development which Roszak identifies as epoch-making is the assertion, new in history, of the *right to personhood*, of the sovereign right to self-discovery. "You have a *right* to be handled with care, a *right* to the employment, education, time and space you need to find your peculiar style, a *right* to participate directly in the decisions that shape your life even if exercising that right means endless delay and disruption." This new right is not a simple extension of traditional rights like civil liberty, equality, social democracy. It may seem to us now like an obvious extension of the right of religious freedom, but in fact it would have been seen as intolerably socially disruptive only a couple of generations ago.

The insistence that "I matter. I'm special. There is more in me to be discovered and liberated" is the wholesome, positive side of the "Me Generation". There has indeed been a decline of social allegiances to tribe, nation, class, social movement, revolutionary masses — and a rise in allegiance to self. This new ethos of self-discovery has been mistaken for narcissism, hedonism, and self-aggrandizement, which has provoked ominous warnings from political leaders and social critics. Nevertheless, this quest

for personal growth and spiritual fulfillment, and the accompanying protest against the underdevelopment of the human being in urban-industrial society, Roszak asserts to be the most prominent cultural current of the day — one which, despite instances of excess and of nonsense, contains within it the seeds of re-creation of modern society.

One of Roszak's most interesting and important points has to do with the threatening nature of the new therapies and liberating experiences because of the way they deal with the issue of guilt. In this society, acceptable therapy, introspection, and self-revelation preserves guilt. This characteristic relates to the deep conviction of fallenness, of intrinsic guilt, which we have inherited. The new therapies which deviate from this guilt preservation tend to be labeled "hedonistic", as though it were axiomatic that joy without guilt must be self-deception or worse. In the newer version of self-discovery the central guilt, a guilt to be disposed of in the process of self-realization, is "guilt born of our unfulfilled destiny, our failure to become what we truly are".

The complement to the self-realization ethic, which helps insure that it will not in the end degenerate into debauching narcissism, is an emerging ecological ethic.

Growing out of a sense of ecological responsibility comes another right—the right of the planet to self-sustaining integrity. This new ecological value focus (new to industrial society, not new to the North-American Indian) appears in stark contrast to the classical political ideals of liberal and socialist values. These latter, whether embodied in state capitalism or state socialism, have led to exploitative attitudes toward the planet, estrangement from nature, industrial massification and class conformity. The emerging ecological sense would recognize the spiritual failure in our ecological emergency, and see the only real solution in the direction of granting “the planet its personhood and its sacred rights”.

And so there is a “third choice” in politics besides the familiar Left and Right, social democracy and bourgeois liberalism. This third choice involves a commitment to personal scale, a recognition of the rights of the planet, and most central of all, the liberation of the person. Roszak quotes the French Personalist Emmanuel Mounier on this latter emphasis:

There is a madness of those who treat the world as a dream, and there is a madness of those who treat the inner life as a phantom. The second lunatic is scarcely less frightening than the former. But whereas the former gets locked up in an asylum, the other slowly acquires an ascendancy amongst men who forget what it is to be man.

It is the sway of this last type of madman in modern society that constitutes the main danger Roszak would alert us to.

In industrial society the greatest direct enemy of both person and planet is the bigness of things. “The problem the biosphere confronts is the convergence of all urban-industrial economies as they thicken and coagulate into a single planet-wide system everywhere devoted to maximum productivity and the unbridled assertion of human dominance.” It is for that reason that the only long-range solution to our environmental problems, as well as to the human

underdevelopment problem, is to be found in the “creative disintegration” of industrial society and reassertion of the human scale. Institutions have to be made more person-sized, more adaptable to the needs of the person, more biodegradable when they have outlived their purpose.

Roszak compares the mystery of homeostatic regulation in the human body and its counterpart in a sort of homeostatic regulation of the planet, and muses about the possibility of an Earth consciousness which ultimately awakens in us a response to the insult industrial society is administering to the planet and its creatures. “And so, quite suddenly, in the very heartland of urban-industrial society, a generation appears that instinctively yearns for a quality of life wholly incompatible with the gigantism of our economic and technological structures. And the cry of personal pain which that generation utters is the planet’s own cry for rescue, her protest against the bigness of things becoming one with ours. So we begin to look for alternatives to that person- and planet-crushing colossalism. We search for ways to disintegrate the bigness—to disintegrate it *creatively* into humanly scaled, organically balanced communities and systems that free us from the deadly industrial compulsions of the past.”

As an essential key to the restructuring Roszak sees the need for a new science to replace the science dedicated to power over nature—a noetic “science beyond reductionism.” Orthodox science has not yet come around to endorsing such an idea as an underlying consciousness more fundamental than the bits and pieces of mechanistic models characterizing present science. The emerging holistic science of ecology may point in this direction. “If there is mentality to be found in nature—something that corresponds to and resonates with the powers of human thought—it could only emerge in a science that studies comprehensive, self-regulating natural wholes and purposeful patterns of interaction that in-

clude the human as well as the nonhuman.”

In four separate chapters Roszak explores the areas of home, school, work, and cities, to identify what the new outlook implies for those aspects of our lives—and also what local projects might constitute action steps toward ensuring the rights of the person and the health of the planet.

The concluding section of the book compares the present state of industrial society with the latter stages of the Roman empire. He likens the tasks to be performed before the end of the century to those undertaken by the monastic communities of Rome’s imperial twilight: “We—the ordinary, chronically powerless people who live in the belly of the urban-industrial leviathan—are going to have to find our way back to a comparable sense of mutual aid, a comparable capacity to live self-reliantly within more local and domestic economies, a comparable appreciation of the wealth that lies in modest means and simplicity of need. We are going to have to rethink some of our most firmly held assumptions about property and privacy, security and success, recognizing that there is simply no livable future for the competitive, self-regarding, high consumption, middle-class way of life which we have been taught to regard as the culmination of industrial progress. And we are going to have to undertake that reappraisal from the bottom up, expecting no encouragement from leaders and experts who are the chief products and principal beneficiaries of our high industrial compulsions. It will be up to us.”

It may well be that the Eighties will be the decade of the Emperor’s New Clothes, in which an expanding group of people become aware of what had been previously unnoticed before their eyes—the manifold contradictions of modern industrial society and its underlying belief system. If so, *Person/Planet* will turn out to be a much-handed-around guide to the new perception.

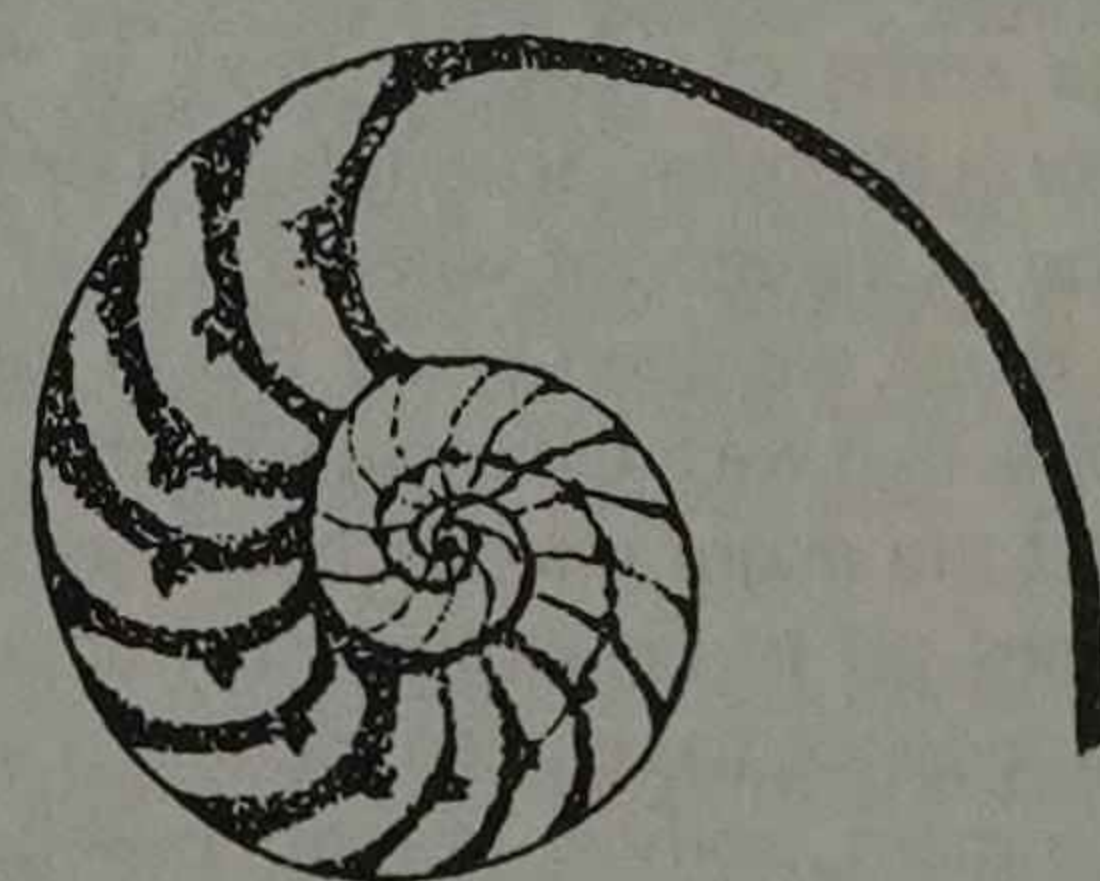
—Willis W. Harman

Announcement of a New Publication: GAIA

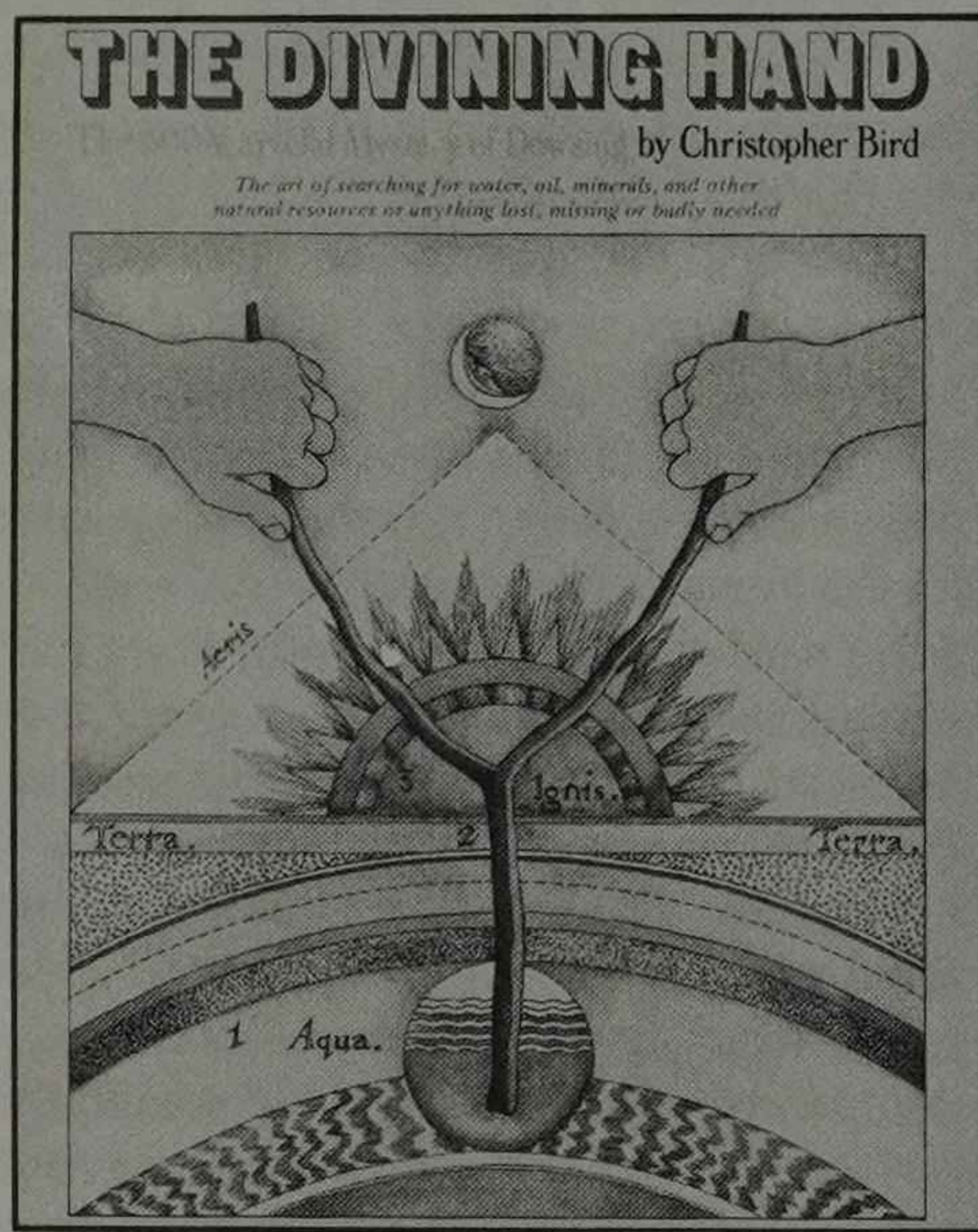
The Institute for the Study of Conscious Evolution announces its forthcoming quarterly publication, *Gaia*, which will report the ongoing progress and findings of ISCE projects, along with the work of colleagues in the field of conscious evolution. Key concepts will be developed and emphasized in relationship to the theme of each issue. The first issue—Summer 1980—will focus on Gaia, the living being of Planet Earth.

From a planetary perspective, the Institute for the Study of Conscious Evolution combines inner meditative search with scientific inquiry and works toward individual wellbeing, social harmony and human/environmental right-relationship.

Those interested in receiving without charge the charter issue please contact ISCE, 2418 Clement Street, San Francisco, CA 94121, (415) 221-9222.



On Knowing What You Shouldn't by Means That Don't Exist . . .



The sheer complexity of the known human senses is not news to any researcher. It has taken years of painstaking work to unravel the basic secrets of how each of them operates. Though we now know a great deal about sensory processes, in many ways our knowledge is still confined to the level of mechanism and deals hardly at all with the qualities of perception that give meaning to our lives. Take the visual sense, for example. Very slowly and by no single means, the overall mechanisms of vision have emerged. Even so, that knowledge is still a long way from translating the way in which the signals of sight translate into a science of aesthetics and the pleasures of great visual art. In vision, we at least know where the signals begin to impact on the brain/mind i.e. when light strikes the retina. Similarly with the other senses, we at least know where to begin our search.

At a deeper level, we acknowledge that it is through the basic senses that we acquire *information* about the world around us and from the overall body of information we possess at any given moment, we develop our sense of what we think is "real" and worth attention. Scientists will be the first to nod in agreement when it is said that there is much we don't know, but in turn tend to think that we are basically on the right track, that the major chapter headings in the volumes yet to be written on human sensory experience have been identified and that in the main, nothing of real consequence has been omitted. If this is true, then it is reasonable to expect that some sort of complete picture of human capacities should emerge from the exercise. One would expect all the ways whereby the human being gains information about the world around

The Divining Hand *The 500-Year Old Mystery of Dowsing*

by Christopher Bird
E.P. Dutton, New York, \$24.95

him or her to be included in the map and that the only mysteries remaining are those connected with unsolved problems that have been accurately described. There is, of course, the uncomfortable possibility that something very basic is missing. It could be that that missing piece might contain the nugget that would ultimately allow all the rest to fall into place and provide a picture that is in effect much closer to the whole cloth of human experience.

Dowsing & Information Theory

There can be all sorts of things that can act as stimuli for this kind of concern. One of them certainly is the recent book *The Divining Hand* by Christopher Bird. You may well wonder just why a book about the ancient and modern art of dowsing (water divining) could activate such a fundamental concern. After all, dowsing to most well-educated people seems like some sort of primitive art that rather strange people, who probably live too far from a university or college, practice because they don't have a good geologist at hand or simply don't know any better. In the main, people tend to think of dowsing in the manner that Paracelsus, the great physician and alchemist regarded it:

Therefore, care is sedulously to be taken that ye suffer not yourselves to be seduced by the divinations of uncertain arts. For they are in vain and frivolous, especially the Divinatory Rods, which deceive many times. For if they show anything rightly, they on the contrary deceive ten times. In like manner we are not at all to trust to other fraudulent signs of the Devil, which are done and appear against nature upon the night, and at inconvenient time, as apparitions, visions and the like.

In the majority of respectable intellectual circles, dowsing has no place at all and certainly not as a possibly important piece of the puzzle surrounding human sensory capacities. It is even further still from the

realm of serious discussions about such apparently unconnected issues as the energy, ecology and natural resources debates of our time. And yet, in quite curious ways, it is at the heart of all of them.

To understand this somewhat unconventional view of the subject, we should return to where we began in this review. The basic question is: when we list all the known major means whereby the human being senses information about the external world, is that list complete? Should we define as senses only those where we have an obvious anatomical location for the signals involved as in sight, sound, touch, taste and smell? The basic challenge posed by dowsing, if we simply accept it as real for the moment, is that as a means of gaining information about the external environment, it operates in terms of no known sensory apparatus and in terms of signals for which we have no apparent physics or chemistry. What is interesting here is that we are immediately thrown upon the *informational* nature of the process . . . all we have is that there is information "out there" that somehow becomes information "in here". All we have in between is a peculiar interaction between a primitive device and the human body, which in combination act to generate information in accord with the question being asked in the mind of the dowser. Put like this, the phenomenon begins to take on both Alice in Wonderland qualities that offend rational sensibilities *and* the basic aspects of what we have become familiar with in remote viewing research.

It is worthwhile here to remind ourselves about some of the history of sensory research in the past 100 years. Sensory research began with an anatomical orientation in terms of understanding the physical apparatus of the eye, the ear and so forth. Then a new level of understanding emerged with the application of electrophysiological techniques. The next level of progress was

achieved when a biochemical paradigm was applied, but more recently all of these approaches are being greatly aided by the so-called information theory approach. It is the various forms of information, its origin, the mode of its transmission and reception and finally its arrival in human consciousness that constitutes the real business of sensory research. With dowsing however, there is perhaps nowhere else to begin but with the informational nature of the phenomenon. Given the history of conventional sensory research, it may well be that we simply have had to wait until the evolution of the information theory approach before we could actually even know where to begin analyzing the data on dowsing.

Dowsing: Industry, Energy & the Military

However, one might well ask: is it really worth it? Why bother now with something which has been hanging around for centuries as a rather fringe phenomenon? And is there anything really new or different about the way in which the subject is presented in Bird's new book?

Perhaps one of the first things we learn from this massive compilation of information is that we have to abandon the notion that dowsing has no credence amongst "serious people". The book goes into great detail about a variety of contemporary illustrious users of the technique for a variety of important purposes. This is why the phe-

(continued on page 26)

Volunteers Help Institute

by Ann Gagnon

What an impact volunteers make through their varied efforts! Some work in our office, while others assist with library research or take work home.

We asked some of them to share with us their reasons and rewards for volunteering.

Hal Kramer was founder and publisher of Celestial Arts. He consults with us on materials we publish. "For 15 years I have been interested in exactly the same areas as the Institute: holistic health, healing without drugs, and psychic phenomena. This kind of inquiry is the hallmark of the new frontier of human experience. The people make it an exciting place to be."

Joan Gisle works in San Francisco during the day and volunteers after work two days a week. "I like being involved in projects that affect the future of each of us. Volunteering is an opportunity to hear about new programs in the field of consciousness and human potential. It is rewarding to work with dedicated and concerned people. I find it to be a unique learning experience."

Daryl Hewitt volunteers for our research department. "Noetics, in my view, is right on the leading edge of consciousness and human performance research. The moving vision of its space voyager founder is alive, well, and growing. The reward in volunteering is knowing that the Institute's research will have significant, long-range positive impact."

Vern Appleby assists in editing the newsletter. "I believe in what the Institute is doing. There aren't opportunities in my work where I can get involved in what I believe. So it's important to me to find others who share my values. I like lending a hand, knowing that I am helping. It also gives me a chance to associate with people I admire and that is deeply rewarding."

IONS is very grateful to the many volunteers who donate their time and talent to help further its goals. With this caliber of people we are indeed "alive, well, and growing."

One of our continuing needs is to have a volunteer answer phone inquiries and keep records of our membership. You could make a significant difference by assisting three to four hours, one day a week. Ann Gagnon, Director of Support Services, is pleased to talk with you about this idea or one of your own. Just let it be known. You can reach her at 434-0626.

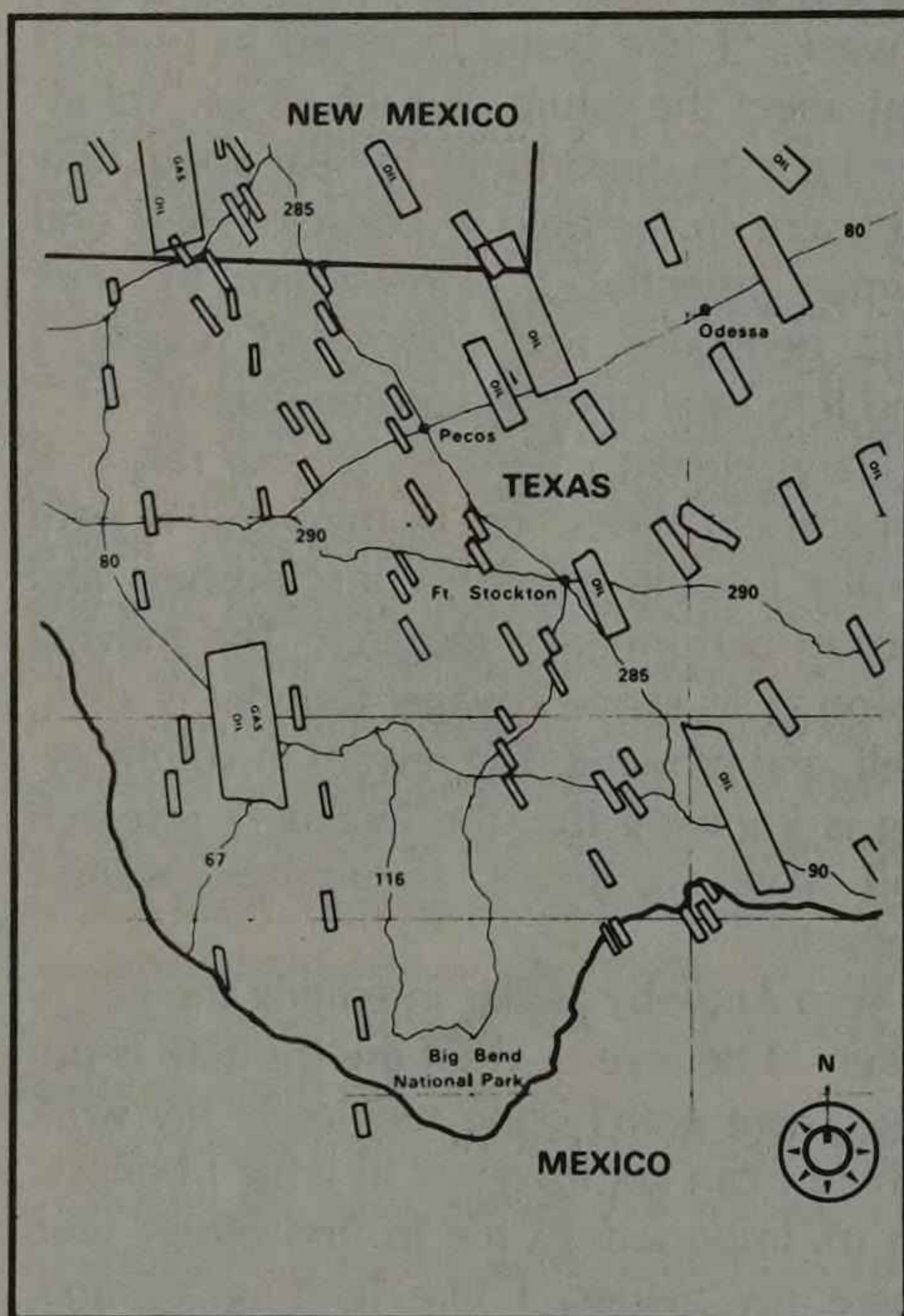
Short Summaries of Typical Predictions by Paul C. Brown and Actual Results

	Predictions	Results
Signal Oil & Gas Co.	Some shows only below 11,000 feet but not commercially productive.	Oil shows at about 11,000 feet. Well abandoned as nonproductive.
Standard Oil Co. KCL 27-3	Well will discover a new field. Oil sand about 40 feet thick at about 7900 foot depth.	Well completed as a new discovery. Oil produced from 7904 to 7943 feet depth.
Standard Oil Co. "67" 21-10	Well will be a dry hole.	Well drilled to 12,705 feet. No oil encountered.
Standard Oil Co. KCL 34-3	Well will be a dry hole. All zones wet.	Well drilled to 8400 feet. Objective sands wet.
Standard Oil Co. 9Z-523	If drilled straight, well will find all objective sands wet. If redrilled to SW commercial production will be possible from two upper sand series.	Straight hole drilled to 9991 feet. All sands wet. Well redrilled to SW. Two upper sand series produced 1268 B/D and 220 B/D.
Standard Oil Co. 9Z-534	Well will find all sands wet. Possibly a marginal well can be obtained in Phacoides sand. Fracing will be necessary to establish commercial production.	Well drilled to 9290 feet and all sands wet. Redrilled. Phacoides sands yielded 50 B/D. After fracing well produced 265 barrels a day.
Getty Oil Company Morris USL-581	Upper and lower Carneros sand series will be productive if hole drilled straight down.	Well completed as a dual upper and lower Carneros Zone producer.
Standard Oil Co. 4Z-518	Only upper Carneros sands will be productive.	Well completed as an upper Carneros zone producer.
Rothschild Oil Co. Kliwer No. 1	Well hole will result in finding the objective sand wet.	The objective Stevens sand was wet.

nomenon is highly relevant to the energy and ecology debates of today. Amongst others, we find that large corporations such as Hoffman-La Roche, Standard Oil, Getty Oil, Rothschild Oil, the U.S. Army and the Soviet Ministry of Defense all seem to have made use of the technique at one time or another.

Listed below are some of the successful results achieved by various oil companies in searching for oil . . . surely an important task in these days of what we are told are dwindling reserves!

Bird then goes on to reproduce a rather provocative map of Texas and New Mexico, showing what dowser Paul Clement Brown, who has had success at finding oil as well as other minerals, claims are overlooked oil-rich portions of each state. In case any of our readers happen to live near the general areas indicated, we thought we would simply reproduce the map and see what happens next!

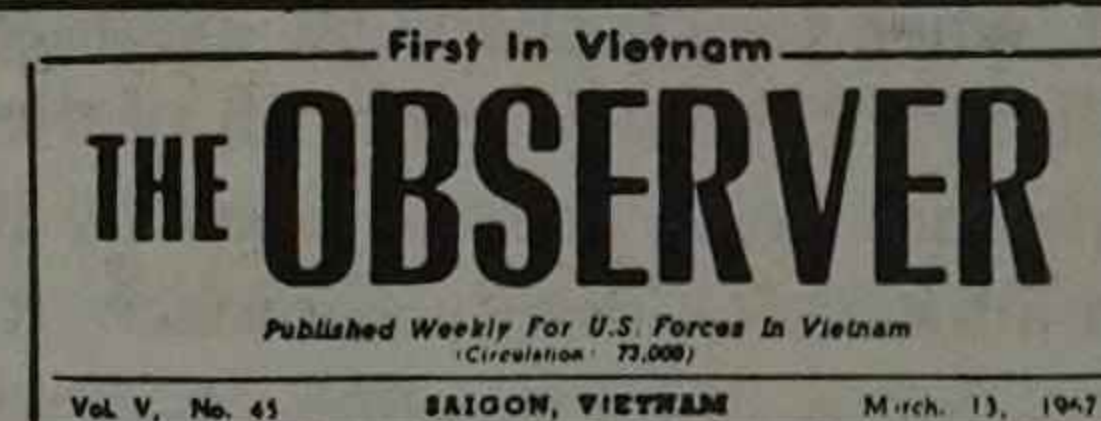
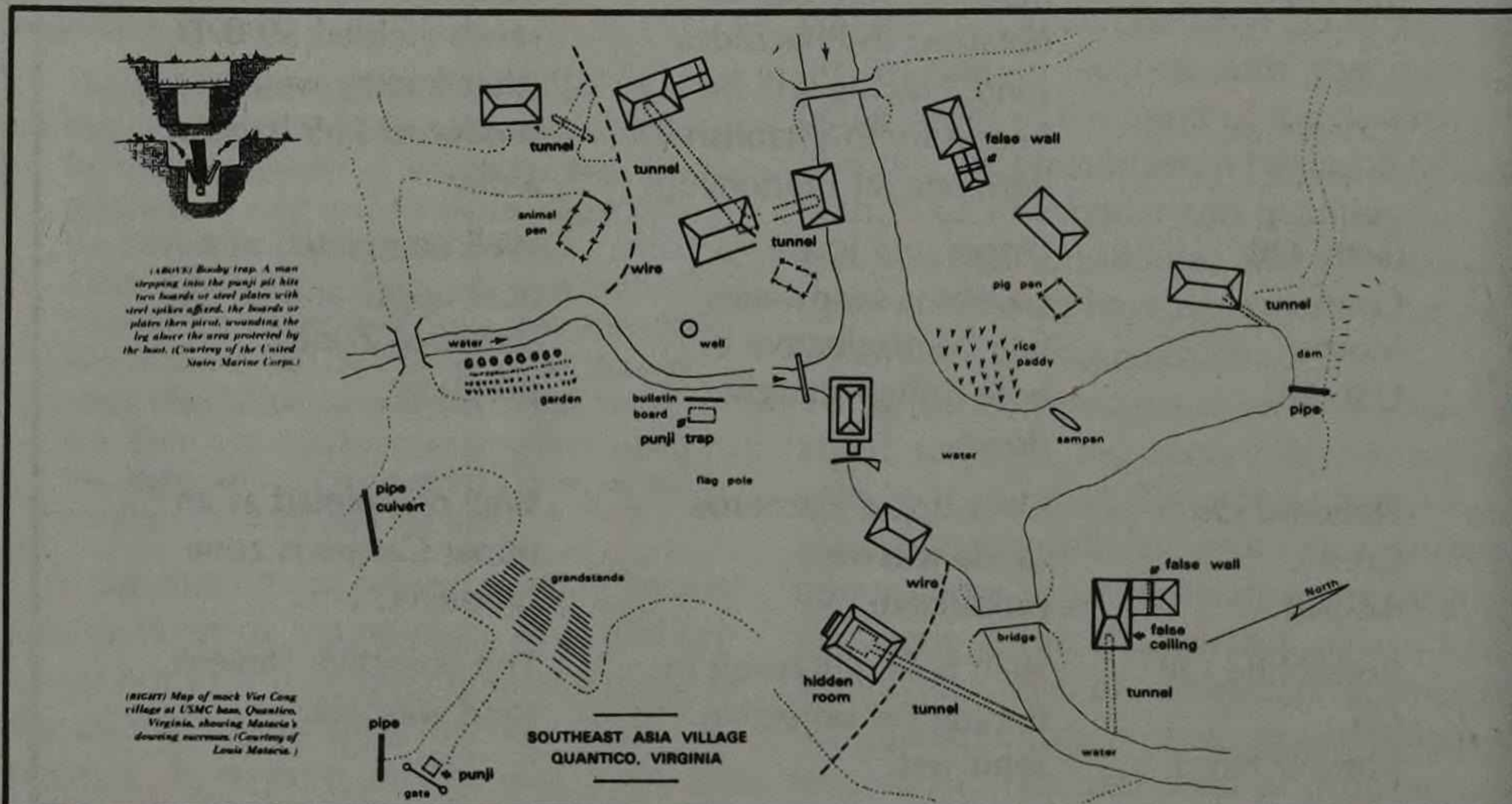


The military uses by the U.S. Army during the Vietnam war are no less interesting in their own way. Accompanying this piece are reproductions of two items documenting the use of dowsers to locate hidden Viet Cong tunnels and settlements. The first is a copy of an article that appeared in *The Observer*, the weekly published for the U.S. Forces in Vietnam that on March 13, 1967 carried a story on the Marines' use of dowsing. Also shown is a map of the kind of complex situations involved—the map is of a U.S. Army reproduction of a mock Viet Cong village built in Virginia, in which dowsers successfully mapped hidden tunnels.

The Politics of Water

Needless to say, the book gives multiple examples of successful use of dowsing to locate water—which since it is what most people are familiar with, we will not devote any attention to in this review except for one important aspect. Though this theme is unfortunately scattered throughout the book, it is worth mentioning directly here, since it is both part of the reason for the strong opposition of geologists to the whole business of dowsing as well as an indication that will only prove out with time as to which means of creating a science of geology ultimately yields the most, whether it be in terms of water, oil, uranium or any other natural resource. Dowzers don't simply stop at saying that oil or water either is or is not at some location. They wish to go further and explain where they think it is coming from and here we have quite a clash between conventional geology and the dowzers' theory of the origin of natural springs. What is particularly interesting conceptually here is that this is an example of an unknown sense creating not just surprising information on a case-by-case basis, but also serving as the means for the generation of complex theory of geological processes.

As the natural resource debates intensify in the coming decade, it will be interesting to see what happens here. As things presently stand geology is providing not much better than a 10% success rate in drilling for oil and it may well be that it will take the pragmatics of intense need to break through the prejudice against dowsing and make more extensive use of it. As those of us who live in California learned during the 1978/9 drought, the politics of water can be quite a volatile matter. The net result today is that there are now businesses who at that time used dowzers to successfully locate their own water supplies when municipal sources had all but run dry and they have simply never returned as customers of the municipal systems.



Marines On Operation Divine For VC Tunnels

Da Nang (USMC)—An old-fashioned method of locating water in arid areas, the divining rod, has been updated and put to military use in Vietnam.

A method for locating underground structures and other objects by use of wires, "Matacia's Wire Rudder," was used by Marines during the final three days of Operation Independence, three miles west of An Hoa.

Matacia's Wire-Rudder is two identical wires, 3/16 inch in diameter, bent in the shape of an "L" with an overall length of 34 inches. The longer side of the "L" is 26 inches in length.

Marines operate the divining rod by holding one in each hand, level with the ground, pointing in the direction of their movement. As the carrier moves over, under or along a hidden structure,

the wires will swing into alignment with the structure.

Introduced to Marines of the 2nd Battalion, 5th Marine Regiment, the divining rods were greeted with skepticism, but did locate a few Viet Cong tunnels.

Private First Class Don R. Steiner, Shadyside, Ohio, a battalion scout with the 2nd Battalion, 1st Marine Regiment, tried the rods for the first time on a recent patrol. The rods spread apart as Steiner passed a Vietnamese hut.

Upon checking inside the building, Marines discovered a tunnel that led to a family bunker underneath the trail, right where the rods had reacted.

In this day of nuclear powered devices, it may seem that there is still room for the old, if you happen to be a believer.

If there is one major criticism to make of the book, it is that it tends to wander all over when considering the various scientific attempts to understand dowsing. So one finds references to it in the beginning, the middle and the end of the book and this makes it rather hard to obtain any integrated sense of the state of our knowledge in this regard. However, this notwithstanding, the book is a goldmine of information and is probably the most extraordinary compilation of information about what has until now seemed to be an esoteric backwater in the channels of human perception. Today, if it can increase success rates in oil or water exploration, let's use it, at least as an adjunct to conventional methods, as the Russians have been doing for several years now. Then the stage will be set for an open investigation of just how dowsing actually works. As we have pointed out before, pragmatism is the real champion of new roads in science and the history of dowsing may prove to be no exception.

—Brendan O'Regan

An Intelligence Revolution?

A New Newsletter Leads the Way

by Brendan O'Regan

The first issue of a new international newsletter: *Human Intelligence* arrived recently. Its statement of purpose reads as follows:

This international newsletter will be concerned with the vigorously expanding inter-disciplinary study of human intelligence, and will provide an open forum for the exchange of ideas and innovations related to that field.

We will publish current articles on basic and applied research and educational practices which expand our understanding of the nature of human intelligence. Topics will include: the measurement of intelligence, the potential for teaching/developing/enhancing intelligence, methods for transferring cognitive skills from the home and school into society. We will also provide international sources of information, contacts, and news of publications and conferences.

Human Intelligence will be published bimonthly for educators and administrators, behavioral and social scientists, professional managers, parents and public policy-makers.

Veterans of research into intelligence will be able to tell from the above that this is one newsletter that takes a clear position on the old nature/nurture debate i.e. the debate between those who choose to regard intelligence (or whatever aspect of it is actually "measured" by the Intelligence Quotient [IQ] Test) as a given of nature and those who prefer the view that intelligence is more a product of the cultural and educational environment, the nurture school of thought. As is well known, proponents of the 'nature' school also have tended to be those who have been the major proponents of the idea that there are inherent differences in IQ between different races. This, of course, inevitably leads to the suggestion that some races inherently seem to have lower IQs and hence the vigorous protest from large ethnic groups slurred by this claim.

The counter-argument, both by those who specifically oppose this point of view and by others whose reasons stem from a different research orientation, is that it is the differences in cultural and educational background that account for the apparent differences in IQ between the racial groups studied. It seems clear that this new Newsletter is firmly committed to the 'nurture' school of thought and seems to be about to place its major emphasis on backing up this particular view of human intelligence. This on its own would be quite significant, if only as evidence of a new thrust in research orientation.

Ibero-American View of Intelligence

However, there appear to be much more complex, not to say interesting, forces at work here that make this position of even greater import. The major clue to the nature of these forces comes from the main headline of the first issue: "Venezuela Launches Intelligence Revolution." The story details a global first by Venezuela: the creation of a new Ministry in the Venezuelan Government whose Head, Luis Alberto Machado, enjoys the title: Minister of State for the *Development of Human Intelligence* (italics ours):

With President Herrera's unprecedented political decision, the government of Venezuela became the first in history to so succinctly state its obligation to the people, an obligation that goes beyond the right to an education and acknowledges the *right to be intelligent*. (italics ours)

Following the creation of the new Ministry in March 1979, the fourth Annual Meeting of the Education Ministers from 26 "Ibero-American" countries approved and signed the Declaration of Madrid, establishing the following principles and priorities of the 80s:

1. That education is the first priority for the development of man and society
2. That man has the right to develop his intelligence as the basis for a full and integral human development
3. That it is important to promote new methods of teaching and learning to enhance intelligence and creativity (italics ours)

All this should leave us in no doubt as to where both the Newsletter and also the Ibero-American countries are choosing to stand on the issue of the nature/nurture debate about intelligence. It is also a stand which is clearly on the side of emphasizing the plasticity of the human brain/mind and surely the first time that this posture on the issue has been adopted so boldly. Already the Venezuelan Government has sent a team of people all over the world, learning what is being done in almost every country where research into the nature and function of human intelligence is being conducted. The idea appears to be to apply all available techniques to the educational system of Venezuela as soon as possible. In addition projects have been initiated by the Venezuelan Government in a wide variety of contexts: The Harvard Project Intelligence "to develop a program to enhance thinking skills"; the International Labor Organization Project "to formulate an adult educa-

tion program aimed at teaching cognitive skills to the workers"; the UNESCO Project "to prepare a new curriculum to teach critical and creative thinking," and so on. Clearly the hope is that "intelligence" is something that through research we can understand and ultimately teach in an active manner.

It is certainly going to be interesting to see what kind of reaction all this is going to get from establishment academic and media circles in the U.S. If the reactions to some recent books whose major theme is the untapped potential of the human mind are any indication, it seems likely that some of this may be rather loudly scoffed at. We are referring here to the somewhat chilly reception by magazines such as *Psychology Today* of books like *The Aquarian Conspiracy* by Marilyn Ferguson (reviewed in the last Newsletter) and *Supermind* by Barbara Brown (to be reviewed in the next Newsletter). Both were attacked as "mindless" though presumably no pun was intended here! It is curious that both reviews seemed to have the most difficulty with the idea that the mind may have unexplored potentials and any attempt to place such views in an evolutionary context, we were told, should be regarded as "a chaotic jumble of fragmented and unexplored half-guesses". The key word here would indeed seem to be "unexplored" for that is precisely the condition of our knowledge system when it comes to making any meaningful statement about our unused potentials. However, it remains somewhat of a mystery as to why these themes have lately tended to be interpreted as arguments against rationalism, rather than support for hopefully higher levels of it when appropriate, and perhaps higher levels of intuition when it isn't.

We shall certainly be looking forward to watching the progress of this new effort, and indeed to seeing it become successful. In the meantime we might do well to remember the words of George Bernard Shaw:

The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore all progress depends on the unreasonable man.

You can obtain *Human Intelligence* by writing to the Editor/Publisher Glenda Greenwald, *Human Intelligence Newsletter*, P.O. Box 1163, Birmingham, Michigan 48012. The cost of a one-year subscription is \$12 for individuals, \$20 to libraries and \$18 to overseas subscribers.



The Brain: The Last Frontier

by **Richard M. Restak, M.D.**
Doubleday, 1979, \$12.00



That science has profound effects on our quality of life, the shape of our society, and our image of ourselves, is obvious. The technologies of science, from genetic engineering to communications satellites, have changed the way we travel, communicate, and in other ways interact with each other. More subtle, but at least as important, are the conceptual shifts engendered by science. From Darwin's theory of evolution, to Einstein's relativity theory, to the spectacle of watching men walk on the moon—each achievement has had enormous impact on the way we view ourselves and our place in the world.

While the impacts of a new science can be immense, however, it is usually very difficult to tell what specific effects a new area of knowledge will ultimately have while it is still in its early stages. Often, the result of an apparently benign area of research can be something less than desirable.

When a science is young, the pioneering researchers are excitedly pressing on with the development of their science and, understandably, do not overly concern themselves with the effects their research may have 20 years down the line. When they do attempt to peer into the future, it is generally the beneficial prospects which catch their attention. Rarely, and usually then too late, do scientists themselves gain the perspective to question the potential impacts, both good and bad, of their work.

In this respect, neurologist Richard Restak's recent book, *The Brain: The Last Frontier*, is a welcome and timely addition to the growing literature on brain research. The book's subtitle, "An Exploration of the Human Mind and Our Future," describes well Restak's goals—not only to summarize and evaluate the status of brain research in a manner palatable to the lay person, but to attempt to outline, and to prepare for, the changes that brain research is likely to have in store for society and for ourselves as individuals.

The first of these goals—that of summarizing and evaluating the status of brain research—Restak accomplishes with unusual clarity and eloquence. So often, in books of this sort, the author sooner or later reaches a point in the discussion when he has to say

something like, "and now, before proceeding further, I'm going to have to bore you with a confusing and technical discussion of what we know about the physical structure and mechanisms of the brain." And that's usually what it is—boring and confusing.

Restak, however, takes a different approach. Being a psychobiologist, his major concern is with explaining behaviors, and behaviors are the reference point for all of his technical discussions. Beginning with a behavior, say anger, Restak will gradually lead the reader to the point where he or she understands the need to investigate certain brain processes in order to fully understand the behavior. Throughout the ensuing discussion of the structure and function of the limbic system, and the results of surgical experiments on it, the reader already understands the underlying questions about behavior which led the researchers to their experiments. The reader suddenly finds himself, even while struggling to imagine the pronunciation of 'amygdala' or 'hypothalamus,' engrossed in the required neuroanatomy lesson as if it were an Agatha Christie thriller.

As helpful and interesting as Restak's explanations of the brain and current research are, however, it is Restak's concern with implications of this research for the future of human society that sets this book apart from most other works on the subject.

"The world we're in the process of creating for ourselves and future generations is the product of our brains; therefore, only by understanding how our brains work, can we hope to achieve true insights regarding individual and species motivation," writes Restak. "I believe psychobiology can help us with many of the social problems we are now facing. For this reason, I've presented brain research from the point of view of its relevancy for social policy."

What benefits can we hope to gain from brain research? Among others, Restak includes: treatment and prevention of criminal violence and certain types of insanity; the assessment and possibly the prevention of senility; aid for persons handicapped by blindness, deafness, and other disabilities; and accurate assessment of intelligence.

Turning first to violence, Restak writes that "our response to violence oscillates be-

tween ignoring the dimensions and seriousness of the problem to periodic 'get tough' policies that meet violence with violence. . . . little has been accomplished by way of understanding the basis for violence. Taken up with stop-gap measures, we've stopped asking ourselves the important questions. Why are some people violent? Is there any way to predict violence? Even better, can violence be prevented?"

Restak's answer to all these questions is a qualified "yes." Citing anthropological evidence that levels of violence tend to vary from culture to culture, Restak begins by trying to discover the possible reasons for this variance. One association that emerges is a relationship between early infant care practices and the later emergence of violence. Experiments conducted in the 50s and 60s demonstrate that a lack of physical affection and bodily contact during infancy could produce relatively violent and non-adaptive adults. Restak also cites further experiments with monkeys which demonstrated that if isolated early in life, the monkeys would exhibit neurotic and self-mutilating behaviors. At a later point, self-aggression would inevitably turn to aggression against others.

How does one explain this apparent association between early physical contact and violence? This, says Restak, is where brain research comes in. Years of observation and experimentation finally showed that the cerebellum, an evolutionarily ancient portion of our brain responsible for the regulation of motion (among other things), is connected to portions of the limbic system (that portion of the brain thought to be the primary seat of emotion). Researchers hypothesize that the lack of early physical contact (rocking, playing, etc.), retards the development of connections between the cerebellum and the limbic system, and thereby in some way (as yet not specified) alters the normal regulation of pleasure and pain. The end result is erratic and often destructive behaviors.

Based on these findings, researchers implanted an electronic stimulator in the cerebellum of several violently insane persons. After implantation, most of the selected patients experienced immediate remission of their violent tendencies and became increasingly lucid. Several improved so markedly that they were soon released.

While stressing that the full explanation is still unknown, Restak indicates that we have already gained enough knowledge to intervene therapeutically in many cases of chronic extreme violence. "Obviously, the relationship of environmental stimulation to brain development, and subsequent violence is complex," Restak writes. "So far, the theory that early physical contact and movement may play a role in a tendency toward violence, remains an intriguing but

improven possibility which can only be settled by further psychobiologic research. In the meantime, however, increasing violence on our streets and in our homes underscores the importance of carrying out whatever research will enable us to decide one way or another."

Though much of the work on the treatment of violence and insanity is still in its early, uncertain stages, it is increasingly clear that brain research may provide us with the tools to correct or eliminate such behaviors altogether. "Who would have even imagined ten years ago," Restak queries, "that studies on early brain development and infant stimulation might someday suggest a provisional theory about the origin and treatment of human violence?"

If Restak is optimistic about the prospects of emptying many of our prisons and mental institutions through the benefits of psychobiology, he is equally optimistic about the possibilities for increasing human potential. To begin with, he reviews much of the work currently taking place that may one day enable the blind to 'see' and the deaf to 'hear.' Among those projects that may help the blind are the development of television cameras which translate visual patterns into electronic stimulations felt on the skin, and experimental implantation of sensors in the visual cortex that, once attached to a T.V. camera, may restore experienceable sight. For the deaf, tiny sensors are being perfected which translate sound waves into tactile vibrations inside the ear.

Even those of us who are not suffering from a particular handicap are likely to find our lives increasingly affected by developments in brain research. Among other things, Restak cites evidence indicating that we may not be too far away from having the power to prevent senility. It is suspected that the onset of senility may be brought about by the accumulation in the brain of lipofuscin, a product (it is hypothesized) of the metabolic breakdown of brain cells. Although researchers are still unsure of the causal mechanisms, one drug (centropheoxine) has been shown to reduce the incidence of lipofuscin in elderly rats by as much as 40%. It may not be too far down the road, Restak suggests, that we may be able, with this agent or another yet to be discovered, to reverse the effects of senility. Along with the possible therapies for preventing senility, increasing refinements in our methods of measuring brain waves (and understanding what they mean) are already allowing us to predict with some accuracy the onset of senility before it is otherwise apparent. This same research, according to Restak, promises to aid in the early detection of learning disabilities in children. There are also major implications for the so-called normal majority.

The measurement of brain waves — or, "neurometrics" — has shown that each of us has our own, unique characteristic patterns of neural activity. The 'evoked response' of the brain to the presentation of a stimuli, whether that of a sound outside or the sensation of one's own muscles moving, is according to Restak very like a fingerprint. This evoked response is now considered to be the closest physical correlate to the phenomenon of thought.

Before a person acts, or even can be observed to have made a decision to act, this evoked response can be measured. "Evoked response work," writes Restak, "is moving psychobiology closer to the time when thought can be quantitated and even predicted ahead of time. Brain potentials associated with voluntary movement could make possible predictions about when a particular movement is about to take place. Another long latency response, known as the P300 wave, is already enabling neuroscientists to measure complex psychological variables, such as decision-making."

In one experiment cited by Restak, an attempt was made to correlate the timing of an individual's P300 wave with leadership qualities. Ordinarily, the P300 wave can be observed before any action is taken by the individual. In a sense, the presence of the wave indicates that a decision has been reached by the individual. Some people, however, often act before the P300 wave appears. Such persons, according to researchers, are acting impulsively, will make more errors, and will be a poor choice for a leader. We may, in short, be getting close to the day when part of a job interview (or a political campaign) may be the examination of people's evoked response scores.

Characteristics of these waves are also said to vary with age, and may be seen as indications of brain maturation. In several studies, the characteristics of evoked response waves are significantly different in children with high IQ's from those of children with low IQs. If this work is further refined, Restak indicates that we may in the near future be able to reliably differentiate children with high and low intelligence solely on the basis of their evoked responses. We may also be able to predict ahead of time what learning areas a child will likely find difficult. The major advantages of this, says Restak, would be to assure that persons with learning difficulties can receive help early, when it can be most effective, and that persons of especially high intelligence can have their potentials recognized and fulfilled.

Any powerful tool for change, however, can be used for good or for ill. Restak, though he does not dwell too long on the potential evils, is quick to point out that there is potential for abuse. On the subject

of measuring brain waves, Restak writes: "Neurometrics, if improperly used, could provide further justification for applying labels to behavior that we don't understand and can do little about. As with any scientific procedure, neurometric prediction can sometimes be wrong. For instance, how can we protect a child who is merely a slow starter and not learning-disabled at all? Dr. E. R. John has captured the essence of the conflict beautifully: "Procedures must be devised to assure that neurometric evaluations are used to optimize the development of the individuals rather than to restrict their opportunities."

It is difficult to imagine, however, just what sort of procedures could be developed to assure the "proper" use of neurometrics. For many years we have as a society made decisions as to who will be in 'advanced' classes at our schools, who will receive a college education, and who will have the best job opportunities, at least in part on the basis of IQ tests. Even now, long after these tests have been shown to be biased, we continue to use and abuse them. What cause, then, have we to assume that we will be any wiser in our use of neurometrics?

Similar problems arise with the question of treatments for the criminally violent and insane. As described above, Restak holds great hope in the potential of brain research for 'curing' certain types of violence. While the power to alter such behaviors would certainly be of great value, it can also be a great danger. Just imagine the uses to which such a refined control of behavior as Restak envisions could be put in the hands of an oppressive dictator.

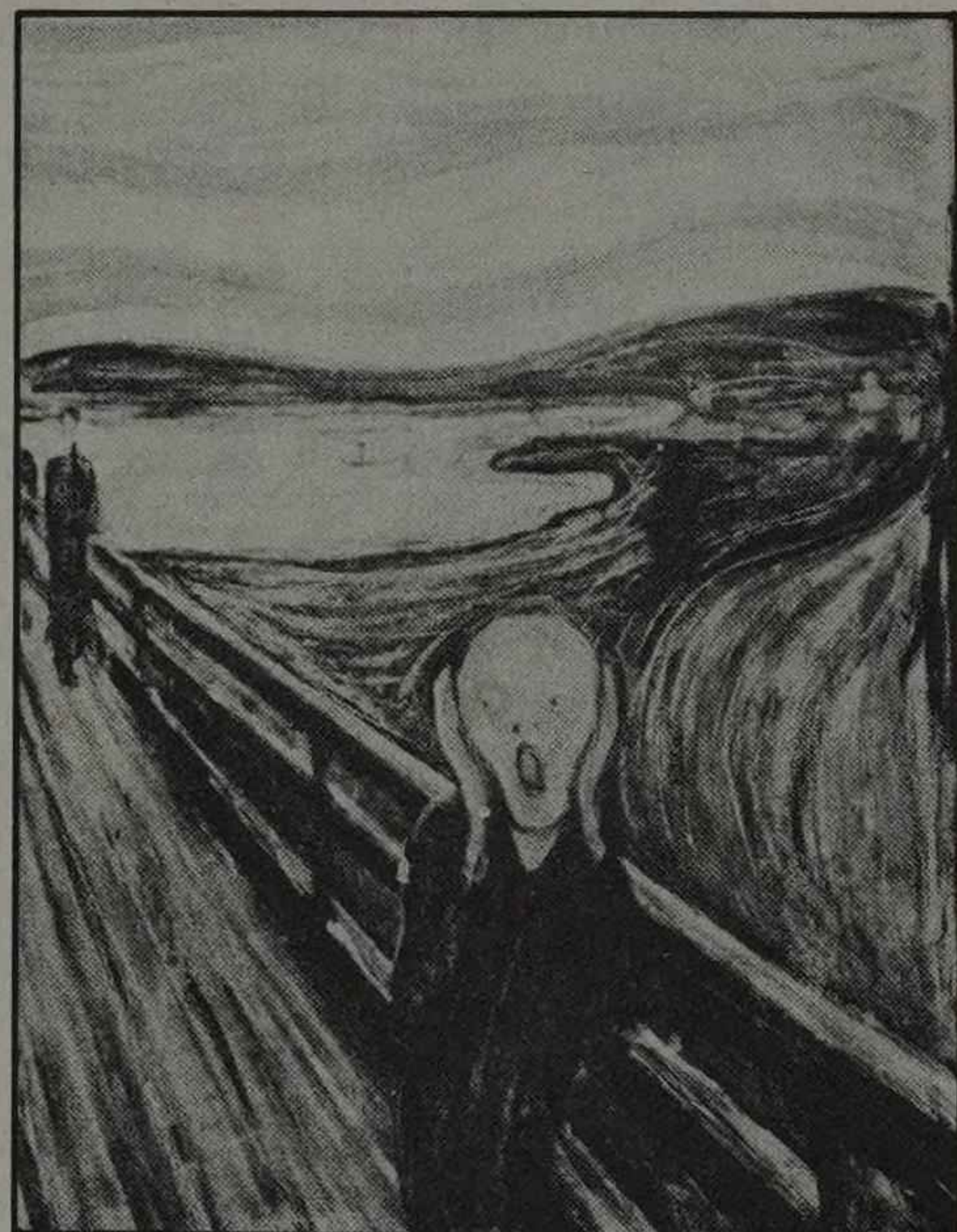
The major problem with Restak's book is this failure to pay sufficient attention to the possible abuses of the developing sciences of brain research and its resulting technologies. Restak's optimism regarding the incredible benefits we may reap from such research is not misplaced, but it does need to be tempered with a greater awareness of the foibles of human society. It is only rarely that we humans have exercised wisdom in our dealings with new technologies and the powers they give us. For every major benefit, it seems that we also encounter a new and previously unimagined threat. If we are to reap the benefits Restak describes without placing ourselves in ever greater jeopardy we must assure that the sciences of the brain are continually examined from the perspective of social policy.

Even if Restak has concentrated here more on optimism than the need for caution, he is to be praised for having given us such an eloquent and entertaining exposition of the emerging fields of brain research. More importantly, he is to be praised for having turned our eyes to its larger social context.

—Patrick Marshall

BOOK REVIEW

Free Yourself From Pain



Munch

by **Dr. David E. Bresler,**
Director of the UCLA Pain Control Unit,
with Richard Trubo
Simon & Schuster, New York, 1979
479 pp., \$12.95.

If you are the least bit inclined toward engaging in an inner look at your life patterns to affect your emotional and physical well-being, this book is the best of the many self-help guides I have yet seen. If you suffer from pain, the book is indispensable to your understanding of your pain and ways to eliminate it.

Bresler and Turbo's style is easy reading and includes enough brief case examples to illustrate success stories, using the techniques without cluttering the data with a surfeit of such stories. The book clearly describes the traditional medical system and the various options within it for the pain sufferer. They comment on possible outcomes of each treatment procedure, and its advantages and disadvantages. Bresler recommends consultation with medical personnel but includes admonition to take charge of one's own healing program. His sections on electrostimulation, nerve blocks, transcutaneous nerve stimulation and others familiarize the lay person in pain with some options available to them in medical procedures. There is a chart to summarize your own experiences in the traditional medical system.

Their section on alternatives offers a working knowledge of the many options available in the newer therapies that deal with pain and healing. Especially informative to me were his descriptions of acupuncture, imagery, hypnosis, and the nervous system's natural pain-killer—called "endorphins" (inner morphines because they act like morphine). Bresler's imagery training teaches pain-plagued patients to encourage their nervous systems to secrete more of this substance within the body.

Bresler has been director of the Acupuncture Research Project, now a division of the Pain Control Unit at UCLA, since it started in 1972. They have administered nearly 80,000 acupuncture treatments at the clinic, and Bresler says, "Our experience indicates that acupuncture is frequently very effective for a wide variety of ills—including acute and chronic pain." Some research indicates acupuncture may be stimulating the release of endorphines in the brain and thus stimulating the body's ability to turn off pain sensations.

Some of the other unconventional therapies covered include massage, heat and

cold treatment, pressure, chiropractic, gone therapy and bioenergetics, structural integration, movement and exercise therapy, and therapeutic touch, which Dolon Krieger defines as "not simple physiologic touch, but rather a humanized touch which conveys an intent to help or to heal and which is suffused with this motivation."

Bresler cites research indicating that the amino acid tryptophan can help ease pain when consumed in larger-than-normal amounts and describes patients' experiences with this treatment.

He describes chronic pain as "usually not a disease or mistake; rather it is a symptom generated through the wisdom of the body. In my opinion symptoms are the way the body tries to heal itself or prevent further injury. Once their message is heard and a proper action taken, symptoms will usually disappear, for they are no longer needed."

Patients, and hopefully the readers of this book, devote at least six weeks to daily work on the techniques in the book, which starts with journal keeping and assessment of one's present status. There are helpful forms for the many processes of introspection with sample forms beside them to illustrate a useful way to work with the form.

Bresler individualizes a combination of conventional and unconventional approaches in the treatment of each patient at the Clinic, and the wide range of modalities described in this book will help each reader individualize his or her self-healing program in a similar fashion. He said, "Many patients come to us dependent on their pain medications. Most who complete our program end up using none."

In my opinion it would be impossible to read this book and do the exercises and worksheets contained therein and not make important and valuable life changes that could lead to enhanced health and well-being.

—Marguerite Cra

Institute Library—How You Can Help

The Institute, as you know, has recently made a commitment to perform significant research projects on an in-house basis. This commitment, while increasing opportunities, has also increased the needs of the Institute. Among other things, our need for more staff and work space has grown. Additionally, we have a greater need than ever for a quality library of the essential works in the areas of concern to the noetic sciences.

The need for this expanded library is all the greater since the Institute is engaged in

work in relatively new, pioneering areas. Because these areas are new, the libraries and research files of the large universities and institutes reflect neither the interests nor the new organization of knowledge demanded by the emerging paradigms. In short, if the Institute is to write proposals, conduct research, and disseminate information in the areas of the noetic sciences, it cannot depend on the information resources of already established libraries. A library for the noetic sciences must be developed.

We would greatly appreciate donations of books (especially recent books) in any of the following broad subject areas. All donations are tax-deductible as well.

1. General Psychology
2. Neurology & Biology
3. Health & Medicine
4. Creativity & the Gifted
5. Just about anything else having to do with the mind.

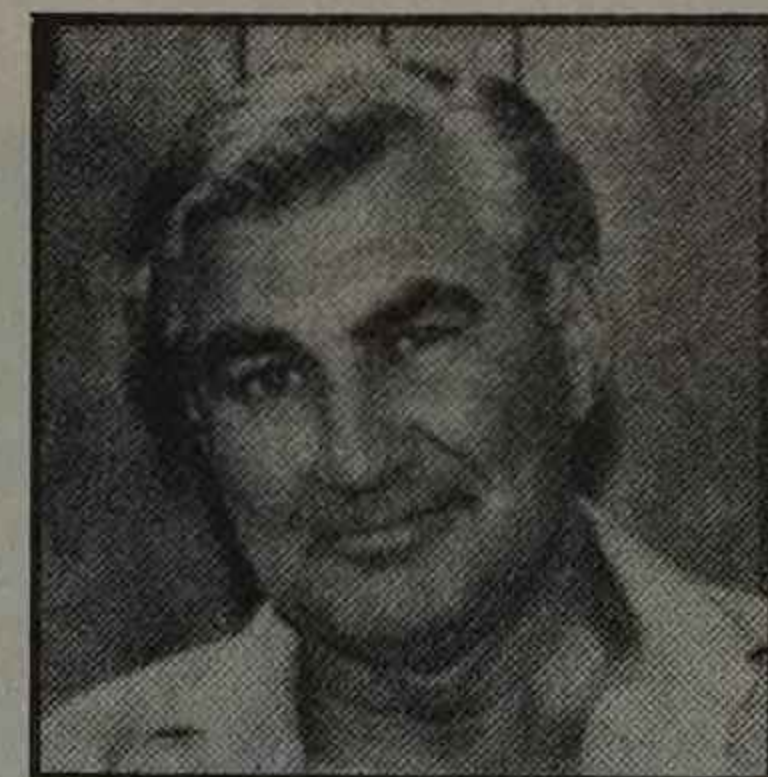
Please contact Patrick Marshall at the Institute if you can help.



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As you may know, the Institute is a non-profit organization dedicated to contributing in a positive way to our world's evolutionary progress. We are financed almost completely by voluntary donations from concerned people and our activities are limited only by the donations we receive.



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Why do people become members of the Noetic Institute?

Here are a few quotes from letters received along with membership applications.

"Congratulations on the publication of one of the most stimulating, well researched and informative Newsletters I have ever had the privilege of receiving . . . I wish to give an Associate Membership as a gift to a friend." — *Palm Beach, Florida*

"I join whole heartedly in your search for a broader, deeper view of possibilities for living. Since first hearing about the IONS I have felt deeply supportive of their creative explorations. Someday I will be financially capable of sending greater monetary support, for now I wish to become an Associate Member and also to purchase a soft cover copy of the *Holistic Medicine Book*." — *Seattle, Washington*

"I was very much impressed by the *Newsletter* (Vol. 8, No. 1). The graphics and content are superb, and the insights regarding future trends in consciousness growth are interesting and thought provoking." — *Solana Beach, California*

"The Institute is of particular interest to me since I am head of a department of psychiatry." — *California*

"Dear Edgar, I appreciate your invitation to join the Institute—the information was inspiring. In fact, I read parts of your letter to my psychology class. The entire package of materials was of high quality." — *Massachusetts*

"This (check) is to cover a Supporting Membership for myself. I am also enclosing a list of names of friends of mine in Houston whom I wish to receive your mailing. It seems to me you have done the best job of putting the whole package together of the things in which I am interested." — *Houston, Texas*

"I recently received a packet of information about the Institute of Noetic Sciences, including your *Newsletter* (Vol. 8, No. 1). I found the contents to be very interesting and am delighted with the work of your group in being willing to push back the frontiers of human consciousness." — *Loveland, Colorado*



(please fill in, clip out, and mail)

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Attn: Membership Committee
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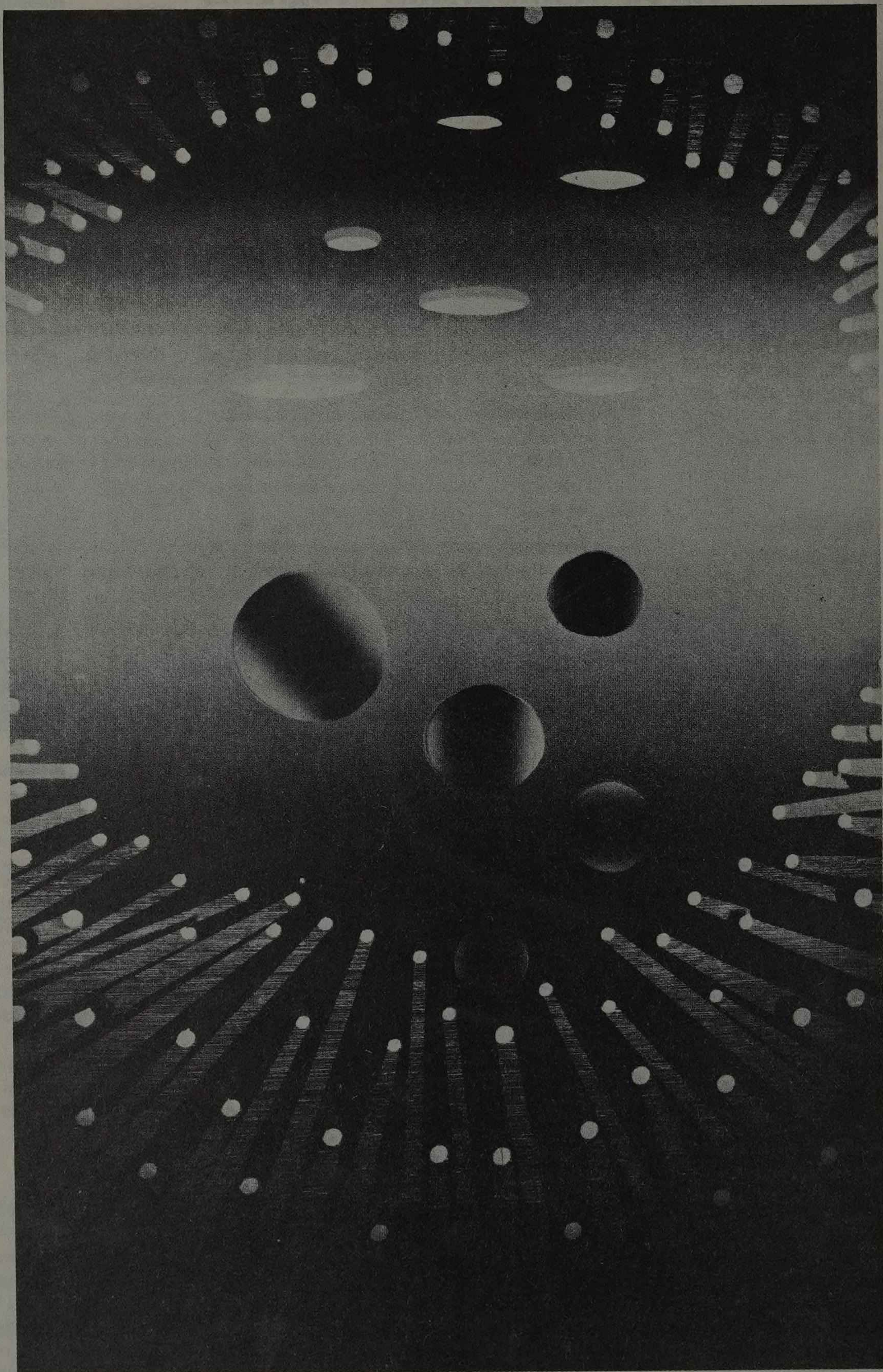
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Funasaka

More powerful than the tread of mighty armies
is the idea whose moment has come.
— *Victor Hugo*

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