

## Psi-Favorable Conditions

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Under which circumstances is psychic functioning most and least likely to occur? The identification of psi-favorable and psi-antagonistic conditions can allow greater practical applications of psi and also increased understanding of its nature and underlying processes. An adequate account of psi-favorable conditions would be an inclusive, systemic one that would address an extensive range of influencing factors. These would include not only the characteristics of the individuals who are experiencing psi, but also environmental, familial, societal, cultural, planetary, and extraplanetary influences. This chapter will honor the systems approach to some degree, but will emphasize the psychological (and related physiological) characteristics of the individual psi experiencer.

If a given factor is identified as psi-favorable, that factor's opposite, complement, or absence might be considered to be psi-antagonistic. This may be so in many, but not all, cases. The contraries or absences of psi-conducive conditions might be neutral with respect to psi or, paradoxically, might even, themselves, be psi favorable. Possible examples of the latter would be cases in which an extreme opposite might result in a compensatory overreaction (or enantiotropic conversion) in the direction of the

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favorable factor—e.g., extreme over-arousal or extreme stimulus bombardment might result in physiological or perceptual shut-downs that could mimic conditions of under-arousal and stimulus deprivation.

*Important, But Often Overlooked, Distinctions*

Before surveying factors that appear to facilitate psi, it is important to make explicit a number of distinctions that typically are neglected in such endeavors. One distinction has to do with whether a given variable might facilitate the psi process itself or its direction (i.e., its tendency to hit or miss the target in question). In this chapter, *psi-favorable* usually means conducive to psi hitting.

A more important distinction is that between the conscious awareness and expression of psi, on the one hand, and its very occurrence or unconscious manifestation, on the other. Because a factor does not favor a clear subjective experience (and, hence, readily reportable instance) of psi, this does not mean that the same factor is incapable of supporting or facilitating psi interactions that are below a threshold of consciousness (and, hence, of reportability). Important instances of the latter include psi-mediated instrumental reactions (PMIR) that can be adaptive, but of which we are unaware, as well as target-appropriate unconscious physiological reactions. Factors necessary for the conscious registration and expression of a psi event may not be necessary for its occurrence or detection. Most of the factors addressed in this chapter are those that appear to facilitate the conscious registration and expression of psi.

Another possibly important distinction is that between what might be called *receptive psi* (i.e., extrasensory perception [ESP] or, a term I prefer: *direct knowing*) and what might be called *active psi* (i.e., psychokinesis [PK] or, a term I prefer: *direct mental*

*influence*). Factors that facilitate one of these two forms of psi may or may not similarly facilitate the other; hence, overgeneralization of the efficacy of various facilitators may be unwise.

Finally, it is important to distinguish favorability for *psi*, per se, from favorability for a wider class of processes. This distinction is one of selectivity or, perhaps, sensitivity. It may be that a factor found to be psi-favorable also is favorable to a very wide range of experiences that do not involve psi or favorable to a larger class of events of which psi is but one member. To learn whether a factor selectively enhances psi—as opposed to serving as a nonspecific enhancer—it would, of course, be necessary to observe what happens to a range of other processes or experiences when the facilitator is introduced. The monitoring of multiple measures, in such a fashion, rarely occurs in psi investigations. For example, a psychological intervention (such as the production of a relaxed state) may indeed facilitate the conscious experiencing and accurate reporting of psi events; however, the intervention may also facilitate a wide range of thoughts, images, feelings, and other reactions that have nothing to do with psi. This *selectivity* distinction may not be important if one's aim is a practical one of increasing the yield of psi. The distinction is important, however, for conceptual, theoretical inquiries into the nature of psi and its possible underlying mechanisms.

#### *Favorable Physical Factors*

Investigators have found few physical factors that appear to influence psi directly. Psi's notorious disregard for the usual constraints of space, time, shielding and other physical characteristics has often been mentioned. Recently, however, there has been excitement about five physical variables that may, after all, be importantly implicated in

psi interactions. There are indications that the momentary *geomagnetic field* (the earth's electromagnetic atmosphere), the *local sidereal time* (the time at which a particular part of the sky is directly overhead), the *gradient of Shannon entropy* (changes in level of information content) inherent in a target (for receptive psi [ESP] tasks), the quality of *randomness* of a target (for active psi [PK] tasks), and, possibly, other *target features* (i.e., numbers, letters, and words vs. colors, shapes, and textures, for receptive psi) may influence psi performance (see Braud, 1990-1991; May, Spottiswoode, & James, 1994; Persinger, 1985; Spottiswoode, 1997a, 1997b). It remains to be seen if these intriguing findings can be confirmed in additional, careful research studies by other investigators (in an effort to assess possible experimenter effects), if the results are directly related to these physical factors or are mediated or confounded by the latter's influences upon physiological or psychological conditions of the research participants, or if—in the case of randomness—physical or psychological (perceived) randomness is most important.

#### *Favorable Physiological Factors*

There exists substantial literature on possible brain-related accompaniments of psi functioning. In this work, techniques of electroencephalography (EEG), event-related potentials (ERP), and—more recently—single-photon emission computerized tomography (SPECT) have been used. A review of these studies is beyond the scope of this chapter, and the interested reader is directed to representative papers of this genre, including Alexander, Persinger, Roll, and Webster (1998); Don, McDonough, and Warren (1998); McDonough, Don, and Warren (2000). Similarly, researchers have made efforts to identify autonomic, hormonal, and other physiological correlates of psi (e.g., Assailly, 1963, 1967; Braud, 1981b; Tart, 1963; Wilson, 1962). An extensive review of

such studies also is beyond the scope of this chapter, and physiological findings will be mentioned, in the sections that follow, only to the extent that these may be related to the psychological factors that are the chief focus of this chapter.

*Favorable Psychological Factors: An Organizational Schema*

In addressing psi-conducive psychological conditions, I will make use of an organizational schema proposed by Allan Combs (1996). Combs' schema includes three hierarchical levels: There are *states of mind* (such as sadness, joy, depression, enthusiasm, doubt, determination, and other moods and dispositions) that are relatively transient, and their defining content is important and narrow. These are supported by a second level: *states of consciousness*. These consciousness states are larger and consist of unique configurations of sets of processes of thought, imagery, feelings, memories, world perceptions, and self-perceptions. Examples include the well-recognized ordinary and altered states that have been discussed extensively by Charles Tart (1969, 1975), Stanislav Grof (1975, 1985, 1988; Grof & Bennett, 1992), and others—ordinary waking consciousness, nondream sleep, dream sleep, meditative states, shamanic trances, hypnosis, and so on. Combs likens these states of consciousness to the so-called *attractors* of chaos theory. The third, and broadest, level is that of *structures of consciousness*. These are “entire overarching regimes that determine how the world is experienced and understood” (Combs, 1996, p. 263). These are the more global forms of consciousness—the *archaic, magical, mythical, mental, and integral* patterns of thinking—identified by Jean Gebser (1949/1986). In these different structures of consciousness—which, according to Gebser, developed in successive historical periods, but which continue to be active in us, today, in various ways and at various

times—different mental processes are possible, impossible, and differently valued. These five consciousness structures are more inclusive and more enduring than are states of consciousness and states of mind, and they may be likened to worldviews or mindsets (or even paradigms of thought).

### *Structures of Consciousness*

It would seem that some of the structures of consciousness are more favorable to psi than are others. For example, psi would have a more comfortable home in the magical structure (in which magical thinking is prominent) than in the mental structure (with its privileging of rational consciousness). Anthropological findings regarding psi prevalence in peoples and periods in which the magical structure is dominant are consistent with such a view (Angoff & Barth, 1974; Huxley, 1967; Long, 1977; Van de Castle, 1977). Additionally, Rex Stanford (1987) has indicated how powerful cognitive constraints—characteristic of Gebser's mental structure of consciousness—can interfere with psychic functioning.

Gebser hypothesized that the five identified consciousness structures emerged successively during human history. To the degree that ontogeny recapitulates phylogeny, stages similar to these hypothesized evolutionary stages of human consciousness could also occur, progressively, during the course of *individual* development, and some of these could be more hospitable to psi than others. For example, psi might be more prevalent during the developmental stages of infancy and early childhood than during adolescence or early and middle adulthood. Drewes (1997) provides a review of empirical evidence bearing on the issue of psi in childhood.

Structures of consciousness are relatively extensive and persistent. On the basis of these criteria, a number of possible psi-influencing conditions could be included among, or viewed as closely related to, the structures of consciousness. These conditions include the various developmental stages that extend beyond those conventionally considered; these include pre- and perinatal stages, stages of advanced psychospiritual development, and stages near death (see, e.g., Grof, 1975, 1985, 1988; Grof & Bennett, 1992; Sri Aurobindo Ghose, 1970; Wade, 1996; Wilber, 1980). The transitional or liminal conditions that occur betwixt and between more stable, identity-conferring stages also are relevant; psi and other exceptional human experiences may be especially likely under these conditions of liminality or anti-structure (see, e.g., Hansen, 2001; McMahon, 1998). Relatively enduring and pervasive conditions that typically are considered as instances of pathology, personality, and worldview also could qualify as special structures of consciousness, and such conditions have been found to differ in the degree to which they can foster or inhibit psi manifestations. Treatments of these vast areas are, of course, beyond the scope of this chapter.

### *States of Consciousness*

Researchers have identified a number of states of consciousness that appear to be psi-favorable. It is important that we qualify that statement to indicate that by *psi-favorable*, here, we mean favorable to the conscious experience and reporting of accurate (i.e., in the direction of “hitting”) forms of psi. It will be recognized, of course, that the conditions reviewed in this section have both psychological and physiological aspects; it is not yet clear whether the former, the latter, or both are responsible for any enhanced psi that might be observed under such conditions.

*Muscular relaxation.* Relatively early investigations revealed that relaxation seemed to be a reliable characteristic of the percipient in a majority of cases of spontaneous psi (Stevenson, 1970). Reference to the importance of relaxation can be found in the writings of and about nearly all gifted sensitives or psychics (persons who can demonstrate psi repeated and with great accuracy). Rhea White (1964) described the critical role of deep physical and mental relaxation, reduction of strain, increase of passivity, and stillness of mind in the successful performance of research participants in laboratory studies. The nocturnal dream state, which investigators at the Maimonides Dream Laboratory (Ullman & Krippner, 1970) and elsewhere have found to be quite conducive to psi (see below), is characterized by extremely low muscle tension. Additionally, Gerber and Schmeidler (1957), in an ESP study involving hospitalized patients, obtained significant ESP scores from their relaxed and acceptant patients, but not from nonrelaxed, nonacceptant patients.

In the early 1970s we initiated a series of laboratory studies in which we explored, directly and systematically, the role of muscular relaxation in psi performance. In these studies, we used modified versions of Edmund Jacobson's (1929) progressive relaxation procedures to induce conditions of deep relaxation in our research participants. Psi was assessed using free response procedures, in which the percipients attempted to gain accurate psi impression of remote pictorial targets. As summarized in our early reports (Braud, 1974; Braud & Braud, 1973, 1974), evidence for significant receptive psi (general ESP, i.e., a possible blend of telepathy and clairvoyance) was found in our relaxed percipients; the psi performance of relaxed percipients was significantly greater than that of nonrelaxed, control percipients; and psi performance was positively and



significantly correlated with degree of muscular relaxation (assessed by electromyographic recordings), as well as with the percipient's self-rated degree of physical and mental relaxation. The results of these studies not only were quantitatively significant but also were qualitatively impressive: Often there were extremely accurate, clear, and dramatic descriptions of the targets.

In 1977, Charles Honorton analyzed the results of these and subsequent relaxation-psi studies. At that time, there were 13 experimental studies of receptive psi under conditions of induced relaxation. Ten of these studies yield significant evidence for psi—a 77% success rate, compared with an expected 5% success rate, based on chance alone. The combined significance of all 13 studies was associated with a probability of less than one in a billion, leading Honorton (1977) to conclude, “Quite clearly, induced relaxation procedures appear to enhance psi receptivity” (p. 457).

In the most recent meta-analysis of relaxation and psi, Storm and Thalbourne (in press) summarized the results of 25 studies. Twelve of the 25 studies yielded significant differences in psi between the relaxation condition and the appropriate contrast condition—i.e., there was a 48% experiment success rate (to be compared with a 5% experiment success rate, expected on the basis of chance alone).

*Emotional, autonomic quietude.* Early findings in experimental psychology and in psychophysiology indicated that different types of tasks could be facilitated or impeded by different levels of motivation or arousal. Generally, simple and well-learned behaviors are facilitated by higher levels of arousal, whereas more complex or not-as-well-learned behaviors are facilitated by lower levels of arousal. Similarly, there were indications that two major forms of human information-processing responded differently to level of

arousal. One form of processing—characterized by rich awareness, selective attention, and logical thought (akin to second signaling system activity in Pavlovian theory or secondary process activity in Freudian theory)—appeared to function best under conditions of relatively high arousal. Another form of processing—characterized by less conscious awareness and by broadened or diffuse attention (and more akin to Pavlovian first signaling system and Freudian primary process activity)—appeared to function best under conditions of relatively low arousal. Subliminal perception and psi seem to resemble each other in their operating characteristics, and both seem more like the latter form of processing than like the former. Therefore, it seemed useful to explore whether psi might be more likely to occur under conditions of lower arousal. Indeed, a number of the conditions that appeared psi-favorable—including many of the consciousness states reviewed in this chapter—also are characterized by reduced arousal (i.e., reduced sympathetic nervous system activity). More directly, a formal review of the relationship between psi performance and sympathetic activation (which reflects physiological, emotional, and cognitive arousal) found that out of 10 direct tests of this relationship, 7 found significantly higher psi scoring under lower than under higher levels of autonomic arousal. In the remaining three studies, significant relationships were not found. In no study was heightened autonomic arousal found to facilitate psi scoring significantly (Braud, 1981b). Additionally, special studies in our own laboratory indicated that the relationship between psi performance and arousal (as inferred from peripheral autonomic indicators such as basal skin conductance level) seemed curvilinear—with the highest psi scoring occurring at moderately, but not extremely, low levels of arousal (Braud, 1981b).

The foregoing comments apply to receptive psi. There are some tantalizing findings that suggest that complementary relationships may obtain for active psi—i.e., that psychokinesis might be facilitated by increases in arousal (Braud, 1985). However, the literature bearing on this suggestion is sparse and more anecdotal and inferential than directly experimental. This would seem a fruitful area for further exploration and interpretation.

*Cognitive quietude.* We have seen that effective psi functioning can occur under conditions of bodily and emotional quietude. From this, it might be inferred that cognitive quietude—a stilling of the thought ripples that can disturb a quiet, tranquil mind, such as the condition that can accompany meditation—also might be psi-favorable. This inference that meditation might be psi-conducive is supported by findings that meditation tends to be accompanied by reduced muscular tension and reduced autonomic (sympathetic) arousal, and also by traditional beliefs and anecdotal observations that paranormal events (e.g., the so-called *siddhis* or paranormal powers described in yogic and other spiritual and wisdom traditions) may occur spontaneously at certain stages of meditative practice (see Kanthamani, 1971; Smith, 1966; Tennison & Lustig, 1962; von Grunebaum, 1966). With these possibilities in mind, Honorton (1977) reviewed 16 experimental studies of psi performance during or immediately following meditation and found that 9 of the 16 studies yielded significance evidence for psi (in both receptive [ESP] and active [PK] forms). A later review—focusing on the possible role of meditation in psychokinesis performance—found that results of all but one of eight studies were consistent with the expectation that the practice of meditation would be favorable to the occurrence of psychokinetic effects (Braud, 1989).

In an early and eloquent statement, the British social critic and writer Edward Carpenter (1912) suggested that by “dying” to our thinking selves [in a manner made possible by meditation and related techniques] we might gain access to a larger self, with its increased nonlocal interconnections [that could allow the types of awarenesses that we now call “psychic”]:

If you inhibit thought (and persevere) you come at length to a region of consciousness below or behind thought, and different from ordinary thought in its nature and character—a consciousness of quasi-universal quality, and a realization of an altogether vaster self than that to which we are accustomed. And since the ordinary consciousness, with which we are concerned in ordinary life, is before all things founded on the little local self, and is in fact *self*-consciousness in the little local sense, it follows that to pass out of that is to die to the ordinary self and the ordinary world.

It is to die in the ordinary sense, but in another sense it is to wake up and find that the “I,” one’s real, most intimate self, pervades the universe and all other beings—that the mountains and the sea and the stars are a part of one’s body and that one’s soul is in touch with the souls of all creatures. Yes, far closer than before. (pp. 79-80)

*Sensory/perceptual restriction.* There has been considerable research on sensory/perceptual restriction (mild sensory deprivation) as a possible facilitator of receptive psi. In an early study, Honorton, Drucker, and Hermon (1973) found facilitation of free-response GESP (accurate matching of impressions with remote pictorial targets) in participants whose attention had been directed inwardly during a 30-minute period of confinement in a sensory isolation cradle. In the *altered states of consciousness induction device* (ASCID) used in this study [the ASCID was based on the so-called *witches cradles* of medieval times, which were said to be used to help enhance fantasy and alterations in consciousness; there also are references to them as torture devices], the participants were isolated from the usual sensory and perceptual information by means of

a light-proof blindfold, sound-attenuating headphones, and a freely-moving bodily support that served to modify spatial orientation and the body's usual kinesthetic cues.

An important extension of sensory restriction techniques occurred shortly thereafter, when three investigators, working independently, nearly simultaneously published accounts of their use of the *ganzfeld* procedure in their psi studies (Braud, 1973; Braud & Braud, 1974; Honorton & Harper, 1974; Parker, 1975). The *ganzfeld* (from the German for "whole or entire field") technique reduces sensory/perceptual information through the use of uniform visual stimulation (exposure to unpatterned, diffuse light through translucent eye covers) and uniform auditory stimulation (unpatterned white or pink noise through headphones). During this procedure, participants are asked to remain relaxed, direct their attention inwardly to thoughts, images, and feelings, and allow target-relevant information enter their awareness.

Honorton initially developed his *ganzfeld* procedure in an attempt to operationalize and study the absorption (*samyama*) techniques described in Patanjali's *Yoga Sutras* (personal communication, 1976; see also Honorton, 1981). My own interest in the *ganzfeld* was prompted by Bertini, Lewis, and Witkin's (1964) use of the technique in producing a twilight state of consciousness, similar to the naturally occurring hypnagogic state. Because nocturnal dreaming had been found to be psi-facilitating (see below), I reasoned that the similar hypnagogic state also might be psi-favorable.

In the quarter century following its introduction into parapsychology, there have been many reports of studies using manual or automated *ganzfeld* procedures in psi studies, numerous debates by its advocates and counteradvocates as to its psi-effectiveness, and several meta-analyses of the replicability of its accompanying psi-

scoring (see Bem & Honorton, 1994; Honorton, 1985; Hyman & Honorton, 1986; Milton & Wiseman, 1999, 2001; Schmeidler & Edge, 1999; Stanford, 1984, 1987; Utts, 1996). Four major ganzfeld-psi meta-analyses have been published. Bem and Honorton (1994) reported a psi-success (hit) rate of 35% ( $p < 10^{-9}$ ) for 28 ganzfeld studies conducted between 1974 and 1981, and a hit rate of 32% ( $p = .0008$ ) for 10 additional computer-controlled (*autoganzfeld*) studies, conducted between 1983 and 1989, that were specially designed to eliminate methodological flaws that could have been present in the earlier studies. These outcomes significantly exceeded the 25% hit rates expected by chance alone and yielded a significant effect size of .16 ( $p = .005$ ). Milton and Wisemann (1999) reported a follow-up meta-analysis of 30 additional ganzfeld studies that had been conducted from 1987 through 1997; they found that these studies yielded a nonsignificant effect size of .013 and argued that these studies did not replicate those reported by Bem and Honorton. However, two even more recent meta-analyses include additional ganzfeld studies that were not included in the Milton and Wiseman analyses, and these two most up-to-date analyses again provide evidence for significant psi performance under ganzfeld conditions. Bem, Palmer, and Broughton (2001) reported an overall hit rate of 30.1% and an effect size of .051 ( $p = .0048$ ) for all 40 ganzfeld studies published after the Bem and Honorton report. Storm and Ertel (2001) were able to find additional studies that had not been included in Milton and Wiseman's (1999) analysis; when the latest and largest aggregates of 79 ganzfeld and auto-ganzfeld studies were analyzed, significant evidence for ganzfeld-psi was found (effect size = .14,  $p = 7.78 \times 10^{-9}$ ).

*Hypnosis.* Throughout its long history—dating back to its very introduction as *mesmerism*—hypnosis has been linked to psi functioning. Mesmer himself claimed

successful action-at-a-distance influences in informal experiments conducted in 1775 (see Braud, 1993). Early investigations—by figures such as Puysegur, Esdaile, Elliotson, Gibert, Janet, Joire, and Vasiliev—pointed to the occurrence of psi manifestations such as telepathy (in the guise of *community of sensation* and similar effects) and distant mental influence (and hypnosis, itself, at a distance) in hypnotized persons (Braud, 1993). More recently, researchers have noted that hypnosis is rich in concomitants that themselves may be psi-favorable—e.g., the relaxed conditions that accompany it, as well as increased tendencies toward creative imagination, suggestibility, absorption, dissociation, and a cognitive style that is quite hospitable to psi.

Formal analyses of the relationship between psi and hypnosis in carefully conducted studies have been carried out by Honorton, Schechter, and Stanford and Stein. Honorton (1977) found significant evidence for hypnotic enhancement of psi in 22 out of 42 relevant studies. A later meta-analysis by Schechter (1984) confirmed and extended Honorton's findings, and an even more recent meta-analysis by Stanford and Stein (1993) yielded strong evidence for significant psi performance in the hypnotic conditions of 25 studies conducted by 12 chief investigators (the 47,050 trials yielded an effect size of .52,  $p = 2.3 \times 10^{-17}$ ).

*Dreams.* The association of psi functioning with dreams is, of course, even more extensive than that between psi and hypnosis. The dream-psi relationship has been suggested by observations, throughout history, of the spontaneous occurrence of prophetic or precognitive dreams, and by accounts of dream psi in therapy settings (see Van de Castle, 1977). More convincing evidence for the dreaming-psi relationship comes from careful psi studies conducted in dream laboratories, the most extensive of which

were conducted in the William C. Menninger Dream Laboratory of the Division of Parapsychology and Psychophysics at Maimonides Medical Center in Brooklyn, New York, between 1962 and 1973. These were GESP (a possible blend of telepathy and clairvoyance), clairvoyance, and precognition experiments wherein percipients attempted to become psychically aware of remote pictorial targets under conditions of psychophysiologically-monitored nocturnal dreaming (see Ullman & Krippner, 1970). The results of these Maimonides “dream telepathy” studies have been summarized and analyzed by different reviewers, using slightly different approaches. Child (1985) published a conservative analysis of what he judged to be the most appropriate subsets of the experiments; his analysis of 83 sessions yielded a significant outcome, with an effect size of .52 [calculated by WB from Child’s data] and a  $p = 1.7 \times 10^{-6}$ . In 1988, Vaughan and Utts analyzed 379 of the experimental sessions, finding an accuracy rate of 83.5% (where a 50% rate would be expected on the basis of chance) and a  $p < 4.0 \times 10^{-6}$  (reported in Ullman & Krippner, 1989, p. 172n). Radin (1997) summarized a total of 450 dream telepathy sessions that were reported between 1966 and 1973 and calculated an overall hit rate of 63% (compared to a 50% rate expected by chance) and a  $p = 1.3 \times 10^{-8}$ . There have been various attempts to replicate the Maimonides—some successful and some unsuccessful (see Child, 1985).

*Drug-induced states.* There have been occasional studies and reports of psychic functioning during various drug-induced states. Of interest, for this section, would be only studies in which the pharmacological agent was associated with an altered state of consciousness. Some *psychoactive* drugs would qualify, but only if they were responsible for a qualitative, rather than merely a quantitative, shift in consciousness; typically, such



a shift would require a relatively high drug dosage. On the other hand, research conducted with various *psychedelic* (mind-manifesting) or *entheogenic* chemicals would easily qualify, because even small dosages of such drugs can result in drastic changes of consciousness. There have been reports of both informal and formal tests of psychic functioning during or immediately following shifts in consciousness induced by psychedelic agents such as LSD and psilocybin. Although there have been promising psi results in some cases, and even some individual instances of impressive accuracy, overall, there have been no strong or consistent indications of psi enhancement under these drug-induced conditions. Perhaps more positive findings might be obtained were we to discover the proper combinations of drug, dosage, timing, set, setting, participant characteristics, and psi testing procedures. Interesting information and findings may be found in the following sources: Blewett (1963); Cavanna and Servadio (1964); Krippner (1970); Krippner and Davidson (1974); Masters and Houston (1966); Osis (1961); Paul (1966); Pahnke (1971); Puharich (1959, 1962); Roney-Dougal (1991); van Asperen de Boer, Barkema, and Kappers (1973); and Whittlesey (1960).

#### *Common Features and Possible Underlying Processes*

What do the psi-conducive conditions reviewed above have in common, and what might be the special qualities that make them psi-favorable? Several underlying processes can be suggested.

*Reduced distractions.* In the psi-favorable conditions of consciousness described above, attention is freed from the various external (sensory-perceptual) and internal (bodily activities, emotions, analytical thoughts) sources of stimulation that ordinarily occupy it. Freed from such distractions—or “noise”—attention may be more readily

available for accessing psi-mediating vehicles (images, feelings) that might otherwise be ignored. This view is generally described as a *noise-reduction* hypothesis. Here, psi is seen as a weak signal that ordinarily is obscured or masked by relatively high levels of noise. The psi-favorable states of consciousness are seen as ones in which psi inhibitors (distractors, noise) are themselves greatly reduced or inhibited. This view emphasizes enhanced *access* of signal-like psi events or experiences that already have occurred.

*Internally deployed attention.* This view is closely related to and complements the noise-reduction hypothesis. The latter emphasizes the reduction of distracting, non-psi-related stimulation. Concomitantly, attention is deployed inwardly toward mentation that is more likely to be a vehicle of psi-relevant information. The inwardly deployed attention can more readily access—and virtually *amplify*—the psi “signals” themselves. Again, this view emphasizes detection of psi interactions that already have occurred.

*Decreased constraints (destructuring) and increased free variability (enhanced lability and availability).* Not only are the inductions of psi-favorable conditions of consciousness noise-reducing, but they also free the brain-mind from external and internal structuring patterns that may constrain it. Freed from such constraining or occupying structures, the brain-mind may more readily change and re-organize itself to match or correspond to relevant psi target events. Not only might the favorable states of consciousness allow greater access to preexisting psi-carrying information, but their destructuring nature may increase the likelihood of psi interactions, themselves, in the first place. The favorable conditions of consciousness may free the subcomponents or vehicles of psi from being occupied for other purposes, so that they now are available for participation in new patterns that can subserve psi interactions.

An analogy might clarify this view. Consider that a specific memory is subserved by a particular spatio-temporal pattern of brain activity, and consider that the brain's parallel distributed processing constructs such a pattern using available neurons. Assume that the pattern must be present to a certain degree (with a certain completeness) in order to trigger the memory. If the neurons to be used in reconstructing the required spatio-temporal pattern are unavailable, because they are preoccupied elsewhere, in other structures or patterns, the substrate for the memory would be temporarily unavailable. Its reconstruction would require waiting for a sufficient number of neurons to become "unbusy" so that they might now participate in the necessary memory pattern. This process might be illustrated by the *tip of the tongue phenomenon* in which one's access to a memory is temporarily unavailable. Perhaps its subserving components are preoccupied in other ways, and there are insufficient free neurons to participate in and reconstruct the memory's substrate. With release of effort, relaxation, or engaging in activities that are not cognitively demanding (i.e., by shifting to a condition of *incubation*), sufficient neurons may *unbusy* themselves and become free to engage in the reconstruction of the desired memory pattern. Once a threshold of completeness has been reached—as sufficient neurons become unbusy and now available—a pattern now can occur that is sufficiently like the original memory-sub-serving pattern to allow the memory to be retrieved, and to spring, apparently full blown, at the tip of one's previously vacant tongue.

Stated in another way, a psi experience may be like unto a figure or pattern that requires a certain amount of a certain kind of clay or plasticine for its proper construction. If insufficient clay is available, the pattern cannot be produced. The de-structuring or de-

constraining properties of certain psi favorable conscious states may provide sufficient, freely-available clay to be used in the construction of a psi experience. The suggested process is similar to that proposed by Stanford (1990) to underlie psi-mediated instrumental reactions (PMIR) and conformance behavior. It also resembles one of the conditions assumed by Storm and Thalbourne (2000) to underlie *psychopraxia* (their name for the generic psi process): There must exist a “set of necessary conditions that mediate between the self with its pro attitude and the goal state” (p. 280). The clay just described—the presence of sufficient vehicles made freely available in a psi-favorable consciousness condition—provides these “necessary conditions” for the very occurrence of a psi interaction.

To say that psi-favorable conditions are characterized by increased *lability* and decreased *inertia* (see Braud, 1981a) is a shorthand way of describing the concepts presented in the last two paragraphs. The illustrative examples indicate the close relationships between psi occurrence and psi detection and between the processes of noise-reduction and increased lability.

*Increased expectancy, suggestion, and confidence.* Inductions of the various psi-favorable states of consciousness can be considered to be *rituals* that carry with them powerful demand characteristics (Orne, 1962; Rosenthal & Rosnow, 1991) that suggest (either overtly or subtly) that the procedures will elicit abundant and accurate forms of psi. The resultant positive expectations and enhanced confidence might themselves promote effective psi in the participants in these rituals. Placebo-like and self-fulfilling prophesy-like effects may account to some (or all) of the psi-efficacy of various

procedures. These issues have been presented and discussed extensively elsewhere (Braud, 1978; Stanford, 1984, 1987).

*Investigator preferences and experimenter effects.* To the extent that particular states of consciousness, and their corresponding induction procedures, are emphasized by particular investigators in particular laboratories and with particular samples of research participants and research personnel, it may be possible that characteristics of the investigators may influence psi outcomes, rather than, or in addition to, possible effects of the state-of-consciousness procedures themselves. Some of these experimenter effects may involve conventional processes and some may be psi-mediated. Until the same investigators study psi under a wider range of conditions (including the introduction of rarely employed contrast or control conditions), and until the same conditions are used by a wider range of investigators, it may be unwise to attribute psi enhancement to specific techniques, procedures, or states, rather than to the demand characteristics of the investigators, laboratories, sets, and settings in which those techniques happen to be used.

#### *States of Mind*

In addition to the structures and states of consciousness reviewed above, there is a third set of psi-influencing conditions that could be classified as states of mind. Space limitations allow only a cursory review of these many mental states. In a prior review (Braud, 1990-1991), many of these states were found to coalesce into three interrelated clusters that, somewhat surprisingly, are well-described by the terms *faith*, *hope*, and *charity (love)*. Some of these states of mind are summarized here; for more precise information and for relevant references, the reader is referred to the publication just mentioned.

*Faith-related relationships.* Psi-functioning appears to be facilitated by the presence of belief, confidence, and trust on the part of all personnel involved in the research project. Persons self-reporting greater levels of belief in psi have been found consistently to perform at higher levels on laboratory psi tasks than persons reporting lesser levels of belief; this is the well-known "sheep-goat" effect. Similar belief-related effects have been explored in the realm of direct mental influence. Many psi researchers point to the importance of feedback (knowledge of results) to participants in their studies. Perhaps at least part of the psi-favorable influence of feedback may be related to the fact that positive feedback (feedback for successful psi performance) may enhance confidence and belief in the possibility of effective psi in the particular experimental setting at hand. On the other hand, attitudes of disbelief, distrust, doubt, and suspicion appear to be inimical to effective psi performance.

*Hope-related relationships.* Hope, as desire accompanied by expectation of fulfillment, may contribute to enhanced psi performance. Factors such as need, importance, significance, and meaningfulness of the knowledge or effect being sought, or of the goal of a particular experiment or study, may contribute positive motivation or incentive to a study's context, increasing the desire component of a study, and directing the psi process to a particular target, goal, or outcome. Hope, in the form of wishing, wanting, or intending in instances of psychokinesis, may help facilitate a desired and expected target or study outcome. Mental strategies that have been found to be favorable to successful psi performance—such as imagery or visualization of the desired goal outcome in psychokinesis studies, or the use of focusing, concentration, and attention-

training procedures—may owe at least part of their success to their hope (expectation) facilitating aspects.

*Charity- (love-) related relationships.* The role of love or charity, in the form of caring, is most evident in direct mental influence investigations that are designed as healing-analog studies. Here, the "healer's" feelings of love, caring, and concern for the "healee" may facilitate successful outcomes. In psi experiments in general, positive dispositions toward the test situation as a whole and toward all personnel involved in the study have been found to be favorable to effective psi performance. Factors such as negative emotionality, defensiveness, boredom, lack of caring, and feelings of triviality toward the psi task, on the other hand, tend to impede effective psi functioning. The reduction of egocentric motives and methods is believed to be favorable to psi success. The possible psi-antagonistic and psi-favorable roles, respectively, of egocentric and altruistic motives in studies of practical applications of psi have been noted. It has been reported that "bonded couples"—in whom there are, presumably, strong love relationships—have been able to exert much greater direct mental influences under laboratory conditions than were found in other types of participants.

#### *Psi-Favorable Techniques*

We have seen that certain conditions of consciousness appear to be psi-favorable. From this, it follows that techniques that are able to induce such conditions, or that are able to encourage processes that are characteristic of such conditions, also would be psi-favorable. Thus, it is possible to identify a number of potentially useful psi-conducive techniques or procedures. These include techniques for creating relaxation and quietude at many levels (e.g., relaxation exercises, autogenic training, meditation, sensory

restriction) and for fostering an inward-turning of attention (e.g., attentional training, imagery and visualization techniques). When combined with appropriately deployed volition and intention, the use of such techniques might increase our yield of accurate and effective psi. The psi-favorable quality of lability might also be encouraged in our studies. One way of doing this is through the use of PK targets possessing free variability—as in the investigations of direct mental interactions with living systems (DMILS) that recently have become popular (see Braud, 1993). Encouraging increased lability of mentation in recipients in ESP studies is another possibly useful strategy that has been only infrequently explored.

*“All Things Being Equal”*

Evidence for psi has been found in the various states and conditions reviewed above. This review is not meant to imply that psi might not occur often and accurately in conditions other than the ones reviewed. What has not yet been stated explicitly is that other factors or variables might sometimes “over-ride” the psi-conduciveness of the states of consciousness and mind that have been mentioned. If all other things are equal, one might expect conscious awareness of psi interactions to occur more readily under the reviewed conditions than otherwise. Of course, other things not always are equal. Other important factors such as the presence of need, the training, temperament or other characteristics of those who participate in potential psi interactions, and a wide range of other relevant circumstance all can combine and interact to help determine if or how psi might, indeed, occur.

The presence and requisite degree of *need* may be especially important for the occurrence of psi, particularly in spontaneous cases (cf., Ehrenwald’s [1978] *need-*



*determined psi*). Often, in the laboratory, we may be observing what Ehrenwald called *flaw-determined psi*. The various psi-favorable conditions may be associated with induced “flaws” in the normally inhibitory and filtering functions of neural and attentional mechanisms, resulting in a temporary access to information otherwise unavailable. This possibility has been expressed in terms of the breakdown of the Bergsonian filter (see, e.g., Bergson, 1914) and, hence, a fuller access to Mind at Large (e.g., Huxley, 1963).

#### *Complementary Forms of Consciousness*

The findings reviewed in this chapter are merely the most current rediscoveries of the ancient, enduring notion that humankind possesses forms of consciousness that are complementary, Janus-faced—that there is a dualistic aspect within the human soul. One form reveals itself in our active waking lives, and we know well its capabilities and limitations. The other form is less well understood, but glimpses of its nature can occur in sleep, dreams, hypnosis, meditative, and mystical conditions. In many mystical, esoteric, spiritual, philosophical, and scientific traditions, these two modes of consciousness have been viewed as always latently present but mutually antagonistic. Quotations, which can be selected nearly at random from early writings, express this view. Here is but one example.

The greatest passivity of sense-consciousness is the condition for the emergence of the transcendental consciousness, its ideas being the clearer the more the senses are obscured, as a light shines brighter the darker its neighborhood is. . . . The inward sense . . . is only manifested when the outward senses are suppressed . . . the higher powers of the soul rise in proportion as the life of sense is depressed. . . . Sense-consciousness isolates us from the totality of Nature more than it connect us with it, whereas the transcendental consciousness is far more intimately involved in this totality; it follows that with the mobility of the threshold of

sensibility faculties must come to light, which from the standpoint of sense appear impossible (Du Prel, 1889, Vol. 2, pp. 172, 173, 171, 193)

Modern laboratory findings may help us increasingly understand psi and the conditions that foster it, and so, too, will our re-acquaintance with these early writings.

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