

PSYCHOLOGY, SCIENCE AND
SPIRITUAL PATHS:
CONTEMPORARY ISSUES

John Welwood
Symposium Coordinator
Santa Barbara, California

Karl Pribram
Stanford University
Stanford, California

Fritjof Capra
Lawrence Berkeley
Laboratory
Berkeley, California

Huston Smith
Syracuse University
Syracuse, New York

Marilyn Ferguson
Brain/Mind Bulletin
Los Angeles, California

Frances Vaughan
Mill Valley, California

Jacob Needleman
San Francisco State
University
San Francisco, California

Roger N. Walsh
University of California
Medical School
Irvine, California

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*After individual presentations, each of the speakers participated in an open panel discussion, Session One, which appears below. A second panel discussion, Session Two, was held a day later on Sunday, including two of the speakers and Frances Vaughan and Roger N. Walsh. Both sessions were edited for publication.-
Editor*

Fritjof Capra, Marilyn Ferguson, Jacob Needleman, Karl Pribram, Huston Smith, John Welwood:

*science
and
our
spiritual
condition*

John Welwood: I thought we could talk about science and its relation to our own spiritual condition. Personally, I find it rather strange that we as a culture rely so heavily on science to tell us what we could also know in a more personal and direct way. And I sometimes wonder if this makes us depend on a scientific proof for something that could be known through the development of our own attention, as Jacob Needleman would put it. Does this affect our direct attunement to our own experience in some way? A second question along the same lines--and I'm not trying to be anti-science--concerns the implications of the hologram model (Anderson, 1977; Pribram, 1971; Welwood, 1978). If we think that we live in a holographic universe and we think that the brain functions holographically, what kind of difference does that make in our lives? Is that just another theory? Can a scientific theory in itself provide a new vision of life?

*science
and
shared
experience*

Karl Pribram: I think there is a misinterpretation of science that is going around and I would like to try to rectify it. The reason science is so powerful is that it allows us a commonality of experience which private experience cannot provide. For instance we quantify things in science, so that somebody can reproduce it and see for themselves what we saw. Reading about science, reading about religious experience, or about anything is secondhand and watered down. The actual scientific process for the scientist is a method that has been devised for allowing us to share our experiences with each other in an extremely precise way. That's what science is all about. It is the sharing of experiences.

*shared
experience
of
mystics*

Huston Smith: Yes, commonality seems right, and it is, I think, one of the sources of science's power. But then my question is, Do you think the truths the mystics are involved with can be shared in the way scientific truths can be shared? Or even the kind of subjective, personal experience John Welwood speaks of--is it open to the kind of objective sharing and confirmation that mathematics allows? We know we're talking about the same thing when we talk in numbers. But when we turn to qualities, even such simple ones as our senses report, can we be sure that what I call green and what you call green actually have the same appearance?

Pribram: We never can. If a mystic has an experience, we can't really share it. However, if I have a conceptual base that allows

me to understand to some extent the descriptions that he makes-and something like Fritjof Capra's *Tao of Physics* (1975) appears-then one knows that what Fritjof is describing and what the mystic is describing have some relationship to each other-the descriptions look alike. Perhaps a few physicists will go through similar experiences and realize that the world view, the cosmology, the ontology they've derived is similar to the mystics', or to Fritjof's descriptions, and then that unifies things. Of course the conceptual base has to be adequate to the task. For instance, if the only model I have of how the brain works is a digital computer, though it is a good model for some things, that model cannot handle mystical experience.

Marilyn Ferguson: In Adam Smith's book *Powers of the Mind* (1975), he said that he was asking a number of individuals, "If you had to learn to meditate, or if you were going to learn to meditate, would you rather learn a method that was handed down from an ancient tradition or would you rather have one that was verified in a Harvard Laboratory?" He said he found that everybody wanted to learn a method that was banded down by ancient tradition *but* they wanted it verified in a Harvard Laboratory.

*ancient
tradition
and
laboratory
verification*

Welwood: Are we really talking about the same kinds of experiences? Is laboratory verification really the same order of experience as what someone is experiencing as spiritual practice?

Pribram: There is no way that we can share what you're describing as "the experience of spiritual practice."

Ferguson: I think we need to know with both methods of knowing. The intellect wants to understand and I think that this is what science gives us. In interviewing people about their transformative experiences and then trying to describe those experiences in writing, and then reading them to other people and asking: "Do you understand this? Does this mean anything to you?", I find that it is impossible for people to communicate these experiences in their essence. The people who don't have those experiences don't believe that they exist, There are many more people who *don't* have those experiences than you might imagine. To such people the only verification that such experiences are possible is "data."

*difficulties
in
communicating
transformative
experiences*

We/wood: There seems to be a complementary dynamic involved between the intellect and intuition. But often intellect seems to get in the way of intuition. I would like you, Jacob Needleman, to comment, because in your book, *A Sense of the Cosmos* (1975), you discuss this issue.

*aims
of
science
and
spiritual
systems*

Jacob Needleman: I think one must be clear about the aim of a spiritual system. The aim of a tradition or spiritual path usually includes ideas and concepts about the universe, and the mind, brain and nervous system, and everything else. Every complete tradition in one way or another has a teaching about the whole structure of the universe. The aim, however, is to produce a transformed human being, and the problem all of us are faced with is that at each level of consciousness, each level of unity, there is a kind of knowledge which is adequate at that level but which is not adequate to another level of unity. This analogy has helped me: It's as though we are in a laboratory, we *are* a laboratory, with many different kinds of technical instrumentation such as electron microscopes, centrifuges, magnifying glasses, telescopes. There are all kinds of instruments for perception in this laboratory of the self. And it's not just science, *it's* everybody, *it's* the whole human condition. We tend to become attached to one or another of these human instruments out of fear, out of a wish to be saved, out of a wish to be recognized, out of all sorts of reasons. An instrument may even function in a certain sphere very effectively, as science and technology do to help us survive and transform the outer world, as well as to explain things in order to function properly outwardly. But we can be so bemused by this one instrument that we are no longer even searching for the other instruments which are sensitive to other spectra of reality. I feel that before one can even reach into or solve the question John raises, we have to look into what it is that actually does take place when one has a better state of consciousness. What kind of knowledge appears? What kind of language is used in a better state, a higher state. I'm not ashamed to use the word higher. People now are using "altered," but it doesn't address the verticality of what we're speaking about.

Now there is a kind of knowledge that we hear about in the traditions that is intuitive, which is expressed in the language of myths, parable, and symbols. These items, these linguistic units, or visual symbols are addressed to what might be called an emotional intelligence, an intuitive intelligence if you like. They are very imprecise when viewed by another kind of instrument-*v*hich is what might be called, roughly speaking, the computer mind or the cerebral intellect, by which we usually orient ourselves. Until we know the different states of consciousness and the different kinds of knowledge possible, we run the risk of confusing the religious language and teachings of the traditions, forgetting that these are what Charles Tart (1975) calls "state-specific symbols." There is no way we can settle this issue by saying we can intellectually prove what we feel.

The point is that it is a scientific question. Are these higher states of human consciousness? And in those states are there more adequate instruments of knowing and feeling than we have in our usual states? So the primary question seems to be, What is the state of consciousness in which science is conducted? And no matter how brilliant or successful science is in that state, it can be a deception if we think that by pushing forward into studying material of that state, we are actually coming into a better state, even though our aim would be a better state.

Plato spoke of this in his usual prophetic way in *The Republic*. Everybody knows the symbolism and allegory of the cave. Plato's cave had people strapped into place, looking at a wall upon which was projected the shadows of objects. He implied, at least as I read it, that one could be very brilliant about predicting the patterns of these shadows-perhaps even receiving a Nobel prize as the great shadow theorist. But the main point was to turn away and go up to see the real object -and ultimately to see the real world and to see the sun. And this, he said, couldn't be done merely by turning the head. As he had it structured, the person was shackled in such a way he couldn't turn his head; he had to turn his whole body. This means that the new knowledge, the noesis, that Plato is speaking of involved a change, not only of thought, but of the feelings and the body, together. And this he said leads, not only to an integrated state of being or consciousness, but to a new kind of organ of knowing that appears in that state. So it's a scientific question that goes beyond what we ordinarily call science. It's a question of inner empiricism as well as outer empiricism: How to have a lens or whatever you want to call it, an awareness, an empirical attitude toward oneself that is as tough-minded as the one that empirical science has given us toward the outer data. We need to look at the inner data with as much care, tough-mindedness, experimental method and verification as possible. Now you cannot get public verification in the way you can of a scientific hypothesis, but there is such a thing as private verification which is shared and is communicable among people who have gone through a particular discipline. A form of yoga may be just as scientific, communicable, shareable, and in a certain strange sense even quantifiable, as the outer things.

*knowledge
and
integrated
consciousness*

Ptibrām: I would certainly agree with everything you said. There are two things that came to mind in all this. One has to do with states of consciousness and how they are induced. There are different brain states, and whether they're induced chemically, or through yoga or whatever, depends on many different things. But the other thing is that we are tied too much

*logic
infinities
and
brain
function*

to our Aristotelian logic in science. There is another way of thinking and that has to do with infinities. The hologram itself is mathematically derived from infinities, that's why it has its peculiar structure in part. A Fourier series is an infinite series. And infinities have strange logical properties. Another part of the brain, the frontal lobe and limbic system, deals with alternations, with cycles. Cycles go on and on as long as the organism exists and maybe longer, infinitely longer. So, both frontolimbic brain functions and cortical brain functions partake of a logic which is foreign to us because we are raised within the closed system logic of Aristotle. The kind of property that infinity shows is illustrated by a line of infinite length. You divide it in half and now half equals a whole. Thus one half equals one. Well you see you get into all kinds of problems when you come to grips with infinities. The same is also true of zeroes-v'no-things." The logic of infinities is very different from our ordinary mathematical logic.

*science
and
"cleansing
the
mirror"*

Fritjof Capra: I want to make a comment on the possible role of science in relation to the spiritual path. In many spiritual traditions the metaphor of "cleansing the mirror" is used. It means that if you cleanse yourself or your mind of obstacles, then insights will come and higher states of consciousness will manifest themselves. There are various techniques that have been developed for this cleansing process, physical techniques like yoga, or martial arts, or various meditation techniques, and also intellectual techniques. For instance there is the Buddhist Madhyamika school that works intellectually on cleansing the mirror, on getting rid of false conceptions. I think this is what science can do. If you sit in that cave, first of all you have to have a motivation to turn around. The motivation can come from analyzing the shadows and realizing that they are not distinct, and then realizing that they are really not objects but shadows. First you took them as objects; then you see they are really shadows and there is a reality behind them. Once you have cleared up the misconceptions about the shadows then there is only one way to go, and that's to turn around. I think this can be the role of science-to clarify the way the shadows are related to reality. And, of course, when you know that, then it becomes fun to sit there and watch the shadows, because they are put in their proper place. The whole scientific endeavor again becomes very fascinating and great fun, but you know you're not dealing with any ultimate truth. You're just dealing with some shadow representation.

Needleman: Of course these other ideas or other teachings say that I too am one of the shadows. Until I can see that, I too have an illusion about myself. This insight is not fun, it hurts a

great deal. In the Buddhist training there is an aspect of the training which is intellectual preparation, but ultimately there comes a shattering moment or a shattering or difficult rience, when one has to separate one's self-image from what one is. This is always difficult; it's always a trial. We tend to see the scientific intellectual parallels with some of the teachings of the mystics, but the personal transformation that is spoken of as being the whole main idea of, say Buddhism, may tend to get set aside. One needs to remember that these ideas of, say, Buddhist cosmology, are meant to be forms of *upaya*, or instruments for breaking down the egoistic illusions. So it's not for the sake of knowing but for the sake of *being* that these teachings exist. If that's understood then science might be very useful. But science has a completely different end, a completely different goal than these other systems which are for the sake of breaking your heart, a way of breaking the hold that your illusions have on you. I think we must beware of speaking of a higher state of consciousness as too much an intellectual or mental thing. It's also a terrific emotional thing.

*ideas
for
knowing
and
ideas
for
being*

Pribram: Yes and no. I think that is okay for old geezers like you and me, hut the next generation, or at least our grandchildren, ought to be raised with the holographic frame of reference being part of what they experience right from the very beginning. Perhaps then it would not be necessary to go through the painful experience of losing one's self because it would be part of the objective framework. I must tell you another story. Alan Watts had just come back from Japan and was in Palo Alto giving a talk on "Psychotherapy East and West." It was the first day of my own lectures at Stanford that particular quarter. I start out my lectures by saying I'm a physiological psychologist and this is a course on physiological psychology. The way we are going to tackle it is by looking at the skin as an artificial boundary, a bag that contains our selves. Everything that's within the bag we call physiology and everything that deals with the relationship between inside the bag and outside we call psychology. And of course there are many other ways of looking at this relationship. This was my eight o'clock morning lecture and at noon I went to listen to Alan. He says, "I just came back from Japan and I found out finally what Zen is all about. The important thing in psychotherapy East and psychotherapy West is that you have to realize the skin is an artificial barrier. We're taught that we are living in a bag. It's artificial and when we learn to transcend that bag then ... (ete.)." The point is that if we are raised with the conceptual system of the artificiality of objects as objects, including "I," then things might be different. As you mentioned in your talk, the question is always, Where am I? What am I

*different
frames
of
reference*

*a
paradigm
shift*

and finally, as you so succinctly said, it's *Whetheram I?* And in a hologram, *O/course*, there is no "I" as opposed to something else. It must be continuous to a certain extent. That doesn't mean we lose ourselves completely, because at the same time we also represent everything. We have in ourselves the representation of everything. Every piece of a hologram represents the whole at the same time as the whole represents us. There are no windows, as Leibniz said in his "monadology." I prefer to use the word "lens" where he says "window." It's a lensless system, it's a windowless system, and that means there's no place for shadows. It's continuous. I really think we are participants in a paradigm shift and with this shift will come a blending of Eastern and Western traditions. This has happened before in religious experience, but this time it's going to be a "scientific-religious" experience.

Ferguson: Karl has said that children who grow up with the holographic concept will grow up knowing about paradox, and that this will be an altogether different generation.

Welwood: Is a paradigm shift just a change in ideas, a change in thoughts, or some other kind of change?

Ferguson: A paradigm change is a change in *context*. If you were in a holographic paradigm, rather than an objectified paradigm, you would be viewing everything very differently (Ferguson, 1977; 1978).

Welwood: Are you saying that if we change our paradigm about what reality is, then in some sense we wouldn't need a spiritual path anymore?

*a
scientific
and
spiritual
paradigm*

Pribram: ItwiUbe both scientific and spiritual at once. We won't go floating around holographically. We'll still stumble into chairs and tables and all of that too, but I think that we can integrate the new paradigm into our everyday experiences in the same way we have done with the round world since the Copernican revolution.

Smith: As one who is trying to climb into this paradigm, I'd like to ask an elementary question, for sheer understanding. You say, in holograms every part represents a whole. I guess the word "represents" is what I need help on. It isn't the whole: you're not saying the part *is* the whole. But a prior question is, if the entire hologram is present in its every part, why do you need 250 feet of film in your hologram? Why wouldn't one foot, or even one centimeter do the trick?

Pribram: It happens to be that the smaller the part the worse

the resolution is. Where "a part" ends we don't know. It depends entirely on the kind of film you use just like with any other photograph. If you use high resolution film the minimum is different from that if you use low resolution. It also depends on the scene and how much complexity there is in the scene. I've asked this question too of course ... How small a piece can you take? And how large? We are dealing with a continuous medium and there are no tight answers to that question.

Capra: The punch line is that there are no pieces.

Smith: Let me generalize the question and ask, Does science need space, time, matter and number? I think of science as dealing with these four things. Can it now operate without them?

Pribram: I use them to achieve understanding, and I will still use them to achieve holographic understanding. Just because I can transform something into the holographic domain doesn't mean I don't use time and space to get started.

*holographic
understanding*

Smith: So these four remain the scientific runway, so to speak, but there comes a point where science takes off from them. Does that sound right?

Pribram: We abandon the space-time system in computer science, for instance, when we are writing programs. Once we transform into a language system, we no longer are in a space-time system although the computer is still working with the number zero or one. We ordinarily use higher order systems which still have a numerical base somewhere deep down, but the transactions are no longer in that domain.

Needleman: What part of the mind then is being activated when one is thinking from these particular concepts? Is there possibly part of the mind, or brain if you like, which is only latently activated in us, in which certain experiences or disciplines can activate? What would be the role of an idea, like a holographic idea, in actually activating a different way of life? When Buddha came with the idea, or Christ came with the Christian formulation of the idea that the personality or the ego is not ultimately real, it didn't seem that more than a few people were able to bring that idea into their own tissues, into their blood, their feelings, and their life. The problem is not having the right idea-I think this is John Welwood's question-but how to incarnate that idea in my actual life so that I am transformed in the light of that idea. So in a way right ideas are a great deception or a great danger at the very least. The worst thing that I can have is a right idea which I then

*the
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role
of
an idea*

believe has changed me. We have never lacked great theory. What we suffer from, *as* the traditions tell *us*, is that the good that I would, that I do not; and that which I do, that I would not. John was asking us how does the holographic idea become something which actually enables me to *be* what I can become. Simply holding a new paradigm is far from being that which can help me. It sometimes is the most dangerous of all things because this is where the danger of the mind is approached. It's not that the mind is wrong; it's just that all the power of attention gets sucked into the mind. Then one is under the illusion that because something is understood with the mind, one can be what is understood.

a
complete
sense
of
knowing

Pribram: I agree, and that wouldn't be a paradigm shift. It has to involve being. Just because I can do experiments on monkeys and come up with a holographic theory, and Fritjof can tell us about Ssmatrioes in physics, etc., that would not be in itself a paradigm shift-not if everybody continues to think and behave as before. I sense something else going on here and at other meetings like this, which will allow us to utilize this new knowledge **in** the sense of biblical knowing. Not just knowing what, or knowing how, but knowing that in the complete sense of the word.

Welwood: Do you think that has anything to do with science or is it outside of science?

Pribram: Once we get the paradigm shift, there won't be such emphasis on "you" and "me" only, or science and non-science. Hopefully we'll see a science that will not ignore mystical experience. I don't really care whether you call it science or non-science, as long as it is veridical and validated knowledge. And for that I have to have some kind of coherence criterion. The more data I can fit the happier I am with a viewpoint or theory.

mysticism
and
empiricism

Welwood: When you speak of mysticism, do you mean that you grant that kind of inner empiricism, or would an experimental procedure be involved?

Pribram: It's not either/or. Next year I'm going to study *people* who are in transcendental meditation, or under hypnosis -in different states of consciousness-with adequate controls, measures of GSR under certain conditions, measures of their brainwaves, etc. Part of what I'm doing is science, part of what they're doing is science, but obviously I'm going to have to trust that they're in some altered state of consciousness when they so signal to me. It's no different in psychophysics. We trust the verbal report of the subject's experience as *data*.

Needleman: Never trust a mystic in a laboratory.

Pribram: Let me tell you my intuitions are pretty good. When an animal isn't doing what I want him to do

Needleman: That's what I mean. Mystics will do whatever you want them to do.

Ferguson: Jacob Needleman and I were talking the other day about spiritual discipline and the work that one does on oneself. It struck us that we are almost pleased to have discovered something negative about ourselves, or an error in perception. It can lead to being pleased to have learned it. It's not pleasing to know that it's been going on, but the insight is valuable. In a way that's doing science. Rather than looking at it negatively as, "I failed" or, "I did a stupid thing," you're saying, "That experiment came out that way." That's another way in which the empirical approach that you were talking about, or the science of the self, would apply.

Capra: I would like to propose a definition of science. For *me*, a scientific approach to understanding reality must satisfy two criteria. First, it has to be based on experience, it has to be an empirical approach. The experience can be of various kinds, a meditative experience, an experiment of the kinds we do in our laboratories, all kinds of experiences. But knowledge must be based on experience; a scientific approach has to be empirical. The second criterion is not so well known. It's the scientific method of model-making, of interpreting the experience in terms of a model and recognizing that this model is approximate. It can also be called a theory, but there is always the recognition that whatever we say in science is an approximate description of reality. We never talk about truth. We are not even looking for truth; we are looking for an approximate description of reality. This description may or may not involve quantification. I don't think that quantification is absolutely necessary to call an endeavor scientific. But it may be useful to distinguish between sciences that do quantify and those that do not. Again those scientists who use quantification also recognize that whatever is quantified is still approximate. Quantification is never exact; it is always approximate. Gregory Bateson has expressed this by saying that we tend to confuse quantity and number. Numbers are exact and precise but quantities are not. Anyway, the two criteria, empiricism and model-making, should be enough to distinguish scientific endeavors from others.

*science
empiricism
and
model
making*

Smith: What about verification and controlled experiments?

Capra: Verification is part of the empiricism, part of the empirical basis. In physics you do experiments. Then you build a model and then you verify the model with further experiments that test it further, extend it, and bring up new data. It's a complicated process, but verification is part of the empirical basis.

Smith: Jacob Needleman was referring to a kind of inner empiricism. Does that lend itself to a controlled experiment in your sense of empiricism?

Capra: No, I didn't say I wanted a controlled experiment as it is done in the present sciences. My definition of science is much wider. It can be inner experience. I could never have compared physics to mysticism without this parallel of scientific experiment and inner experience.

Weiwood: What's the verification in inner empiricism?

Capra: The verification occurs when you go to a Zen master and he tells you how to sit and breathe, and gives you a puzzle (koan) and says, Go away for five years and come back again. You'll have verified my experiment.

*the
needs
for
scientific
and
spiritual
knowledge*

Needleman: There is another element to consider. One of the characteristics of the kind of knowledge which the traditions give is that one can't get that knowledge unless it is really needed. It is said in Buddhism that when you are like a drowning person under water, and you desperately want air to breathe to stay alive, when you are seeking for liberation the way a drowning person seeks for air, then you can reach the knowledge or reach liberation. I wonder if the scientific knowledge that we are looking for is needed personally in the same way that the liberation *is* needed as described by the Buddhists, Christians, or other traditions. From where does the wish for scientific knowledge come? Is it the same place as the one where the wish for metaphysical or spiritual knowledge comes from?

Capra: No, I think it doesn't come from the same urge. However, I didn't say that scientific knowledge was the only acceptable knowledge. The scientific approach is just one of many approaches, and it would seem that what you are talking about is a different approach, definitely.

Needleman: I was just introducing it in order to get to this problem of verification. For example, the Biblical teaching about time, or the Hindu or Buddhist teaching about time and

creation, can only be verified in a state of meditation and in a certain condition of need and impartiality towards oneself, so that one witnesses within oneself the processes of time and creation. That's a completely different sphere than theoretical constructs which help us organize our external or even internal perceptions for the sake of explaining something.

Pribram: I think the need is here or all of you wouldn't be here today. I think there is a real surge, partly a push from the data and partly from the pull of people's needs, to get away from atomic holocausts, from the way the use of scientific knowledge has polluted the environment. So many things have gone wrong with science as it is practiced that many individuals feel we just have got to break out of the paradigm that's led us here.

Needleman: Those could be called needs for security and survival, not necessarily needs for transformation or understanding. It's one thing to need to get out of our ecological mess, it's another thing to need to be a new being. It may not be the same thing and we may be confusing them. We'll simply have to start talking about the difference between needs, desires, and fears. The spiritual needs may be a completely different order of phenomena than even the needs that bring us to conferences.

*difference
between
needs,
desires
and
fears*

Ferguson: I think that sometimes an intellectual need can be as desperate for some people as a spiritual need, the need to reconcile anomalies, etc. The best account of that is in the book *Zen and the Art of Motorcycle Maintenance* (Pirsig, 1974). The narrator's search for philosophical and intellectual understanding drove him into chaos, despair and finally transcendence, after a fashion. For many people Alcoholics Anonymous and Overeaters Anonymous provide transformative experiences. They could be considered spiritual disciplines. The people who become involved in those things have a desperate need that drives them there. In a journal on drug abuse and alcoholism in the film industry there was a quotation from a producer who said that the recovered alcoholics that he knew were so integrated and honest that he wished he had taken to drink so that he could have gone to their meetings. Apparently it didn't occur to him that there were any other ways. Need is something so personally defined that a scientist's need to understand may wake him up in the middle of the night, may drive him the same way as somebody climbing a mountain to a guru.

Capra: If I listen to Pribram, or any scientist, and they come up with something that really hits home, and if I'm really

captivated by an idea and confused at the same time, then I can spend days in a sort of daze and I can't do anything *else*. There are accounts of the quantum physicists of the 1920's who went through an extremely excruciating time of trial. It's not essentially different from a spiritual need, but it's somehow narrower. It involves the intellect, it doesn't involve the body.

Needleman: When do you feel more alive-when you're in that state of confusion or after you have figured out the answer?

Capra: Well, I can't say because I haven't figured it out yet. I think it will just go on and on.

Needleman: On a smaller scale, when is one more open or alive to life and others, when one is in a state of not knowing or when one has found the theory, or some sort of answer?

Capra: I think it is in between, when you begin to see how things relate to each other. When you begin to see a pattern here and there, and you don't know the details, but you know that this pattern here has something to do with that pattern there.

*defining
intelligence*

Audience: Does the new paradigm imply an evolving definition of intelligence?

Pribram: Well, we heard today that there are other kinds of intelligences than ordinary reasonable Aristotelian logical intelligence. That kind of intelligence, the Aristotelian, if you take it too far, can get in the way of other kinds of perceiving and being fully conscious.

Ferguson: There is a new appreciation that intuition is a form of intelligence. It hasn't yet affected the schools very much, but it seems that this is the only way that education can go if it is going to break out of all its patterns of failure (Ferguson, 1973).

*intelligence
and
opinion*

Needleman: The ancients found their way toward that issue by beginning to define intelligence in terms of the freedom of the mind from *opinion*. This means the freedom of awareness from the influence of emotion. I am not speaking of feeling but of emotion. Intelligence is not understood unless you bring in the intelligence of the heart, a more central mind. This is a mind that is connected to feeling of a more *SUBtle* sort, which is also related to conscience and moral intelligence. We are talking about a more central power that can organize *all* the forces in us, rather than a power that operates in one of our parts, perhaps very effectively, but is still not a central power.

In the ancient traditions you never could separate intelligence from self-mastery. Until we are free from the power of emotion over our thought, which is very subtle and invisible according to these teachings, we can never have real intelligence. Intelligence can only be awakened when we begin to see the sway that emotions have over our thoughts. These are called opinions. The beginning of the search for intelligence is the study of where my opinions come from, which is a Platonic quest. I'll have to recognize that right now I have opinions. And they are flying in my mind like birds in an aviary, as Plato says. My task is to be able to see these opinions and not identify with them, so that I can watch where they come from. They are not me, and they are not my central mind. They are thoughts which have come from I don't know where. They have been conditioned into me. But the intelligent mind is the mind that is free from conditioning. This means a merciless kind of study of the formation of opinion and how I am identified with it egoistically such that I become emotionally involved in thought. The enemy of intelligence then, if you want to put it practically, is the investing of emotional energy in thought.

*emotion
and
thought*

PANEL DISCUSSION: SESSION TWO

Fritjof Capra, Frances Vaughan, Roger N. Walsh, John Welwood

John Welwood: The one area where science and personal experience, mysticism, transformation, where so many things seem to come together, is the crazy patchwork quilt of psychology. It seems to be one of the more important disciplines right now because it has inherited some of the popular mystique of traditional religion and philosophy. Psychology as a discipline is a nexus of a number of different forces that are changing our culture. I'm wondering what we're going to do with psychology, how we see research proceeding, and how we can humanize and transpersonalize psychology more.

*psychology
as a
nexus
of
forces*

Frances Vaughan: Any psychology that's going to be relevant in terms of really changing the quality of life, or the process of transformation, has to be a psychology of consciousness. We are in the process of social transformation and part of that is a personal transformation in which individual lives are changing. The people that I see who are going through this kind of awakening to a whole different way of experiencing their lives are changing in extraordinary ways. I think we need more opportunities to talk about this and to address the subject because the experience is outstripping the literature. Things

are happening very fast, and an interest in this area also carries with it some kind of responsibility to give focus to the tremendous energy that's available to those who are seriously searching for ways of improving the quality of life. For example, the voluntary simplicity movement, and many different forms of spiritual activities have to be taken into account if we're going to look at what we want to create for ourselves in terms of a future society.

Fritjof Capra: Would you call Family Therapy a transpersonal approach?

*individuals
and
systems
in
relation*

Vaughan: It could be and it is not necessarily so. Most Family Therapy is conducted on the psychodynamic level and can be very useful for problem-solving at an ego level. However, a transpersonal psychology necessarily acknowledges that we are all subsystems of larger systems and that individuals are not isolated. We are looking at the individual in relation to the cosmos as well as the family.

Capra: **But** what about looking at the individual in relation to the family, as a subsystem, as a pattern in the family. Isn't that also transpersonal?

Vaughan: Perhaps insofar as you are looking at the pattern. But family therapy could be just psychodynamic work. There is a lot of work to be done to shift the sense of identity as an individual, or as a separate particle moving around in space, to beginning to think of ourselves as an integral part of a network of interrelated energy.

Welwood: The danger in psychology dealing with spiritual experience is that we tend to psychologize, i.e., lose the dimension of that experience which is very special and beyond the psychological approach. Is there an inherent contradiction in bringing psychology and spiritual experience together? Perhaps they are separate domains.

*implicit
Western
assumptions*

Roger Walsh: If we look at the implicit assumptions of Western psychology, we have essentially the unistate model, i.e., our usual state of consciousness as rational, under voluntary control. All other states, about half a dozen at the most, such as intoxication, sleep, delirium, psychosis, are pathological or less than optimal. If *you* look at the model of consciousness posited by the consciousness disciplines, they encompass a much broader range of states and view our usual state as one specific state within that broader range. They acknowledge the existence of higher states and functionally-specific states. The

Western model is a limited case of the consciousness model. In a different terminology, we have a Newtonian model and an Einsteinian model. The Einsteinian model shows a larger range within which the Newtonian is one relativistically valid component. If you look at a larger model or context from within a smaller model, you necessarily get a distorted interpretation. For example, the experiences which a mystic encounters must necessarily be interpreted from a Western psychiatric model as pathological, because in that system the only people who have mystical experiences are schizophrenics or someone who is psychotic. So to view the larger model from the perspective of the smaller necessarily produces distortion. Of course, from the perspective of the larger model Western psychology makes sense as a state-limited function. It's very interesting to look at a definition of psychosis, which is a distorted perception of reality and ignorance of that distortion. If it is viewed from the consciousness discipline model, then our usual state of consciousness turns out to be psychotic. To view the spiritual disciplines from our current paradigms without recognizing that our current paradigms are often implicit and often unrecognized, and hence have tremendous controlling power over our perception and thinking, is indeed dangerous and results in what Thomas Kuhn (1970) called a "paradigm clash." Recognizing these implicit assumptions is necessary for the expansion of psychological models, if the dangers we are talking about are to be avoided.

*the
controlling
power
of
paradigms*

Welwood: There is another problem in interpreting spiritual experiences from a popular psychological point of view, or from our ordinary point of view. They may be seen as only *experiences*, with all the resulting distortion of what Harvey Cox (1977) and others describe as a greed for new experience. There is a tendency to see spiritual experiences as another high, another trip or odyssey, another fantastic fascinating journey that we can take. Actually a spiritual path demands an enormous surrender of our normal egocentric way of going about our lives. I wonder if the notion of surrender, as it pertains to a spiritual path, could ever be understood within a psychological framework? I think there is also a problem with the use of the word "higher." We talk about higher modes of functioning, which makes sense in relation to hierarchies of integration. But in our culture that word happens to also imply getting high, getting higher, as with drugs. That suggests that a mystical experience or a more unitive kind of awareness is "a high." I think that could create confusion. However, higher in the sense that Huston Smith referred to (Smith, 1976), may mean more inclusiveness and more presence to immediate experience. Enlightened perception seems to be extremely or-

*higher
modes
of
functioning*

dinary. It's not one of these fantabulous trance-like or psychedelic-like experiences. This confusion surrounding terms like higher consciousness, or higher states of consciousness, is the kind of problem which may arise out of the interaction of psychology and spiritual disciplines.

Capra: The use of the word "higher" is even much larger than the association with drugs, e.g., being in high spirits, the highlights of the day, etc. It's also a value judgment.

higher states include lower states

Vaughan: I would like to suggest that Charles Tart (1969; 1971) has given us the best definition of higher states. Higher states are defined as those in which lower states are all subsumed, so that any higher state is an expanded state. And it is not something *instead of* a lower state; it includes everything in the lower state so that the higher state means more presence. It doesn't mean moving from here to there; it just means being here, with expanded awareness.

Walsh: Western behavioral scientists' assessments of the spiritual disciplines almost invariably focus on the dramatic experiences. It's interesting that the disciplines acknowledge such experiences as mere epiphenomena. to be noted with mild interest and then let go. The story I enjoy most is of the Zen master training his student to be aware of the breath continually. And after a few days the student came racing back and said, "I've seen Golden Buddhas, surrounded by light." And the master said, "Ah yes, very nice, but did you keep your mind on the breath." There are traps that can come from too limited a view. The Group for the Advancement of Psychiatry, in its report *Mysticism: Spiritual Quest or Psychic Disorder (1976)*, concluded, in part, that mystical phenomena are of interest to the psychiatrist, "... because they can demonstrate forms of behavior intermediate between normality and frank psychosis. . . ." Within the traditional psychiatric model, it is the only interpretation that makes sense. This is an example of the general principle that we can never see the limitations of a model from within it. We have to step outside of it.

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Reprint requests to John Welwood, 158 Middle Road, Santa Barbara, California, 93108

Psycho-spiritual phenomena experienced during meditative practice are the basis for the speculations and systemization of mind, mental functions, and the world. Further, the belief in successive rebirths means that mind is not an emergent property of life, but is one of the conditions for it. Buddhism's interest in science is essentially therapeutic—to relieve human suffering and to care for the earth. Though Buddhists are open to the discoveries of change, Asian Buddhists were almost universally wary of improper use of new knowledge, and thus have been preoccupied with the ethical issues generated by organ transplant and cloning. jayasuriay, w. f. the psychology and philosophy of buddhism. colombo, ceylon: young men's buddhist association press, 1963.