Transpersonal Images: Implications for Health

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The imagination of man can act not only on his own body, but even on others and very distant bodies. It can fascinate and modify them; make them ill, or restore them to health. – Ibn Sînâ (quoted in Regardie, 1974, p. 90)

Three Modes of Knowing

In the Middle Ages, before the disciplines of theology, philosophy, and psychology had split and gone their separate ways, the metaphor of the *three eyes* frequently was used to describe different modes of knowing. Scholars, contemplatives, and visionaries such as Boethius, the Victorine mystics (Hugh of St. Victor, Richard of St. Victor, Thomas of St. Victor), Bonaventure, and others wrote of the *eye of the flesh* (or of the senses), the *eye of reason* (or of the mind), and the *eye of contemplation* (or of the heart or spirit) (Boethius, 524/1980; Bonaventure, 1259/1953; McGinn, 1995, 1996, 1998). Similar distinctions were made within the Islamic and Sufi traditions by al-Ghazzâlî, Ibn al-'Arabî, and others (Bruns, 1992; Corbin, 1981; Hollenback, 1996; Nasr, 1992; Schneck, 1980; Sells, 1996; Shah, 1964). These three modes of knowing correspond to, respectively, sensation and empirical knowing; thinking and rational knowing; and knowing directly and immediately through feelings, love, compassion, intuition, inspiration, revelation, and becoming or being what is to be known.

Different realms are accessible to the three eyes, and the reality status of what is "seen" through each eye differs from realm to realm. This reminds one of

the different objects of knowing that inhabit Karl Popper's three worlds (of nature, of subjectivity, and

of symbols and culture) (Popper, 1979, 1982; Popper & Eccles, 1983), to which George Zollschan (1989) added a separate and autonomous fourth world of inspiration—a fluid world of unbounded possibilities and no defined limits. A century earlier, William James (1890/1950) had proposed his own version of the many worlds, listing seven of these—sensory qualities, physical things, abstract truths, widespread illusions or prejudices, supernatural and mythological worlds, worlds of individual opinion, and those of sheer madness and vagary. He suggested that "propositions concerning the different worlds are made from 'different points of view'; and . . . each world *whilst it is attended to* is real after its own fashion; only the reality lapses with the attention" (pp. 292-293). As we shall see later, *attention* and *intention* are key factors in determining what we may or may not know or accomplish within the various realms.

Three Modes of Communicating and Influencing

The three eyes is a useful metaphor for how and what we may know or perceive. We can extend the metaphor—to three mouths and three hands—in considering different of modes of communication and influence. We can imagine sets of mouths and hands of the flesh, of the mind, and of the spirit.

We use *the mouth and hands of the flesh* to communicate with and influence ourselves, others, and the physical world in conventional, physical ways. In a health context, this corresponds to the *Era I medicine* described by Larry Dossey (1992, 1993, 1999). Here, health practitioners and clinicians prescribe mechanical, material, or physical interventions for their patients and clients. These take the familiar forms of mechanical adjustments, surgery, medicinal drugs, massage, physical regimens, and behavioral techniques, as well as the less familiar, but increasingly popular, alternative interventions of acupuncture, herbs, aromas, homeopathy, movements, sounds, and so on.

The mouth and hands of the mind correspond to the words, thoughts, feelings, emotions, images, memories, and expectations that we can use to communicate with our internal systems and influence our organisms. This is the realm of what Dossey has called *Era II medicine*, which emphasizes psychosomatic or mind-body interventions. These include most of the imagery approaches treated in this volume, along with related practices of relaxation, autogenics, hypnosis, psychophysiological self-regulation, biofeedback, psychoimmunological techniques, placebo effects, mental rehearsal, some forms of meditation and contemplation, cognitive therapies, and so forth (Dossey, 1992, 1993, 1999).

The mouth and hands of the spirit would correspond to more direct and immediate communications and interactions with other persons, as well as animate and inanimate systems, that distance or barriers might place beyond the reach of the other two sets of mouths and hands. These remote interactions—instances of Dossey's *Era III nonlocal medicine*—include diagnosis at a distance, distant healing, intercessory prayer, telesomatic events, forms of shamanic communication and healing, certain forms of what have come to be known as subtle energy effects, and, perhaps, noncontact therapeutic touch (Dossey, 1992, 1993, 1999). Some of these interesting and important nonlocal interactions may be mediated or facilitated by transpersonal imagery.

Transpersonal Imagery

Jeanne Achterberg, in discussing the role of imagery in healing, distinguished two types of imagery. In *preverbal imagery*, the imagination acts upon one's own physical being to alter cellular, biochemical, and physiological activity. *Transpersonal imagery* "embodies the assumption that information can be transmitted from the consciousness of one person to the physical substrate of others" (Achterberg, 1985, p. 5). She suggested that the validation of transpersonal imagery must be sought in the more qualitative types of observational data gathered by anthropologists, theologians, and medical historians, and in intuitive philosophical speculation. Some of this anecdotal evidence for the existence and efficacy of transpersonal imagery will be presented in a later section of this chapter. We shall see that, in addition to the more naturalistic modes of inquiry that Achterberg suggests, experimental approaches also may be, and have been, used to validate the existence and functions of transpersonal imagery. First, however, it is important to describe in greater detail what is meant by "transpersonal imagery" and, indeed, by "transpersonal" itself.

In its most straightforward sense, transpersonal imagery is imagery that can exist or act *across* persons—i.e., from one person to another. Here, imagery could function as a bridge, connecting the conscious, imaginal content or activity of one person with the conscious or unconscious, physiological or psychological activities or experiences of another person.

There is another meaning of *trans*—as *beyond*—that is of great importance in the relatively young disciplines of transpersonal psychology and transpersonal studies. These fields of study explore experiences and processes that extend beyond the conventionally understood stages of personal development, beyond what is ordinarily understood as the individual ego or personality, beyond one's ordinary conditions of consciousness, and beyond the usual modes of knowing, being, and doing. Transpersonal experiences are those "in which the sense of identity or self extends beyond (trans) the individual or personal to encompass wider aspects of humankind, life, psyche or cosmos"(Walsh & Vaughan, 1993, p. 203). This emphasis does not exclude or invalidate the personal; rather, it places the personal in a larger context, and it recognizes that the transpersonal or the transcendent can be expressed *through* the personal—in still another meaning of *trans*. The emphasis on a beyond or a something more—which can be contrasted with a reductionistic, nothing-but mindset—is congruent with William James' (1902/1985) view that one can become conscious of and in touch with "a More" with which one is "conterminous and continuous" (p. 508) and that such forms of awareness are at the heart of what we today call spiritual experiences.

Although it is common to assign its earliest use to Stanislav Grof and Abraham Maslow in 1967 and 1968, the term *transpersonal* was used on earlier occasions by scholars and psychologists who contributed importantly to topics related to those addressed in this volume on healing images. Among these are William James [1905], Carl Jung [1917], Dane Rudhyar [1930], Eric Neumann [1954], and Ira Progoff [1955] (Boorstein, 1990; Sutich, 1976; Vich, 1988). Additionally, the subjects explored in transpersonal studies have considerable overlap with likely interests of readers of this volume—namely, the limitations of purely verbal, rational, and analytical modes of thought; consciousness and unusual states of consciousness; exceptional human experiences; creativity; our latent human potentials; inner wisdom; wholeness, health, and well-being; experientially-based therapies; and psychospiritual growth, development, and transformation. In addition to its more specific role in the context of transpersonal imagery, the transpersonal in general is relevant to our interests.

The Reality of the Imaginal

In transpersonal experiences, there can be an expansion of one's identity to include much more of the world, and there can be a greater appreciation of one's interconnectedness with all of nature. Some of these apprehensions may be represented in one's imagination and imagery. Are such awarenesses and images momentary illusions or ways of speaking, or is there some sense in which they partake of "reality"?

Certainly, perceptions and images can be illusory and have no correspondence with conventional reality. There is a tendency, especially among Western, Eurocentric thinkers, to attribute a status of unreality to all aspects of the imagination. The usual connotations of words such as *imaginary* or *fantasy* reveal such a mindset. However, there always has been a parallel stream of thought in which the transpersonal and the imaginal are considered *real*—although this reality may be of a different character than that of the physical entities with which we are familiar. A sampling of systems of thought in which a special reality is attributed to the imaginal realm would include shamanic worldviews (Hollenback, 1996; Peters, 1989; Walsh, 1989); the Tantric Buddhism of Tibet (Hollenback, 1996); descriptions of the spiritual and creative imagination in Ibn al-'Arabî and Suhrawardî, within mystical Islam Corbin, 1981; Hollenback, 1996); the Western hermetic and magical traditions (Gray, 1975; Yates, 1964); various mystical traditions (Hollenback, 1996); and the views of Romantic poets such as Blake, Wordsworth, Coleridge, Keats, and Shelley (Bowra, 1961; Burnshaw, 1970). More recent and more familiar are many of the works of Carl Jung, James Hillman's archetypal psychology, Henry Corbin's writings on the imaginal faculty; Jess Hollenback's treatments of the empowered imagination, and Stanislav Grof's researches on the transpersonal realm, as revealed by imagery occurring in nonordinary states of consciousness (Avens, 1980; Corbin, 1972; Grof, 1972, 1973; Hillman, 1976, 1995; Jung, 1965).

Key considerations regarding different forms of imagery and their nature and "powers" have been provided by Henry Corbin (1972, 1981), in his elaboration of Ibn al-'Arabî's description of *himmah*—a kind of transfigured or empowered imaginal process or creative imagination, through which it becomes possible to directly perceive subtle or spiritual realities and to endow products of one's imagination and intention with a form of external reality, capable of being perceived by others—and by Jess Hollenback's (1996) treatments of *enthymesis* or empowered imagination, with properties identical to those of *himmah*. In these systems of thought, ordinary imagination may remain "local" in what it may know and accomplish. However, a special form of concentrated, empowered, transformed, or dynamized imagination can know and act veridically and nonlocally.

The imaginal is emphasized and is active in both the Era II and Era III categories of Dossey's schema. The validity (as an accurate means of knowing) and efficacy (in producing objectively measurable changes) of preverbal imagery have been demonstrated repeatedly in Era II contexts—through immunological, physiological, and behavioral studies of types well-documented in other chapters of this volume. The remainder of this chapter will explore indications of the reality, validity, and efficacy of transpersonal imagery in nonlocal, Era III contexts. The imagery to be discussed may be called "transpersonal" because it acts in a person other than the person who is its "source" (or because the imagery originates in a person other than the person in whom it is acting). *The Reach of the Imaginal: Anecdotal evidence*

Anecdotal accounts of the reach of the imaginal abound. We have received anthropological reports of distant knowing and distant imaginal influences, occurring under field conditions in many cultures and times (Angoff & Barth, 1974; Long, 1977; Van de Castle, 1977). With the increased interest in shamanic studies, today, such reports have increased. Similar phenomena were noted commonly in 19th-century practices of mesmerism and hypnosis, in the forms of *community of sensation* and mental *suggestions at a distance* (Dingwall, 1968; Honorton, 1974, 1977). In health-related contexts, these effects have been

reported in accounts of distant, mental, or spiritual healing and in accounts of remote diagnosis (Benor, 1993; Ehrenwald, 1977; Solfvin, 1984). In psychological situations, counselors and therapists have had experiences in which dreams or intuitive flashes provided specific diagnostic information, and in which preparatory or rehearsal efforts the night before important, upcoming sessions seemed to have already accomplished intended outcomes, distantly and mentally, even before the actual work of the sessions. In contexts of biofeedback and self-regulation training, curious correlations have been noted between the physiological activities and images of several clients practicing at the same time and between a client's physiological responses and the trainer's own reactions, images, and intentions—corresponding patterns that could not be explained in conventional terms. In psychoneuroimmunology investigations, the extreme specificity and rapidity of immunological changes, in response to specific forms of self-generated imagery, suggest the possibility of direct mental influences within one's own body (Braud, 1986). The diagnostic information that imagery can provide about one's internal bodily and psychological conditions also suggests the possibility of direct knowing effects above and beyond conventionally appreciated mechanisms of action (Achterberg, 1985). Use of Imagery in Nonlocal Interventions: Empirical Investigations

The use of imagery in the nonlocal production of health-related outcomes, or of physiological or psychological changes with health-related potentials, has been documented not only in everyday life, field conditions, but also in carefully designed and executed laboratory studies. In this section, I will illustrate this approach by summarizing the methods and findings of an extensive research program in which my colleagues and I have been involved since 1977. This program involves laboratory experiments exploring what is now commonly known as "direct mental interactions with living systems" (DMILS). We have published seven major interim reports and reviews of these experiments (Braud, 1978a, 1990, 1993; Braud & Schlitz, 1983, 1989, 1991; Schlitz & Braud, 1997); interested readers are referred to these reports for specific details and additional information.

Methodological safeguards. In these experiments, one person uses imagery as a vehicle for exerting a direct mental influence upon the objectively measured physiological activity of another person. The influencer and the influencee are situated in separate rooms, at a distance (20 meters or more) from one another, and the experimental protocol is designed to eliminate any conventional informational or energetic interactions between the two persons. Precautions are taken to prevent sensory cueing; these include the use of distant, closed rooms, auditory masking in the influencee's room, and a protocol that prevents auditory cueing. Influence periods are randomly interspersed among non-influence, control periods, and the influencee remains unaware of the precise beginning or sequence of these different types of periods. This design feature eliminates rational inference, expectation, and placebo-like confounds. It also guards against the possibility that the influencer and influencee may simply be responding to common external events or internal rhythms, and it rules out systematic, time-dependent artifacts such as adaptation or habituation to the environment or test conditions. Changes in the physiological activities of the influencee are monitored by electronic equipment, recorded in permanent form (as polygraph records and as digitized records in computer files), and blindscored or computer-scored to prevent recording errors or motivated scoring errors. Results are statistically analyzed to determine the presence and magnitude of effects and to rule out coincidental, chance correspondences as viable explanations of any obtained outcomes. Replications are conducted to assure consistency and reliability.

General procedures. The influencee and influencer are stationed in their separate rooms. The influencee is given general instructions and information about the study and is instrumented appropriately for the monitoring and recording of his or her psychophysiological activity. In most studies, electrodermal activity (EDA) is selected as the dependent variable for its ease of measurement, its sensitive reflection of sympathetic nervous system changes, and its reflection of emotional and psychological changes that are relevant to physical and psychological health and well-being (e.g., the measures can reflect levels of stress, anxiety, anger, or frustration, as well as general physiological or psychological overactivity, underactivity, and deviations from homeostasis or appropriate psychophysiological regulation). EDA is recorded continuously throughout a session, and the fluctuating, AC component of EDA (i.e., skin resistance responses, SRRs, corrected for a shifting skin resistance level, SRL, baseline or DC component), electronically integrated for each influence and noninfluence period, serves as the specific physiological measure. In other studies, other response systems are measured. The influencee is asked to remain seated in a comfortable chair, in a dimly illuminated room, and maintain a moderate level of arousal—i.e., not to become overly excited or relaxed. The influencee is encouraged to let his or her cognitive activity be as freely variable as possible—i.e., not to cling to any particular mental content, but to let one's mentation flow freely, without attempting to control or guide it. The influencee also is asked to remain open to appropriate distant mental influences from the remote influencer. A session is typically 30 minutes or so in duration and consists of many sets of brief, interspersed influence and non-influence periods

Transpersonal imagery components. In the separate influencer's room, an experimenter instructs the influencer regarding the distant mental influence procedures. A random process determines whether a given period is to be a non-

influence, control period or an influence period. These periods typically are 30 – 60 seconds in duration. During a non-influence period, the influencer rests and attempts not to think about the influencee and to think about matters that are not related to the experiment. During influence periods, the influencer's aim is to either activate or calm the remotely situated influencee using appropriate mental imagery and intentions. If the protocol indicates an activation aim for a given period, the influencer attempts to activate the influencee using activating imagery and intentions. Three types of activation imagery strategies are used by the influencer.

1. The influencer uses activating mental imagery and self-regulation to produce a state of sympathetic autonomic arousal or activation in oneself, while intending and imagining the distant influencee's body mirroring these changes and also becoming activated. Imagery with exciting, energetic, or emotion-arousing content could be used—e.g., imagining that one is exercising vigorously, listening to energizing music, visualizing scary circumstances, imagining that one is laughing vigorously and is extremely joyful, imagining that one's own physiological activity is increasing (increased breathing, heart rate, blood pressure, muscle tension, etc.).

2. The influencer imagines the influencee encountering a situation or circumstance that, if actually encountered, would produce physiological activation or arousal. For example, one might imagine the influencee vigorously exercising, or encountering a scary situation, or engaging in some energetic activity. Along with this, one imagines and visualizes increases in the actual physiological activity that is being measured.

3. The influencer watches the feedback indicator (i.e., the polygraph record) and imagines and visualizes that indicator describing much activity (frequent and large deflections). Alternatively, one simply closes one's eyes and

visualizes a very active polygraph record, filled with numerous, large-amplitude deflections, indicative of heightened influencee activity.

Any or any combination of these strategies can be used. Additionally, the influencer may try a given imagery strategy, observe its outcome (by means of the ever-available polygraph feedback record), stay with strategies that seem effective, or abandon seemingly ineffective strategies to shift to more effective ones. The influencer can use a trial and error approach to identify and tailor the most effective imagery strategies for oneself and one's influencee.

If the protocol indicates a calming aim for a given period, the influencer attempts to calm the influencee using calming imagery and intentions. Again, three types of imagery strategies are possible. Each of these is a complement of one mentioned above.

1. The influencer uses calming mental imagery and self-regulation to produce a state of sympathetic autonomic calmness, relaxation, and quietude in oneself, while intending and imagining the distant influencee's body mirroring these changes and also becoming very calm and relaxed. Imagery with relaxing, calming, tranquil content could be used—e.g., imagining that one is relaxing in a favorite location, visualizing oneself reclining comfortably and about to fall asleep, imagining soothing music, imagining extremely peaceful and tranquil circumstances, imagining that one's own physiological activity is decreasing (decreased breathing, heart rate, blood pressure, muscle tension, etc.).

2. The influencer imagines the influencee encountering a situation or circumstance that, if actually encountered, would produce physiological deactivation, relaxation, and hypoarousal. For example, one might imagine the influencee at rest, relaxing, encountering a calming situation, or being present in a soothing, tranquil, pastoral setting. Along with this, one imagines and visualizes decrements in the actual physiological activity that is being measured.

3. The influencer watches the feedback indicator (i.e., the polygraph record) and imagines and visualizes that indicator describing greatly reduced (few and small deflections). Alternatively, one simply closes one's eyes and visualizes a very inactive polygraph record, having infrequent, small-amplitude deflections, indicative of reduced influencee activity.

In addition to these specific, process-oriented images, the influencer may engage in *goal-oriented imagery* of a more general and overarching sort. This would involve imaging and visualizing (and intending for) events that would be associated with a successful experiment outcome. Such events would include imagining the joy of the research personnel as they celebrate a positive outcome for a session or for the entire experiment, imagining a computer printing out significant findings, imagining reading a published report of positive findings of this session or this experiment, imagining how the outcome of the present session may contribute to the realization of some useful, health-related practical application of these principles, and so on.

Results summary. Through the years, we have conducted 15 experiments in which "transpersonal imagery" and intentions were used in attempts to influence the ongoing EDA of a distant person. These studies provided statistically significant and reliable evidence for the existence of nonlocal, direct mental influences. The 15-study series yielded a combined, Stouffer *z* of 4.08, an associated *p* value of .000023, and a mean effect size *d* of +.29 [52]. The EDA of influencees increased during periods in which remotely situated influencers used activating imagery, and decreased during periods in which calming, relaxing imagery was used, compared to appropriate control conditions. These experiments involved 323 separate sessions conducted with 271 different influencees, 62 influencers, and 4 experimenters. Subsequent to our 1989 report, four replication studies, involving a total of 75 additional experimental sessions, were attempted elsewhere. Updating our original work, in 1997, to include these replications yielded an overall z = 4.82, p = .0000007, and mean effect size r = +.25 [56].

We conducted additional experiments in which biological activities other than EDA were influenced, mentally and at a distance. The new response systems included: subtle muscular movements, muscular tremor, blood pressure, the spatial orientation of fish, the locomotor activity of small mammals, and the rate of hemolysis of human red blood cells, in vitro. Positive results were obtained for all of these new living systems, with the exception of muscular tremor. In 1991, we published a summary (meta-analysis) of all of our DMILS studies. The research program included 37 experiments, 655 sessions, 449 different influencees, 153 different influencers, and 12 different experimenters. The overall results, for all influenced living systems combined, yielded a combined (Stouffer) z = 7.72, $p = 2.58 \times 10^{-14}$, and a mean effect size r= +.33(Braud & Schlitz, 1991).

In each of these studies, an influencer imagined and visualized the desired outcome activities occurring in the distant living "target systems." In the hemolysis study, for example, human red blood cells were osmotically-stressed by placing them in hypotonic saline solutions in test tubes in a distant room. The rate of cell destruction (hemolysis) was objectively monitored by a spectrophotometer interfaced with a computer. For influence periods (half of the set of hemolysis tubes), the remote influencers attempted to mentally "protect" the red blood cells by visualizing the cells with intact, resilient membranes that resisted the osmotic stress, rather than bursting. Color slides of healthy, intact red blood cells were available to the influencers, should they choose to use this sensory aid to enhance their protective mental imagery. For non-influence, control periods (half of the set of hemolysis tubes), the influencers thought about

matters unrelated to the experiment and did not entertain cell-related imagery. The experimenter who measured the hemolysis rates was blind as to whether or not remote influences were being attempted during the measurements. Hemolysis rate was significantly less during the periods of remote protective imagery than during control periods. There was a tendency, albeit a nonsignificant one, for greater remote hemolysis protection for one's own red blood cells than for another person's red blood cells (Braud, 1990).

In all of the studies mentioned above, imagery was used along with deliberate intentions for the distant, biological activities to change in particular ways. Following these studies, we conducted variations on these studies in which imagery was used in a different way, and in which directional intention was replaced by a "purer" form of attention. These studies also involved recording of EDA, but EDA now was used as an "unconscious" measure of the detection of remote staring. A person was stationed in a distant room, as before, and that person's ongoing, spontaneous EDA was monitored. A closed-circuit television camera was focused upon the person, allowing that person's visual image to be displayed on a television monitor in a distant room. On a random schedule, the observer either watched or did not watch the television image of the observee. During the watching periods, the observer attempted to deploy attention as fully as possible upon the person whose image was being viewed. During nonwatching period, the observer did not view the image and attempted to think of things other than the experiment. Of course, the observees did not know whether they were being remotely

viewed (stared at) or not, at any given moment. We conducted four experiments of this type in our own laboratory, and, subsequently, seven replication experiments were conducted elsewhere. In 1997, we reported a summary (metaanalysis) of all 11 of these experiments on electrodermal detection of remote staring. Overall, the 11 experiments involved 241 sessions and yielded a combined (Stouffer) z = 3.87, p = .000054, and an average effect size r = +.25 (Schlitz & Braud, 1997).

We have extended this work by conducting experiments in which persons used imagery and intention in attempts to facilitate the mental or psychological, rather than the physiological, activities of a distant person. In one study, we measured the self-reported vividness of mental imagery occurring during what might be described as a guided imagination exercise, using the Creative Imagination Scale (CIS) developed by Sheryl Wilson and T. X. Barber. For half of these persons, their imagery intensity was assessed under ordinary conditions. For the other half, imagery was assessed while a distant "helper" was generating similar imagery (augmented by sensory aids) and intending to assist the first person's imagery, mentally and at a distance. The vividness and realism of imagery was significantly greater when the imager was being mentally and distantly assisted by the similar, concurrent imagery of another person (Braud & Jackson, 1983). The imagers were, of course, "blind" as to whether or not this remote imagery aid was in effect. This study can be understood as one in which nonlocal, transpersonal imagery was used to facilitate local, preverbal imagery.

Most recently, we have found that similar remote, mental assistance can be effective in helping persons concentrate and focus their attention on a centering object in a meditation-like setting. Fewer distractions to concentration were reported by persons who were being mentally assisted by the concurrent, focused attention of another, distant person (Braud, Shafer, McNeill, & Guerra, 1995).

Influences "across time." In the studies described above, process-oriented and goal-oriented imagery and intentions acted nonlocally with respect to space—a person's direct mental influence was monitored in a distant living

system. We have also conducted sessions in which the to-be-influenced living system was distant in *time*. The procedures and analysis methods for these temporally nonlocal experiments are similar to those of the concurrent influence studies, with the important exception that the activity of the living "target" system is monitored and recorded *before* the influence attempts are made. Any systematic results in such experiments must involve time-displaced influences. Although such outcomes would appear impossible, given our conventional apprehensions of time and of causality, there are, nonetheless, both theoretical and empirical supports for such outcomes. The issues and studies in this area are too complex to be treated in this chapter, and so, the reader is referred to a recently published paper that describes these studies in detail (Braud, 1999, 2000). For present purposes, I will simply indicate that there exists both anecdotal and laboratory evidence that supports the possibility of apparently "backward-acting," time-displaced, direct mental influences of living systems. Our imaginal processes appear to be capable of exerting objectively measurable influences not only upon present, distant biological and physical systems, but also upon the past and future activities of these systems.

Size of effect and replicability. Probability values and effect sizes were reported above. Another way of estimating the strength of these effects is to calculate the actual percentage of events or activities that change, in association with these direct mental interventions. In various reported aggregations of these studies, the average influence has ranged from 4% or 8% in certain electrodermal influence studies, to 80%, 90%—and even 100%—changes in individual sessions. In special experiments, remote, direct mental influence effects on EDA did not differ appreciably from the size of deliberate, selfregulation effects on these same activities (Braud & Schlitz, 1983). Expressed in either probability, effect size, or percent change terms, these effects are far from negligible. While it is true that these effects do not always occur or replicate, their reproduction records are far from unacceptable, can compare favorably with the replication records of other behavioral or biomedical findings, and are not atypical of events that are newly being explored and about which the essential factors necessary for their production are not yet fully known or understood. *Role of Imagery in Nonlocal Knowing: Empirical Investigations*

The studies summarized above explored processes that could be considered models, analogs, or scaled-down versions of nonlocal imaginal *interventions* that may occur in everyday life. In addition to these, there have been numerous laboratory studies of processes equivalent to nonlocal imaginal *diagnosis*. In these studies, imagery can serve as a vehicle for veridical perception or knowledge of physical, biological, or psychological events that distance and other barriers have placed beyond the reach of the conventional senses. There are extensive empirical studies of remote knowing through imagery. Because these are so numerous, and in order not to duplicate materials presented in Belleruth Naparstek's chapter, I will limit my discussion to some of my own research and theorizing in this area.

Our access to information or circumstances beyond the reach of our conventional senses can be revealed in many ways. This "knowing" can be expressed in clear, information-rich thoughts—as when the name of an illness or condition comes to mind. Equally unambiguous are specific bodily changes or conditions that are felt or exhibited, and that correspond clearly and closely to those of a distant person; these could be described as empathic or telesomatic indicators (Dossey, 1993; Schwarz, 1967). Other expressions can take the form of behavioral, perceptual, or memory-related changes that betray a knowing that has not yet reached our conscious awareness; these are the psi-mediated instrumental responses (PMIR)—e.g., finding ourselves at the right place at the

right time, and thereby avoiding an accident or gaining access to needed information—that have been well-described and studied by Rex Stanford (1974a, 1974b). Knowledge of events beyond sensory range also can be indicated by subtle physiological changes, of which we may be unaware; by a diffuse awareness too vague to be articulated; or by a direct experience of "knowing" that also is difficult or impossible to put into words. Perhaps most commonly, our knowledge of distant or otherwise inaccessible events is expressed by imagery that bears some resemblance to the distant event or circumstance.

Methods and findings. In order to qualify imagery as transpersonal—in the senses we have been using in this chapter—it is necessary to distinguish images that carry information about distant circumstances or events from other forms of imagery. Some of the latter include imagery that might arise naturally regardless of distant events, images that might be triggered by some common, conventional event that influences both the distant event and the person generating the imagery, and images that may correspond to the distant, to-be-known events only through chance or coincidence. Our experimental designs allow us to make these distinctions through the use of sensory shielding, truly random selection of the events to be known, blind evaluation of imagery correspondences with the true target event versus randomly selected non-target "decoys," and statistical analyses that compare obtained results with theoretically or empirically derived baselines.

We have conducted experiments in which spontaneously arising imagery, in suitably prepared individuals, could be shown to correspond to distant, randomly-selected target events. These events could be randomly selected pictures or objects, or their representations in the thoughts, images, and sensations of other persons. In some cases, the research participants were in ordinary states of consciousness (in remote viewing studies); in other cases, the participants were studied under the more imagery-rich conditions provided by relaxation, autogenic, sensory restriction (*Ganzfeld*), or hypnotic induction procedures, or during guided imagery, "waking dream," or nocturnal dream conditions (1978b, 1981). In these, and in many related studies, transpersonal imagery can be demonstrated to have a veridical, *noetic* character—allowing accurate access to information temporarily unavailable to the conventional senses.

In principle, the focus of this imagery could be "targeted" to physical or psychological conditions of distant persons, for purposes of remote or augmented diagnosis. For example, in one test session, a participant was asked to describe the health condition of an absent "target person." The participant described a young girl with blonde hair in ringlets, a metal brace on one of her legs, her heart "blown up, like a big red balloon," and the unusual circumstance of her heart displaced to the "wrong" side of the body. Each of these images corresponded perfectly to the conditions of the target person. Such accurate correspondences of "local" imagery with remote realities have been observed in countless formal and informal experiments.

Modulating Factors

Although considerable uncertainty and mystery continue to exist with respect to the nature of these transpersonal imagery effects, and the conditions that influence them, we are able to make certain generalizations about the factors that seem to facilitate or impede their occurrence. These empirical generalizations are based upon our own research, conducted over a span of 30 years, and upon a huge database of similar research findings reported by others (Braud, 1991; Broughton, 1991; Edge, Morris, Rush, & Palmer, 1986; Krippner, 1977-1982, 1984-1994; Kurtz, 1985; Radin, 1997; Wolman, 1977).

Physical facilitators and inhibitors. Transpersonal imagery effects, in both their influential/intervention and noetic/diagnostic forms, have not been shown to be influenced importantly by physical factors. Factors such a distance, time, physical barriers, and the physical nature of the events to be known or influenced do not appear to play critical roles in transpersonal imagery outcomes. One factor that does seem important is the amount of free variability that is inherent in the system to be influenced. Random or labile physical systems that are relatively free from internal or external constraints or structure seem most amenable to being influenced through transpersonal imagery.

Three additional, possible physical correlates have been suggested. A tantalizing one, in terms of potential medical applications, is that water that has been "treated" through transpersonal imagery or related intention techniques may be physically altered. Such treated water appears to have decreased hydrogen bonding, compared to untreated, control water (Schwartz, De Mattei, Brame, & Spottiswoode, 1990). To the extent that changes in hydrogen bonding characterizes either disease conditions or therapeutic agents, this possible mode of action of nonlocal influence may provide a useful entry point for health applications.

Two other physical factors have recently been found to correlate with the likelihood or accuracy of nonlocal knowing, and these are, indeed, curious ones. One is the degree of activity in the earth's geomagnetic field. A decrease in this ambient activity (equivalent to a reduction in the amount of "noise" in the earth's electromagnetic "atmosphere") is associated with increased effectiveness of nonlocal knowing, both in the laboratory and in spontaneous occurrences in everyday life (Persinger, 1989; Spottiswoode, 1990). The other recently identified physical variable is the local sidereal time at the site at which a nonlocal knowing experiment is being conducted (Spottiswoode, 1997). It remains to be seen how

well these unusual findings hold up to future replications and how these curious relationships might be understood.

Physiological facilitators and inhibitors. Although the nonlocal knowing effects we have been considering probably can occur in any physiological state, they appear to occur most readily or most accurately—or, at least, are most readily *noticed* or *detected*—under conditions of reduced muscular activity, reduced sympathetic autonomic activation, relatively reduced arousal, and a freeing of the brain (of the knower) from heavy information-processing demands (Braud, 1981, 1991). There also are indications—not as definitive as the foregoing—that heightened sympathetic nervous system arousal (in the influencer) may be associated with the production of some forms of nonlocal influence effects (Braud, 1985).

Complementary principles may apply to what is to be known or what is to be influenced. For example, heightened physiological arousal (which could be associated with increased *need*) in one person may make that person or that person's circumstances more discernable to others via the latter's nonlocal knowing. A person whose internal systems are relatively quiet and relatively free from internal or external structure or energetic- or information-handling demands may be more susceptible to nonlocal influence than would overly structured, constrained, or burdened physiological systems. This is an analog of the physical indeterminacy, randomness, or lability mentioned, above, as a physical facilitator.

Psychological facilitators and inhibitors. It is in the psychological area that we have learned most about facilitating and inhibiting factors. Many of the psychological facilitators of transpersonal imagery effects are closely related to, or may be variations of, faith, hope, and love, and many of the inhibitors are related to the opposites of these three virtues. Space permits only a brief mentioning of these factors here; more extended treatments are available elsewhere (Braud, 1991; Schmeidler, 1988; Wolman, 1977). Psychological facilitators of transpersonal imagery effects include: attitudes of belief, confidence, trust, hope, expectation of a successful outcome, the presence of strong motives and incentives, need, positive dispositions, caring, and a reduction in egocentric motives, strivings, or involvements. Psychological inhibitors include: attitudes of disbelief, distrust, doubt, suspicion, absent or negative expectations of success, increased egocentric motivation or too-effortful striving, and the absence of sufficient need, motivation, or purpose for the task at hand.

Additional psychological facilitators include: psychological comfort and absence of stress; freedom from distractions or "psychological noise"; conditions of relaxation and quietude; ability to direct attention inwardly and access inner processes; ability to control, deploy, and concentrate attention, generally; ability to generate and to detect imagery; ability to reduce "left-hemispheric," analytical thought and to increase "right-hemispheric," synthetic, and intuitive modes of mentation; ability to engage in a form of volition and intention that is more "passive" and less effortful (this is akin to wishing, rather than willing); freedom from excessive cognitive structure or information-handling demands; the presence of openness; and the absence of defensiveness (Braud, 1975; Stanford, 1977). Additional psychological inhibitors would include the absence or opposites of the facilitators just listed.

Also important to the occurrence of these transpersonal imagery effects is the preparedness, adequateness, and predisposition of the participant. The most effective participant would be one who is familiar with the imaginal world, skilled in negotiating this realm, and skilled in the use of creative imagination. Training in active imagination, psychophysiological self-regulation, concentration, meditation, and related psychospiritual practices may be useful preparations for engaging in transpersonal imagery exercises and nonlocal knowing and influence attempts.

Implications and Potential Applications

The most obvious health-related implications and potential practical applications of nonlocal knowing and influence mediated by transpersonal imagery are in the areas of diagnosis and intervention in instances of physical and psychological health disturbances. Just as *preverbal* imagery may serve these functions within a given individual—as a large extant literature and many of the chapters of this volume clearly indicate—so, too, may images provide diagnostic information and serve an influential, intervention function with respect to *other* individuals. These complementary functions may already be present, in various and unknown degrees, even in the more local, personal uses of imagery. In learning more about, and possibly influencing, one's own bodily and psychological circumstances, imagery may act *directly*, as well as through its conventionally understood mediating channels of neurological and immunological secretions and processes (Braud, 1986). The direct action of imagery may even be present in the familiar processes of volitional action, memory, perception, and so on.

A similar mix of local and nonlocal effects may be present in any and all diagnostic and healing interventions provided by health practitioners, and may, indeed, be an important component of the mysterious art of healing. The nonlocal working of imagery, in this fashion, may be a crucial aspect of such common phenomena as accurate and useful intuitions about a patient or client, the efficacy of therapeutic touch and similar techniques, quick and accurate diagnoses by physicians or therapists, physicians' bedside manners, the ways in which voiced (or unvoiced) prognoses fulfill themselves, effective nonspecific influences of medical or therapeutic interactions, spontaneous remissions, and placebo effects. If this is the case, then we could make greater use of our knowledge of the facilitators and inhibitors of transpersonal imagery in order to amplify any of the processes just mentioned, for the increased benefits of our patients, our clients, and ourselves.

The experiments summarized earlier in this chapter, along with many similar ones of other investigators, help us disentangle nonlocal from local aspects, and they provide indications of what is possible when the nonlocal aspect is acting alone. These experiments already have indicated that, even when acting in this "purer" form, the active and creative imagination—in its modes of imagery and intention—is able to provide accurate knowledge about, and influence, physical, physiological, and psychological circumstances that constitute or are related to health issues. For example, in our own work, we have found evidence for direct mental influences upon autonomic nervous system activity of distant persons, and upon rate of hemolysis of human red blood cells. In one study, we found that these remote mental influences were greater for persons who had a greater "need" to be influenced—i.e., for persons with overly active autonomic activity (Braud & Schlitz, 1983). In other experiments, persons were able to remotely help others focus their attention, helping them calm and focus their wandering thoughts—an outcome that could have well-being implications in the psychological realm. Although these are basic research studies, conducted in the laboratory, already they involve actual forms of healing. Other forms of direct, imagery-mediated, remote healing effects or healing analog effects have been well-documented elsewhere (Benor, 1993; Solvfin, 1984). So, we have both direct evidence of remote healing, as well as many more instances of influences that can indicate this possibility more indirectly and in an "in principle" form. Similar evidence—some direct, some indirect—exists for the reality of the diagnostic modes of these effects (Shealy & Myss, 1988).

The important next steps in these areas are to explore more thoroughly what may or may not be accomplished through transpersonal imagery. What are the ranges and limits of such effects? What else can we learn about the factors that make these effects more or less likely? Surely, there are spectra of magnitudes of effect, loci of action, and purposes for which these knowings and influences may occur. It would be unwise to overestimate what might be accomplished through these means, and it would be equally unwise to underestimate the power of imaginal, adjunctive techniques. Even small remote mental influences upon the more labile, more susceptible earliest stages or seed moments of illnesses or of health—in both physical and psychological areas—can become amplified and blossom into much larger, later outcomes with definite health relevance. Research in the area of chaos studies has shown that the later, very large-scale activities of certain animate and inanimate systems can be extraordinarily sensitive to very slight changes in initial conditions (Briggs & Peat, 1989; Gleick, 1987). The imaginal processes treated in this chapter may be capable of exerting comparably large, later effects through their initial, subtle influences in critical stages of the developmental processes of symptoms and syndromes—both physiological and psychological, both harmful and healthful. Specific examples of actual and hypothetical health applications, especially in the context of time-displaced, direct mental influences, have been described elsewhere (Braud, 2000).

Conventional physical and psychological techniques, including thoughts and preverbal forms of imagery, may be applied "locally"—i.e., within oneself—for harmful, as well as for healthful, purposes. The field of psychosomatic medicine is devoted, largely, to learning about and alleviating ways in which our thoughts, feelings, and images can foster illness. The incidence of iatrogenic illnesses and disorders illustrates how conventional techniques can be misused, when applied to others. Like conventional Era I and Era II techniques, it is likely that Era III nonlocal techniques might also be applied in ways that could be harmful, as well as healthful, to others. In considering potential practical applications of imagery-mediated direct mental influences, it would be unwise for us to ignore possible "negative" applications—be these intentional or unintentional. A survey of a range of actual and potential negative nonlocal influences has been provided by Larry Dossey (1997); it would be good for practitioners to be aware of these.

Perhaps the most important implication of this transpersonal imagery work is what might be termed dyadic co-doing. In any dyadic situation in which one person is helping another person change some aspect of mind or body-e.g., teacher-student, physician-patient, therapist-client, trainer-trainee dyads-if the "leader" in the dyad actively produces the desired physical and psychological changes in herself or himself, using active, creative imagination in the form of imagery and intentions, filling oneself in actuality and in imagination, with these desired gualities may directly facilitate similar desired changes in the "follower" in the dyad. These intention- and imagery-produced and mirrored changes may occur in addition to those accomplished in a more mediated fashion through teachings, instructions, exercises, or other conventional interventions. One may actualize a beneficial change or emphasis in another by realizing and embodying such a change in oneself, with the help of imagery, intention, and other forms of the active and creative imagination. Such dyadic co-doing effects are, undoubtedly, already occurring, spontaneously, in many dyadic situations in which the requisite facilitating conditions are present. These effects might be enhanced through deliberate and focused attention and intention.

At a more conceptual, theoretical level, the findings reviewed in this paper have important implications for our understanding of the imagination. In unbroken traditions, going back to early Greek and Persian thinkers, there have been treatments of the imaginal or the imagination as a special and powerful human faculty with noetic and creative properties of its own (Avens, 1980; Corbin, 1972). In these traditions, the active and creative imagination has been viewed as a bridge or intermediary between the sensory realm (of the body) and the intellectual realm (of the mind), between the conscious and the unconscious, between mind and matter, and between possibility and actuality. The imagery effects noted in this chapter are consistent with such a view. Increasing interest and recent developments in the areas of transpersonal psychology, consciousness studies, the efficacy of prayer, the role of spirituality in health, alternative medical and psychological interventions, and the new positive psychology movement within the American Psychological Association (Seligman & Csikszentmihalyi, 2000) all promise to cast new light on the nature and power of the imagination and of the imaginal realm.

The perceptive reader probably noticed a drift from the use of *imagery*, earlier in this chapter, to *imaginal* or *imagination* in later parts of the chapter. It is never clear whether the effects attributed to imagery are really due to the imagery, per se, or to the specific or generalized intentions that lie behind the images. Perhaps it is intention and focused attention that truly are responsible for both local and nonlocal "imagery" effects. Perhaps images are simply clothed intentions—specific intentions or focused attentions that have been dramatized or personified in imagery forms. *Imaginal* and *imagination* are more generic and can contain both images and the intentions and other mental processes that lie behind or are associated with imagery. A shift from imagery to imagination may serve us well as we continue to explore this realm wherein different possibilities emerge.

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