

## Reaching for Consciousness: Expansions and Complements

by William G. Braud

Manifestation is mind; and so is Voidness too.  
Enlightenment is mind; and so is blindness too.  
- Tilopa, *The Vow of Mahamudra*

Stop talking and thinking, and there is nothing you will not be able to know.  
- from the *Hsin-hsin-ming* ("*On The Believing Mind*")  
of Seng-ts'an, Third Patriarch of Zen

I initially thought of entitling this presentation "Reaches of Consciousness," then thought a more appropriate title would be "Reaching for Consciousness"—as a drowning person reaches for a life preserver...or as a growing plant reaches for the sun...or as a Seeker reaches for the Object of the Quest. And since Nature appears to abhor vacuums but adore complements, I felt it would be good to acknowledge and honor complements both in my title and in the content of my remarks.

### Complements

In Nature and in our everyday lives, as well as in our science of parapsychology, *balance* is the key to proper functioning, well-being, and success. I believe a recognition and an appropriate honoring of *complements* is, in turn, a key to achieving balance. A complement is that which fills up, completes, makes perfect. Complements mutually supply each other's lack. Both are necessary to the completion and functioning of the whole. Each is incomplete without the other and, in fact, each can only be defined and only makes sense in terms of the other. Neither is more important than the other. To overemphasize the one, to ignore the other, is to miss at least half of reality, is to encourage imbalance, is unwise. An appreciation of complements is a healthful antidote to a limited and myopic view of the world. It replaces a quarrelsome, antagonistic, competitive "either/or" view with a more agreeable, cooperative "both/and" position.

The challenge of a complementary view is to learn to look beyond appearances, beyond polarities, to recognize that what seem to be opposites or contradictions or incompatibilities are not truly so. Each aspect is true and real and important under certain conditions. The challenge is to learn to live with and be comfortable with apparent contradictions. Physics has achieved this comfort with respect to the complementary wave/particle nature of light. Parapsychology can grow to appreciate and become comfortable with the complementary nature of its subject matter and of the various methods that have been proposed for its proper study.

Everywhere in Nature, complements abound—chaos and order, darkness and light, birth and death, assertiveness and surrender, activity and rest, emptiness and the Ten Thousand Things, mysticism and Las Vegas. Life's pendulum swings easily from one complement to the other, honoring each,

never attached too long to either extreme, never out of balance, ever leaving, ever returning. Life, as is Nature itself, is a shifting rhythm of complements, a dance of complements. So too, complementary approaches shall swirl and dance through this presentation.

I am speaking with you today as one who is interested in consciousness. Psi functioning is but one aspect of consciousness, and parapsychology is one of a number of complementary approaches to issues of consciousness. Parapsychology's findings regarding psi functioning remind us of those aspects of consciousness that do not appear to be limited by spatial, temporal, and material constraints as these are conventionally understood. They speak to us of the reaches of consciousness into remote, otherwise inaccessible recesses of space, time, and circumstance, for purposes of direct knowledge, direct influence, and, no doubt, for other purposes which remain largely obscure.

In my homage to complements, let me begin by recognizing an obvious one in today's sociological realm—the advances and declines in parapsychology. On the one hand, we have stronger empirical evidence than ever (in the form of effective methodologies, extensive databases, impressive meta-analyses, and supportive review articles), rising public interest, and increasing media attention (in the form of articles, books, and television programs). On the other hand, we are experiencing reduced funding, greater academic and scientific resistances, reduced membership, enthusiasm, and excitement in our professional organizations, reduced contributions to our technical journals, and our laboratories are closing down right and left. Even some of those whose doors remain open are facing troubling and sometimes painful re-evaluations of how, and even whether, they plan to support parapsychological studies in future. To one familiar with Nature's ever-continuing dance of opposites or complements, such a situation is neither strange nor unexpected.

The chief message of my presentation is that we *expand* our research endeavors. Expansions, provided they are wise rather than narrow or redundant, will necessarily allow us to confront increasing numbers of complements and broaden and deepen our appreciation of psi and of reality. I shall suggest several dimensions along which useful expansions may be possible. We can expand our experimental designs, the aspects of reality that we ask psi to address as we use these methods, the levels at which we ask psi to reveal itself, the accompaniments of our procedures, our subject matter, our methods of investigation, our sources of inspiration, our attitudes toward psi, our conceptualization of psi, our audience, and ourselves.

### Expanding Our Experimental Designs

In recent years, experimental parapsychology has become synonymous, in large part, with ganzfeld-ESP and random event generator-PK research. I have viewed this development, alternately, as promising, expedient, and pragmatic and as limited, amusing, and troubling. And I say this as an early ganzfeld researcher and one who has done his share of RNG-PK experiments. Let me suggest that we complement our ganzfeld and RNG research with research on direct mental influence of biological systems (that is, what we used to call "biological psychokinesis" or "bio-PK" research). My motive for emphasizing this kind of research is selfish, for I have been engaged

in this happy pursuit for many years.

In the English-language scientific literature, there are approximately one hundred published reports of experiments in which persons have been able to influence, mentally and at a distance, a variety of living target systems including bacteria, yeast colonies, fungus colonies, motile algae, plants, protozoa, larvae, woodlice, ants, chicks, mice, rats, gerbils, cats, dogs, and dolphins, as well as cellular preparations (blood cells, neurons, cancer cells) and enzyme activity. In human "target persons", eye movements, gross motor movements, electrodermal activity, plethysmographic activity, respiration, and brain rhythms have been influenced. Much of this work has been reviewed by Jerry Solfvin (1984) and by Daniel Benor (1991).

And the work is not really new. Rather, it represents conceptual replications and extensions of human distant mental influence experiments conducted many years ago (just before and just after the turn of the century) in France (by Joire, Gibert, Janet, and Richet) and in the former Soviet Union (by Bekhterev, Vasiliev, and their co-workers).

I do not have time to describe our direct mental influence procedures or results in any detail; for those interested in such details, a very complete summary paper is now available (Braud & Schlitz, 1991). Suffice it to say that in our experiments on direct mental influence of remote biological systems, a variety of living targets have been used, including human electrodermal activity, muscular activity, and blood pressure; the spatial orientation of fish; the locomotor activity of small mammals; and the activity of *in vitro* cellular preparations (that is, rate of hemolysis—breakdown through osmotic stress—of human red blood cells). Using these eight target systems, we have conducted 37 experiments that have involved 655 sessions, 449 different "influencees", 153 different influencers, and 13 different experimenters. A statistical summary of these experiments yields a combined (Stouffer's)  $z = 7.72$  (which has an associated two-tailed probability of approximately  $5 \times 10^{-14}$ ), and a mean effect size ( $r$ ) = .33.

I recommend this direct mental influence of living systems paradigm for your consideration (and, hopefully, for your replication) for a number of reasons. First, the design has yielded positive and relatively consistent results. Conceptual replications of this work have been successfully carried out in independent laboratories in Brooklyn, NY, San Bernardino, CA, Freiburg, Germany, and Moscow, Commonwealth of Independent States (Kelly, Varvoglis & Keane, 1979; Khokhlov, 1983; Gruber, 1979, 1980; Protosov, Baron, Druzhkin & Chistyakova, 1983). Second, the experiments are easy to perform. Third, the living target systems are rich in free variability or *lability*, which has been shown to be favorable to the occurrence of psi effects. Fourth, the findings of such experiments are relevant to a potentially important psi application—mental healing (known also as absent healing, psychic healing, or spiritual healing). Fifth, the design is one that is rich in motivational components (which are accepted as critical to the success of psi experiments). Influencers who might not relate well to inanimate targets (such as random event generators) nonetheless enjoy the prospect of influencing other people or other living organisms, and the motivational levels of influencers, influencees, and experimenters alike are boosted by the recognition of the potential applications (especially for healing) and implications of the findings of

these studies. Sixth, quantification of target activity is very straightforward and objective in these experiments (compared, for example, with the complexities of quantification by judges of results of free response ESP experiments). Seventh, multiple "psi channels" can be active and can contribute to a successful outcome in this design. There can be a direct "causal" psychokinetic influence by the influencer upon the influencee's biological activity. There can be an "active agent telepathy" effect by the influencer upon the influencee. Positive results can occur even if the influencer is not a psi source at all by the influencee learning the influence/noninfluence schedule via telepathy and combining this knowledge with physiological self-regulation in order to bring about the desired outcome; all of this can occur outside of the influencee's awareness. Similarly, the influencee can access the influence/noninfluence schedule clairvoyantly. To the extent that there is freedom in initiating a session or the trials of a session, an experimenter's precognitive waiting strategy or intuitive data sorting strategy could yield positive results; again, this could occur without the experimenter's awareness. Eighth, the task can be represented as one requiring joint effort by both influencer and influencee. The influencer reaches out to influence the influencee, but the influencee makes himself or herself open and receptive to such influence and reaches out (unconsciously and psychically) to determine when the influencer is making influence attempts and (unconsciously) letting the body respond appropriately. This shared responsibility for a successful outcome serves to reduce performance anxiety and decrease the psi-inhibitory effects of what the late Kenneth Batchelder called "ownership resistance" (Batchelder, 1982). And ninth, the experiment is a "general purpose" one that can be represented in different ways to different participants in order to match their interest and increase involvement and motivation. For those interested in mind over matter effects, the task can be presented as one that involves a psychokinetic influence of the bodily systems of a distant person or other living organism. For those interested in healing, the task's healing analog nature can be emphasized. For those interested in telepathy, empathy, or connectedness, those aspects can be emphasized, with the physiological reactions serving as objective indicators or correlates of successful "merging" of influencer and influencee. I can think of no other psi task that is so rich in multi-purpose elements.

Regrettably, time permits only passing reference to some of our findings. Physical factors of *lability* (free variability) and (perhaps) the momentary condition of the earth's *geomagnetic field* may relate importantly to the outcomes of direct mental influence sessions.

Physiologically, there are indications of greater susceptibility to electrodermal direct mental influence in influencees whose spontaneous electrodermal activity levels are relatively high, compared to those with relatively low activity levels. This is consistent with a hypothesis that living systems characterized by a greater degree of departure from homeostasis may be especially susceptible to direct mental influences aimed at restoring physiological balance. (I am thankful to Dr. Bruce Pomeranz for this observation.)

At the psychological level, we have learned that the ability to influence or to be influenced is relatively widespread among both selected and unselected participants. Participants enjoy the experiments, and few have indicated concerns about the possibility of influencing or being influenced by another person. Real time physiological feedback to the influencer is not essential to

the occurrence of the effect. There are indications that the direct mental influence effect can be focused upon particular subsystems of the target through directed attention and intention, and that persons are able to "block" unwanted direct mental influences upon their own physiological activities. The physiological activities of a distant person can be influenced not only by directional intentional aims, but also by simply directing full attention toward the target person. The magnitude of a direct mental influence effect appears to be enhanced by the presence of an influencee's felt need to be influenced or by the influencer's perception of such a need in the influencee. Direct mental influences may occur in persons who are conventionally unaware that such influences upon their physiological activities are being attempted. I suspect, however, that even in such cases, there is a form of *tacit* knowledge and approval of the influence. Finally, we have found that the magnitudes of certain direct mental influence effects are correlated with influencee personality factors such as degree of introversion, degree of social avoidance and anxiety, and the degree to which one is comfortable and nondefensive about the possibility of being strongly "interconnected" with others.

Our direct mental influence work can easily be extended in several directions. There are already indications that animate target systems may be more susceptible to direct mental influence than are inanimate target systems (Braud, Schlitz & Schmidt, 1989). It would be desirable, however, to conduct careful, analytical experiments in which animate and inanimate targets are compared directly, under identical psychological conditions. The outcomes of such comparison studies would have rich methodological, theoretical, and practical implications and applications.

In the experiments conducted thus far, the influencer's bodily and mental activities have been highly correlated. When I attempt to calm a distant person, I maintain an intention for calmness of the distant person, but I also calm and relax my own body. Which is the more critical factor? Is the physiological activity of the influencee "mirroring" that of the influencer, and demonstrating a degree of physiological coherence? Or are the bodily reactions of the influencee more responsive to the influencer's *intentions*? What would happen if these two factors were aimed in opposite directions? If the influencer's intention were for calmness, yet the influencer's body were activated, which would the influencee follow? Would the intention override the physiological template, or would the opposite occur? Outcomes of such studies would have useful practical application.

How well can a direct mental influence be focused upon one of a number of bodily systems or upon one of a number of distant persons? And would the physical proximity of the persons play any role in such targeting attempts?

Can direct mental influence of living systems occur in a time-displaced manner? We are all aware of Helmut Schmidt's remarkable and successful experiments on retro-psychokinesis or time-displaced influences upon digital random event generators (Schmidt, 1987). Can similar, apparently "backward in time" influences be observed with analog living target systems? Would persons be able to influence their own or others' pre-recorded but not yet observed or inspected physiological activity? Would the degree of awareness of the response system (i.e., the degree to which the person is conscious or unconscious of the occurrence of the initial reactions) make a difference?

This could be tested, for example, by comparing time-displaced influences upon relative unconscious reaction systems such as electrodermal activity with much more conscious reaction systems such as muscular or motor activity. What would be the influence of pre-observations by others of the pre-recorded physiological activity? Would the time interval between the initial recording and the influence attempt be an important factor? One can imagine the possible medical implications of such experiments, especially in the areas of initial symptom formation and illness prevention. Can an individual's mental processes "reach backward in time" to actually influence the initial developmental probabilities of healthful or harmful physical changes? And would the degree of development of the changes, their degree of pre-observation by self or others (by means of prior medical tests, for example), and their "age" have important bearings on the likelihood of success in influencing them? These may seem like implausible hypotheses, but they are no more implausible than psi itself and could readily be studied in careful experimental designs.

I mention these possible extension experiments because, without the necessary funding for this new research, I may not be able to follow up on such experiments myself; I am hoping, however, that some of you with the requisite facilities, equipment, and inclination may be able to conduct such studies and perhaps learn very interesting things.

#### Expanding Our Psi Indicators

One of the interesting aspects of the research I have been describing is that the experimental design allows us to tap psi functioning at a relatively "unconscious", physiological level that does not require the generation of conscious, verbal reports. In a way, it was a kind of "historical accident" that led us to focus upon conscious, verbal reports as psi indicators. In the early years of psychical research, and in experimental parapsychology until quite recently, we could only know about a person's psi functioning if it took the form of a conscious experience that could be discussed with the investigator. This is no longer the case. We now have physiological indicators of ever increasing sophistication and subtlety that can be used to detect psi interactions that previously would have gone unnoticed. In our own work, for example, we have used unconscious motor automatisms successfully as psi indicators (Braud & Jackson, 1982). We have also observed positive results in sessions in which participants indicated their awareness of correct target events not by conscious guessing, but rather by demonstrating greater unconscious electrodermal changes to correct targets than to nontarget decoys (Davis & Braud, 1980). Interestingly, in these sessions, accuracy was greater for the nonverbal, physiological indicators than for conscious, verbal guesses. The excellent results from these studies that employ nonverbal psi indicators, as well as the relatively large overall effect size generated by our direct mental influence work (all of which employs nonverbal, physiological psi indicators) suggests that moving away from verbal to nonverbal indicators may indeed be a profitable research strategy. Gertrude Schmeidler's (1990) recent discussion of the essentially "subcognitive" or pre-conceptual nature of psi are relevant to this issue. Perhaps, when we attempt to tap psi at a physiological or pre-conceptual level, we may encounter less distortions or interference by other processes, and our assessment may be somehow "purer" and less contaminated?

Others have already employed more sophisticated electroencephalographic, magnetoencephalographic, and averaged event-related potential measurements as useful psi indicators (e.g., May, Luke, Trask & Frivold, 1990; Warren, McDonough & Don, 1990). Even more sophisticated brain electrical activity mapping (BEAM) and positron emission tomography (PET) procedures may yet yield exciting results.

In addition to all of these physiological indicators, we now have a wide range of possible psi mediated instrumental response (PMIR) indicators of psi, thanks to the thinking and work of Rex Stanford (Stanford, 1990). These PMIR indicators can now allow us to detect instances in which organisms may unconsciously scan their environments for need-fulfilling interactions and change the timing or pattern of reactions in order to increase the likelihood of such interactions. A bonus of the PMIR methodology is that it allows us to conduct otherwise impossible psi investigations with animals, preverbal infants, or nonverbal adult participants.

It should also be possible for us to extend the range of psi indicators in the other direction, so to speak, to tap still other levels of psi responsivity. The direct mental influence methodology, for example, could be extended from biological "target systems" to psychological, social, and even to psi-functioning targets. We are engaged in experiments in which we are exploring whether one person's attention-focusing processes can influence another person's simultaneous attention-focusing or concentration attempts; stated somewhat differently, can one person's meditation practice directly facilitate that of another, distant person? Here, of course, the target system is a *psychological* one.

We are also currently exploring still another psychological target system in an experiment in which persons attempt to influence the physical and psychological health and well-being of another person through the vehicle of intercessory prayer. This multiple blind, prospective study is a conceptual replication and extension of a similar experiment reported in a 1988 issue of the *Southern Medical Journal* by cardiologist Randolph Byrd in which he claimed to find dramatic intercessory prayer effects in cardiac care patients. For us, this study represents three extensions of our ongoing direct mental influence work: (a) from laboratory to clinic (for the influencees are clients experiencing counseling at a local pastoral counseling center), (b) from physiological to psychological targets, and (c) from an egocentric, influential mental strategy to a less egocentric, prayerful mental strategy. Persons contemplating such studies should expect to experience many levels of resistances, as we have experienced, but which we have finally been able to overcome, and the study is now proceeding smoothly.

Social processes could provide targets for direct mental influence attempts. These target systems could range from the social activities of community organisms such as ants or bees that exhibit hive behaviors to simple and complex social behavioral and decisional processes in dolphins and in humans. Societal target experiments have been reported by investigators of Transcendental Meditation (e.g., Orme-Johnson et al., 1988), and while such experiments remain highly controversial and their interpretation unclear (e.g., Schrodtt, 1990), the political, economic, and societal domains in which the experiments and controversies are being conducted and played out indicate the potential importance and practical impact of such work.

### Expanding Our "Target Events"

The foregoing suggestions were extensions of the direct mental influence design. Of course, other experimental methods can be extended as well and may yield new and exciting results. Consider the ganzfeld. Our present use of the ganzfeld is paradoxical and ironic in that we use it as a means of reducing external distractions and directing attention inwardly; that is, we use the technique to release the participant from the world of sense objects. But we direct this newly freed attention to images of pictures, to the world of sense objects one step removed. This may not be the best use of the technique. We free the mind of its senses (chiefly vision) so that the mind can use its psi abilities as new senses (chiefly vision). What would happen if we were to allow the sense-freed mind to do other things? As an easy first step, we could employ sense object-like targets that are nonvisual. Auditory, gustatory, olfactory, and tactile target events could be used. As Lawrence LeShan (1977) has suggested, perhaps individual differences will blossom here, with participants showing different sensitivities or preferences for targets of different sense modalities. Next, we could expand to more "internal" targets—for example, proprioceptive or visceral stimulation of another, distant person. And beyond that, we could leave sense-type targets in order to explore target events that consist of different emotions, different cognitive processes, or different states of consciousness of other persons. More interestingly still, we could investigate what I termed "nonevident psi" in an earlier paper (Braud, 1982). Here, we could begin by assuming that Nature would not have produced a psi process that was completely redundant with sensory or perceptual processes, and ask what psi might be able to tell us about the world that cannot readily be discerned by the conventional senses. Perhaps psi is more adapted to providing knowledge about objects that would not be available to the senses themselves—such as the origin, history, purpose, associations, relationships, interconnections, or meaning of objects. William Roll (1982) has made related suggestions.

Even more interestingly, we might encounter an entirely new realm that is not at all sense-like and that is difficult or impossible to describe in ordinary language. What would happen if we prolonged and restructured our ganzfeld procedures and instructions so that the mind could go not only beyond sense impressions, but beyond images as well...beyond the noise at one or several removes...to silence...to the absence of sensory, emotional, cognitive, and intentional content...beyond anticipations...beyond memories...beyond the visual vehicles of psi? What might we discover? And how might we meet the challenge of developing and utilizing new means of experiencing, describing, representing, understanding, and communicating this reality? Might we discover that some of these are inappropriate, and that the realm must necessarily remain cloaked in a cloud of unknowing?

Approaches to this realm are, of course, not new. Charles Tart called our attention to the general problem area in his seminal "state-specific sciences" paper that appeared in *Science* two decades ago (Tart, 1972), and partakers of the mystical experience have been attempting to describe this conceptless, wordless realm with words and concepts for millennia (Underhill, 1911). To my thinking, the mystics have been amazingly consistent and successful in this undertaking, and the



Way of the Mystic may in fact be one of the state-specific sciences envisioned by Tart. The Way of Meditative Discipline may be another such state-specific "mind science". Still other examples may be found if one looks cautiously at the various esoteric and mystery systems, carefully discarding the associated nonsense that one finds with these, although such distinctions are not always easy to make!

A familiar image, with which all of us are doubtlessly familiar, is the San-en or Three Monkeys: See-No-Evil, Hear-No-Evil, and Speak-No-Evil. We have already followed the advice of the first two monkeys (Mi-saru and Kika-saru: Don't see and Don't hear) in the visual and auditory restriction portions of the ganzfeld procedure. We have yet to adequately heed the advice of the third monkey (Iwa-saru: Don't speak). Let me suggest that we introduce more of the nonspeaking, the nonverbal into our experimental designs and into our other means of investigation. Silence may be a useful complement to our more familiar ways of acquiring knowledge. Time spent in wordless, conceptless silence, in our experiments and in our nonlaboratory experiences, may yield unexpectedly rich rewards of enhanced psi, enhanced creative insights, and other gifts of knowledge and inspiration.

#### Other Accompaniments of Our Procedures

Let us continue with the ganzfeld. That procedure has been used within experimental parapsychology as a facilitator of free-response GESP. There have been a few exceptions—for instance, Rex Stanford's investigations of the cognitive concomitants of ganzfeld exposure (Stanford, 1987), our own work, in the early 1970's, on ganzfeld-correlated enhancements of creativity and originality (e.g., Stembridge, 1972), our studies, reported in 1985, of physiological concomitants of ganzfeld exposure (Braud, Davis & Opella, 1985), and some very recent creativity-related investigations by Marilyn Schlitz and Charles Honorton (Schlitz and Honorton, 1992)—but the ganzfeld has been used almost exclusively as a facilitator of accurate telepathic impressions of visual target materials. It is somewhat embarrassing to add that we are not even certain that the ganzfeld itself is a *facilitator* of such visual target telepathy, for (with only a handful of exceptions) simple, non-ganzfeld control groups are not even used in the experiments. So what are the ganzfeld meta-analyses really telling us? Are the obtained positive results due to the ganzfeld? Or are we simply being told that psi often comes out to play in certain laboratories or with certain investigators, regardless of the techniques used?

But it is easy to add control groups to our ganzfeld experiments. And it is easy to study the ganzfeld as a possible facilitator or amplifier of a far greater range of processes. Jeanne Achterberg has reminded us that throughout history, most if not all natural healing systems (from ancient dream incubation procedures at Asclepian temples to modern techniques of hypnotherapy and psychoimmunology) make use of *images* presented to patients who are in a *state near sleep* (Achterberg, 1985). The ganzfeld has exactly these two characteristics—imagery becomes very prominent, intense, and realistic, and the participant enters a hypnagogic or twilight state of consciousness (Mavromatis, 1989; Schacter, 1976). This happy circumstance suggests that the

ganzfeld might provide a very simple and inexpensive method for facilitating health-enhancing imagery and other health-enhancing processes. We are, in fact, currently pursuing the possibility of using the ganzfeld as a facilitator or amplifier for processes helpful to psychophysiological self-regulation, self-healing, and direct mental influence of animate and inanimate target systems. The ganzfeld might also be used to increase the susceptibility of influencees to the types of biological psychokinesis effects I discussed earlier.

Parallel investigations could be carried out using other ostensibly psi-favorable techniques such as relaxation, meditation, special forms of intentionality, or simply dwelling more frequently in or attending more to the silence between thoughts. In these, and in ganzfeld investigations, physiological and experiential concomitants could be studied during sessions in which participants attempt to become aware of remote target events. Similar studies also could be undertaken during sessions in which there were no specified targets, in order to learn just what psi might "capture" when not directed to a particular type or target "location", as well as to learn whether the physiological and experiential concomitants differ for sessions with and without concurrent psi attempts. The "targetless" experiments could emphasize a more general understanding of the techniques and of the broad range and nature of experiences facilitated by the techniques, quite apart from their real or ostensible "paranormal" components.

#### Expanding Our Subject Matter

Along similar lines, we could expand our subject matter beyond the usual "big four" processes of telepathy, clairvoyance, precognition, and psychokinesis. I am not alone in suggesting such an expansion of the issues, topics and subject matter of our field. In a 1978 paper on "the limits of parapsychology", John Beloff cautioned parapsychologists not to rule out prematurely certain unusual phenomena that might fall outside the traditional psi domain—that we at least be willing to explore anomalous manifestations other than ESP and PK (Beloff, 1978). In his 1979 Presidential Address to this organization, John Palmer suggested that, in view of the progressive decline in "transmission" models and the growth of "correspondence" models of psi, parapsychology might expand its focus to consider additional "correspondences" of the types found in astrology, synchronicity studies, and in the magical tradition (Palmer, 1980). Susan Blackmore (1985, 1988) has often argued for the expansion of parapsychology to include unusual mental phenomena such as ostensible psi experiences but also to include such things as out of body experiences, near death experiences, lucid dreams, mystical experiences, and altered states of consciousness which seem to suggest other "planes" of mental functioning, and that parapsychology study these mental states in their own right, whether or not they happen to be accompanied by veridical psi. I agree with Blackmore's suggested expansion of parapsychology in this way; I disagree, of course, with her rejection of veridical psi phenomena and with her suggestion that we abandon the psi hypothesis as a blind alley. And most recently, Rhea White (1990, 1991) has proposed that we return to the study of spontaneous experiences and that we broaden our field by including studies of not only psi experiences but also other exceptional human experiences such as mystical and peak experiences, experiences of inspiration, out-of-body experiences, and near death experiences.

It may be useful to reiterate my opening comments on complements at this point. I am not suggesting that we substitute a psi-less parapsychology for one that contains psi, nor am I suggesting that we abandon an experimental approach in favor of an experiential approach. We can do both—*complement* our work with related, nonpsi studies and *complement* our experimental work through the addition of more experiential and spontaneous investigation aspects. Not "either/or", but rather "both/and". These are complementary approaches, or perhaps the poles of continua; each can illuminate and enhance our study of the other, and the approaches can join and transform one another in a cooperative and synergistic, rather than a competitive and exclusive, manner.

### Expanding Our Methods of Investigation

Would it be helpful to consider expanding our methods of investigation as well? Assuredly, we can move in the direction of improved technology—tighter experimental designs, improved statistical techniques, more impressive apparatus, experiments that examine geomagnetic field interactions, protocols involving high-tech brain-mapping, new and improved random event generators, and increasingly analytical investigations of possible physical, physiological, and anatomical correlates or influencers of our studied phenomena. No doubt such a strategy is appealing to many, can lead to important insights, and may even attract funding. But to others, to whom the specific "hardware" through which events come about is less important than the events or processes themselves and their psychological natures, such technological adventures soon lose their interest.

One can move in other, complementary, directions as well: toward *applying* what we know or suspect and noting the results of those applications; toward an increased appreciation of the *meaning* of various experiences; toward a more complete *understanding* (see Abel, 1953) as well as explanation of experiences; toward exploring *diverse sources* for findings and interpretations that might illuminate what we are studying; and toward increased *self-work, self-observation, and self-understanding*. I shall have more to say about these later.

### Expanding Our Sources of Inspiration

In addition to more extensive surveys of our own literature of psychical research and parapsychology, increased study of the literature of other scientific disciplines can uncover methods, findings, and concepts of great usefulness in our studies of psi. But we can also range more freely and widely in our search for data, information, approaches, and interpretations that may help us in more fully understanding and appreciating our subject matter. We may find useful clues in unexpected places such as the mystical tradition, various meditative traditions, esoteric teachings, mythology, and even art, poetry, and music. To the extent that much of what we wish to study is nonverbal, it is not surprising that nonverbal modes of expression, such as music or art, could be quite revealing and informative. Concerning the essentially non-linguistic nature of psi, Ivor Grattan-Guinness has provided many useful clues (Grattan-Guinness, 1985).

A specific illustration will provide an indication of what I am proposing. Consider this quotation:

There is within us an immense capacity for perception, for the receiving of messages from outside; and a very little consciousness which deals with them. It is as if one telegraph operator were placed in charge of a multitude of lines: all may be in action, but he can only attend to one at a time. In popular language, there is not enough consciousness to go round. Even upon the sensual plane, no one can be aware of more than few things at once. These fill the centre of our field of consciousness: as the object on which we happen to have focussed our vision dominates our field of sight. The other matters within that field retreat to the margin. We know, dimly, that they are there; but we pay them no attention and should hardly miss them if they ceased to exist.

Transcendental matters are, for most of us, always beyond the margin; because most of us have given up our whole consciousness to the occupation of the senses, and permitted them to construct there a universe in which we are contented to remain. Only in certain states—recollection, contemplation, ecstasy and their allied conditions—does the self contrive to turn out the usual tenants, shut the 'gateways of the flesh', and let those submerged powers which are capable of picking up messages from another plane of being have their turn. Then it is the sense-world which retreats beyond the margin, and another landscape that rushes in....

...by a deliberate inattention to the messages of the senses...[one] can bring the ground of the soul, the seat of 'Transcendental Feeling', within the area of consciousness: making it amenable to the activity of the will. Thus becoming unaware of his usual and largely fictitious 'external world', another and more substantial set of perceptions, which never have their chance under normal conditions, rise to the surface. Sometimes these unite with the normal reasoning faculties. More often, they supercede them. Some such exchange, such 'losing to find', appears to be necessary, if [one's] transcendental powers are to have their full chance."

The writer then goes on to describe methods of quietude, focusing of attention in a one-pointed manner, focusing of "naked intention", and so forth, as ways of attaining a special, different way of knowing. To my ears, these statements do not sound very different from the familiar statements of the "noise-reduction" models of psi optimization that Charles Honorton and I have proposed (Honorton, 1977; Braud, 1978). The statements were written in 1911 by Evelyn Underhill in her classic study, *Mysticism: A study in the nature and development of Man's spiritual consciousness*.

Two interpretations may be given regarding the similarity of recent and ancient thoughts. A pessimistic one is that we have not progressed very far from those olden times and thus know relatively little even today. A more optimistic assessment is that even the ancients possessed a great deal of valid and useful information, which they learned quite early and informally from first hand experiences, ponderings, and appreciations, and that we have much to learn from these

ancients even today. Such knowledge may be similar to that of the very young child who has acquired incredibly accurate knowledge of the physics of trajectories through experience in tossing and catching balls and stones; this is an informal, tacit knowledge that has not yet been communicated to others nor expressed in mathematical formulae. And if the ancients were correct in some of their thoughts and writings, perhaps we could find many more useful findings, concepts, and interpretations were we to delve more widely and deeply into their writings.

And many of us have dipped deeply into such ancient sources. I do not know how widely appreciated it is that Charles Honorton's noise-reduction model (Honorton, 1977) and, in fact, his original ganzfeld experiment were inspired to a large extent by his readings of Patanjali's yoga sutras (dating from the second century B.C.). Some of Rex Stanford's ideas about the interference of cognitive and other constraints owe a debt to similar sources (Stanford, 1990), and K. Ramakrishna Rao has advocated that we research the classical texts of the meditative tradition and carefully study the phenomenology of adept meditators (Rao, 1989). It is also no secret that Lawrence LeShan's methods for training healers owe much to the Western mystical tradition (LeShan, 1966), that William Roll's "long-body" has much in common with the notion of the Mystical Body of Christ (Roll, 1988), and that Dolores Krieger's "therapeutic touch" is a mixture of the ancient practice of laying-on-of-hands and of old Mesmeric procedures (Krieger, 1979). Nor, to give but one example from outside of our field, is it usually appreciated that the powerful notions of general system theory proposed and developed by Ludwig von Bertalanffy (von Bertalanffy, 1968) were largely inspired by von Bertalanffy's interest in the ideas of the mystic Nicholas of Cusa (best known for his doctrine of the coincidence of opposites in the ultimate reality, and about whom von Bertalanffy wrote his own doctoral dissertation [von Bertalanffy, 1928]). The lesson is that there is much latent wisdom in ancient traditions. Combining this ancient wisdom with modern methods of gaining knowledge will yield a fuller, more complete understanding of consciousness, human nature, and reality than that gained by either one or the other alone.

### Expanding Ourselves

Another helpful expansion of our studies would be to engage in more self-work, self-development, and self-observation. I can give you a flavor of what I am suggesting by sharing several quotations that I chanced upon while preparing this address. "We behold that which we are", "Only the Real can know Reality" (both of these from Evelyn Underhill, 1911), and "No man can create anything greater than his own soul" (from a discussion of Robert Browning's poem "Andrea Del Sarto" in Witherspoon, 1951). Similarly, there are many relevant quotations in the writings of Gerald Heard (which I am indebted to Rhea White for bringing to my attention), all to the effect that "being determines cognition"—for example, "To listen *to* the soul, they must listen *with* the soul", "If we change ourselves, changing our power of apprehension, we change the universe confronting us", and "Every insight into the outer world must be balanced by an equally enlarged knowledge of [our] true and full nature" (White, 1982). The gist of what I mean to imply by these quotes is that a most effective way to learn about consciousness and about psi is to observe, develop, and study our own consciousness, in a first-person participatory manner, as a complement to the usual third-person observer manner characteristic of Victorian science. Again, I am merely echoing advice

already offered by several psi investigators. Perhaps the first formal advocacy of this idea was by philosopher and parapsychologist, C. J. Ducasse who suggested, "Some persons disciplined in science and philosophy should strive painstakingly and persistently to develop paranormal abilities in themselves" (Ducasse, 1962). And this has been proposed more recently: for example, by Rex Stanford in his 1973 Presidential Address to this organization (Stanford, 1974) wherein he suggested, "Experimenters should endeavor personally to experience as many psi phenomena as they can. They may also profit by being subjects in experiments of their own or similar to their own"; in the same address, Stanford advocated the study of practices and beliefs of magic, religion, and mysticism of diverse cultures and times as they relate to possible psi phenomena. Similar participatory and experiential suggestions have been made by Hoyt Edge (1982), David Hess (1988), Rhea White (1987, 1990, 1991), and others. What we learn and become in the process of self-work can be applied to and can facilitate our scientific work. Similarly, our laboratory and field findings can provide helpful hints for more effective and more efficient self-work. Again, a synergistic, complementary relationship—"both/and" rather than "either/or".

#### Expanding Our Conceptualization of Psi

We have several alternative conceptualizations of the nature and purpose of psi, ranging from an erratic flaw in our filtering equipment, to a primitive communication system, to a biologically adaptive ability, to a mental faculty, to an indication of our interconnectedness with one another and with all things, to the "glue" that holds together, balances, and orders Nature, to a means of interacting with a transcendent realm. Doubtlessly, reality is even more complicated than this, and psi may have additional functions and purposes about which we are still ignorant. Perhaps psi is an indication that our conceptualizations themselves are limited and incomplete and that there are realities than can never be reduced to conceptualizations. Our complementarity principle reminds us that we need not choose any one conceptualization of psi to the exclusion of others. Psi can be several of these things, and more, all at once.

A related area for expansion is our view of the range of what is possible or impossible to accomplish via psi. If psi accomplishments are indeed influenced by our expectations and beliefs, perhaps by expanding our belief systems, we could increase the range and magnitude of our psi effects, especially our PK effects. Many of the commonly assumed limits of psi may be just that—self-imposed and limiting assumptions. By fully suspending disbelief, fully encouraging positive beliefs and expectations, we may be able to accomplish formerly unthinkable feats via ESP and PK. For example, are PK effects *really* limited to small scale shifts of probabilities of random events? If we assume this to be the case, we shall never venture forth far enough or frequently enough to attempt more outrageous, yet perhaps truly possible, feats including large scale macro-PK effects. We shall never know what is possible or impossible until we give such attempts fair trials. And I mean truly fair opportunities, not half-hearted attempts or attempts that are not sufficiently thorough or intensive.

Similar comments apply to our assumptions about the roles of various physical, physiological, and psychological factors or variables in our experiments. Many of our supposedly discovered laws

may in fact be self-generated and self-fulfilling self-maintaining prophecies. We shall only know if this is so if we are able to go beyond our usual assumptions and test reality on its own terms—fully and sufficiently frequently. For example, nearly all of us take for granted the importance of immediate, trial by trial feedback in the production of psi interactions and go to great lengths to build this into our experiments and our models and theories. But there are many cases, in lab and in life, in which excellent psi appears to occur without such feedback. I have heard of a case in which a particularly accomplished remote viewer provided an extremely accurate and detail remote viewing protocol...then died before receiving feedback. This would seem to be an excellent white crow that disproves the "all black crows" rule that feedback is necessary for effective psi functioning. This is merely one example among many that could be given regarding many "crucial" variables that may not really be crucial. Expanding beyond our assumptions regarding any given variable or process may yield wonderful surprises.

### Expanding Our Audience

Another area of possible expansion is the audiences that we address. In our work and in our pronouncements as parapsychologists, to whom are we speaking? I think we speak, in gatherings such as this, chiefly to ourselves and to our peers. Secondly, we speak to our critics. Thirdly, we speak to scientists at large. But there is a vast group that we usually ignore, and that is the ordinary people, the public. What about the public? What can we offer them? And what can they offer us? At a recent Symposium on Science and Consciousness held in Athens, Greece, which I was honored and delighted to attend, one of the organizers made the following statement in addressing the delegates (scientists and consciousness researchers) during the very last moments of the conference: "You are the modern shamans, the modern priesthood, but if you do not bring your knowledge to the people, there will be barbarism." It is important for us, and for our world, to share the knowledge and wisdom that we have with the public. They are our greatest supporters; they are in need of any insights that can improve their lives; and they possess a great storehouse of knowledge that they can share with us, in return. Certainly, we can continue to speak among ourselves, and to our peers, to our critics, and to other scientists; but we can make greater efforts to address the general public and to listen to and honor what they have to say to us, in turn.

### Expanding Our Attitude Toward Psi

Another area for expansion is in the way in which we approach our subject matter, our attitude toward psi. Along with our aim of explaining, predicting, and controlling psi, would it be helpful to add the complementary approach of honoring and appreciating psi without wishing to capture it or force it or constrain it? A member of our organization, a "tough-minded experimentalist" whom we all very much respect, shared with me at an informal gathering several years ago that he tended to think of psi as a beautiful painting to be admired, not something to be distorted or destroyed through overanalysis, or in the service of technological explanation. A similar point was made in an article by Joseph Friedman in a 1984 issue of the *Journal of the (British) Society for Psychical Research* called "Love and Parapsychology" in which he argued that it may not be appropriate to treat psi as something to manipulate, will, and harness for our own

designs; rather, psi may be part of that order of human experience which includes wisdom, humility, and love—an order "not subject to an approach which challengingly sets upon nature to order its being through will or knowledge."

Perhaps I was describing, to myself, two complementary approaches to psi research when I wrote these two *haiku* (which I present to you with great apologies to Basho, Buson, Issa, Shiki, and all other true practitioners of this wonderful Japanese poetic form). The first was written fifteen years ago, and it, like the method it describes, is strained and ineffective:

*Catching a greased pig  
with gloves filled with quicksilver:  
psi experiments.*

The second, much more effortless, virtually wrote itself about eight months ago:

*Seeds fall to the soil..  
Rains fall, day replaces night..  
Butterflies arrive!*

And perhaps this may serve as a useful recipe for a successful psi experiment, regardless of its specific methodology. We can set the stage, remove the things that get in the way, wait patiently for psi's natural coming, and experience delight when it arrives.

I thank you for your kind attention.



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