

Origin publication and copyright: *The Journal of Parapsychology*, 2003, Volume 67, pp. 53–74

THE CAPRICIOUS, ACTIVELY EVASIVE, UNSUSTAINABLE NATURE OF PSI: A SUMMARY AND HYPOTHESES

BY J. E. KENNEDY

ABSTRACT: Many parapsychological writers have suggested that psi may be capricious or actively evasive. The evidence for this includes the unpredictable, significant reversal of direction for psi effects, the loss of intended psi effects while unintended secondary or internal effects occur, and the pervasive declines in effect for participants, experimenters, and lines of research. Also, attempts to apply psi typically result in a few very impressive cases among a much larger number of unsuccessful results. The term *unsustainable* is applicable because psi is sometimes impressive and reliable, but then becomes actively evasive. One of the most testable models for this property is that psi effects occur against a background of supporting and opposing motivation and psi influence due to the extreme polarization of attitudes toward psi in the population. These attitudes may have genetic and gender associated components. Another possible explanation is that the primary function of psi is to induce a sense of mystery and wonder. Other possible functions of psi also need to be investigated. For example, psi could contribute to evolution by briefly influencing random processes to enhance diversity, without specifically guiding evolution or having sustained effects. Some type of higher consciousness may influence or control psi effects.

It appears to be relatively common for researchers who have spent 2 or 3 decades pursuing research on psychic phenomena to suggest that psi may be capricious or actively evasive. William James summarized the situation in his “Final Impressions of a Psychical Researcher”:

For twenty-five years I have been in touch with the literature on psychical research, and have had acquaintance with numerous “researchers.” I have also spent a good many hours in witnessing . . . phenomena. Yet I am theoretically no “further” than I was at the beginning; and I . . . have been tempted to believe that the Creator has eternally intended this department to remain *baffling*, to prompt our hopes and suspicions all in equal measure, so that, although ghosts and clairvoyances, and raps and messages from spirits, are always seeming to exist and can never be fully explained away, they also can never be susceptible to full corroboration. (James, 1909/1960, p. 310)

I thank two reviewers and George Hansen for their many valuable comments on an earlier version of this article.

About 8 decades later, Beloff (1994) reiterated this same theme and proposed that “paranormal phenomena may be not just elusive, but actively evasive” (p. 7). Braud (1985) described the “self-obscuring” characteristics of psi, and Eisenbud (1963/1992b) and Batchelder (1994) discussed very similar ideas. Hansen (2001) recently published a book devoted to the concept that paranormal phenomena adhere to the archetype of a “trickster.” Various other writers have also mentioned the possibility that psi is capricious. In addition, those who suggest that psi may exist, but reasonably repeatable experiments may not be attainable (e.g., Lucadou, 2001, 2002; White, 1994), are taking a similar position.

The present article describes key categories of evidence that suggest that psi is actively evasive and then discusses hypotheses for why this occurs. A previous article discussed the elusive or unreliable nature of psi more generally and mentioned, but did not delve into, the topic of the actively evasive nature of psi (Kennedy, 2001). The present article characterizes the key evidence for the various topics to provide an overview for integration. An exhaustive review of each topic is beyond the scope of this article.

This article focuses on the characteristics of psi that appear to indicate something like an intent or mechanism that actively prevents reliable psi manifestations. Terms such as *actively evasive* and *self-obscuring* emphasize the suppression of psi effects with little attention to the possibility that periods of impressive, reliable psi can occur. The term *capricious* implies that impressive psi effects can sometimes occur, but such effects are unpredictable. The term *unsustainable* indicates that impressive psi effects can occur and may have predictable patterns, but the effects cannot be sustained and may become evasive. The general approach here is that these terms may offer differing connotations for a poorly understood property of psi.

PSI MISSING AND NEGATIVE RELIABILITY

In describing the evolution of ESP research at the Duke laboratory, Palmer (1981, p. 31) noted: “more typical of the new trend was the performance of a teenage boy identified as P.H., whose promising psi-hitting when tested informally reverted to significant psi-missing when better controls were applied (Russell & Rhine, 1942).”

Rao (1965) used terms like “bidirectionality” and “differential effect” to characterize the property that “shifts the mode of psi response from hitting to missing in a rather capricious manner” (p. 245). He summarized numerous examples and described this characteristic as preventing the useful application of psi.

Bierman (1981) pointed out that the shift between psi hitting and psi missing is not just low reliability, but negative reliability. He noted that the direction of scoring frequently reverses from pilot to confirmation, which is negative reliability. He also commented on several studies he carried out

and other studies in the literature that showed unexpected reversals of scoring when the data for one study were divided into two groups. This division of data is essentially the same as a split-half method to estimate reliability.

These unintended, undesired, significant reversals in direction are an unusual form of unreliability that seem evasive and almost defiant. The normal manifestation of unreliability is results that are sometimes significant and sometimes nonsignificant (i.e., reliability approaching zero rather than being negative).

SHIFT FROM INTENDED EFFECTS TO UNINTENDED SECONDARY EFFECTS

Another seemingly capricious or defiant psi manifestation is when the overall intended effect becomes nonsignificant, but unintended secondary effects provide evidence for psi. The Princeton Engineering Anomalies Research (PEAR) laboratory provides a recent example. Studies with electronic random event generators (REGs) had small but significant effects for a decade. A recent large-scale replication effort obtained nonsignificant results overall, but Jahn et al. (2000) reported internal structural effects that appeared to indicate psi. The analyses for these effects were based on findings in the previous data, and the effects were reported as significant after adjusting for multiple analyses. However, the effects had different patterns than the earlier results and were not consistent across the three laboratories participating in the project.

Jahn and Dunne (2001) summarized the situation as follows: “At the end of the day, we are confronted with an archive of irregular, irrational, yet indismisssable data that testifies, almost impishly, to our enduring lack of comprehension of the basic nature of these phenomena” (p. 300). They noted that these changes in psi manifestations are not consciously intended or desired by those conducting the studies, and suggested that unconscious processes may have a major role in psi effects and the associated inconsistencies.

The evolution of research at the Princeton laboratory is notably similar to the earlier experience at the Duke laboratory. At Duke the initial research was remarkably successful in demonstrating the intended effects. However, a decade later, unintended, internal effects were increasingly being reported as the primary finding. J. B. Rhine (1946a) commented:

[M]any of the experiments yielding only chance totals have proved to be fruitful in other respects. Analyses of different character than those initially applied have in some cases revealed hidden relationships that were first overlooked. Some of the most important discoveries concerning PK, like those concerning ESP, have emerged in this way. (p. 73)

In fact, J. B. Rhine (1974) argued that these internal effects were some of the best evidence for psi because the lack of motivation, intention, and

expectation for their occurrence reduced the likelihood of fraud or errors. The position effects and other internal effects were thought to be a psychological reaction to the testing methods. However, there is also evidence that they may be associated with certain experimenters, and at least some of the internal effects appear to be “mind prints” or “signatures” of experimenter effects (Kennedy & Taddonio, 1976; McConnell, 1989). The Duke group also concluded that the elusive inconsistencies of psi were due to the unconscious nature of psi (J. B. Rhine, 1946c).

Palmer (1981) noted that position effects received relatively little attention after the 1940s. We are left with the impression that these internal effects become elusive when they become an expected or intended outcome. Of course, skeptics would argue that the internal effects were (are) simply post hoc data selection in an effort to salvage nonsignificant results. However, the position effects were remarkably consistent in the early studies—at least when they were not intended or expected.

Batchelder (1994) commented that his efforts to investigate macro (nonstatistical) PK phenomena had similar properties. He summarized his experience as follows:

The evidence exists, but it fluctuates. And a closer examination shows that . . . the evidence seems to “avoid” those positions in time or space where we are actively looking for it. . . . And then, later, new evidence is found elsewhere and under tight conditions. (p. 93)

LOSS OF EFFECTS

In addition to the changes in psi manifestations noted above, the loss of psi effects may also indicate the evasiveness and unsustainability of psi. The loss of psi effects occurs for individual subjects, experimenters, and lines of research.

Pratt (1975) summarized the universal loss of psi effects with individual subjects: “we must recognize what has been the most serious limitation on psi research with outstanding subjects. This is the unexplained loss of ability that has always brought their successful performance in the test situation to an end” (p. 159).

Houtkooper (1994, 2002; Haraldsson & Houtkooper, 1995) proposed the term “meta-analysis demolition” to describe the loss of effect for an experimenter or experimenter group. His evaluation of seven different series of studies found that a summary evaluation was followed by an average of 90% reduction in effect size. Kennedy and Taddonio (1976) noted other examples of declining effects for experimenters. In early parapsychological research, Taves and Dale (1943) used the term experimenter “Midas touch in reverse” to describe the tendency for effects to decline within a study.

Bierman (2001) showed that declines in effect are typical for most lines of research in parapsychology. His evaluation used several meta-analysis databases. Because most popular lines of research were initiated by psi-conducive experimenters, these declines probably result from declines for individual researchers combined with failed replication efforts by experimenters who are not psi-conducive. Beloff (1994) and Pratt (1978) commented on the apparently universal decline in effect for psi research before the advent of meta-analyses.

Despite these various declines, the overall significance level for most of these participants, experimental series, and lines of research remains significant. There is evidence for psi, but the effects seem systematically unstable.

These declines are an anomalous form of unreliability that indicate an inhibitory process. Unreliability normally manifests in one of two patterns over time. The effect sizes and proportion of studies with statistically significant outcomes will tend to increase for later studies if relevant variables are identified and controlled. Alternatively, the effects will remain relatively uniform across studies if there is no progress in understanding the phenomenon. The widespread declines found in psi research indicate an inhibition of psi as well as a general lack of progress in understanding psi.

LESS PSI WITH IMPROVED METHODOLOGY

Braud (1985) and Batchelder (1994) have suggested that psi appears to occur more readily in situations with lower methodological quality. For example, Dunne and Jahn (2002) noted that their 25-year experience with remote viewing found a steady decline that occurred as they attempted to develop increasingly objective, quantitative evaluation methods. Braud (1985) also noted that more sophisticated, process-oriented studies seem less likely to obtain psi effects than simple studies intended to provide evidence for the existence of psi. Of course, skeptics interpret these trends as evidence that ostensible psi phenomena actually result from methodological problems.

However, there is a clear mechanism for a misleading, noncausal association between psi effects and methodological quality. The normal process for scientific research is to develop increasingly controlled and analytical research methods as research progresses. The declines over time in psi effects for a line of research will therefore be correlated with higher quality methodology even though they may be independent processes.

This possibility is supported by cases when declines occur even when the methodology remains constant or becomes less well controlled. For example, in a study investigating the use of ESP to find land mines, the initially significant results declined even though the methodology did not change (J. B. Rhine, 1971). The loss of effect with the attempted replication of the PEAR

REG studies occurred even though the replication efforts used an REG that was lower quality (had less redundant failsafe measures) than the REG for many of the early studies (Jahn et al., 2000). Also, the REG used in the replication studies had been used with positive results in some earlier studies. Given the evidence for widespread declines in psi effects, a more sophisticated analysis is needed before a negative association between psi and methodological quality can be taken as evidence for the evasive nature of psi.

At the same time, the idea that psi effects are inversely related to experimental sophistication needs to be evaluated. The notable lack of comparative studies in some of the most successful lines of psi research appears to indicate that parapsychologists have tacit, working assumptions favoring simple, unrevealing experiments (perhaps as a result of operant conditioning by actively evasive psi). As a conspicuous example, research attempting to show that the ganzfeld procedure is psi conducive has rarely included a control group even though that is a fundamental departure from the basic principles of research design. The assumptions underlying this practice need to be acknowledged and made explicit.

LACK OF PRACTICAL APPLICATION OF PSI

The inability to practically apply psi provides some of the clearest evidence for the capricious or unsustainable nature of psi. Even minimal reliability of psi could be leveraged into money-making operations. The fact that parapsychological research is not financed by entrepreneurs profiting from successful applications of psi is a clear indication of the unsustainable nature of psi and lack of tangible progress.

Opportunity and interest in applying psi have occurred throughout the history of parapsychology. The PK experiments with dice were originally inspired by gambling (J. B. Rhine, 1946b). Several experiments have been carried out to predict the outcomes of casino games (Brier & Tyminski, 1970a, 1970b; Dean & Taetzsch, 1970; Puthoff, May, & Thompson, 1986). Although these studies provided statistically significant outcomes, they have not resulted in a usefully reliable application of psi.

Attempts to apply psi typically have not given results that were sufficiently reliable to maintain the interest of those initiating or supporting the projects. These efforts have provided results that were noteworthy to those with an existing interest and belief in psi phenomena. However, the overall unreliability of the results did not change the minds of those with an existing skepticism about the phenomena or maintain the interest of those looking for useful applications.

For example, a contracted project to investigate using ESP to find land mines produced statistically significant results in the first few sessions, but the later sessions declined to chance (J. B. Rhine, 1971). Rhine terminated the study because he thought it unlikely that the positive results would resume.

Targ described another case:

[W]e did a series of trials some time ago where we had nine successes in a row forecasting silver futures changes, and then I tried to replicate that . . . and got eight out of nine hits. . . . I then sought for replication to take advantage of this mechanical psi machine we had created and I got eight out of nine failures. That has really stopped my personal psi investigation for a couple of years while I have tried to meditate on what the problem is here. (Targ, Braud, Stanford, Schlitz, & Honorton, 1991, pp. 76–77)

The 24-year government-funded Star Gate project to investigate using psi in government intelligence work is probably the most well-funded effort to develop applications of psi. In a congressionally mandated evaluation of the project, one reviewer, Ray Hyman, who had previously been skeptical of psi, gave an unfavorable evaluation (Hyman, 1995). The other reviewer, Jessica Utts, had previously been favorable to psi and gave a positive evaluation (Utts, 1995a, 1995b). The agency recommended that the project be discontinued. Ed May, the director for most of the project, took issue with the process for reaching that recommendation (May, 1996).

The pivotal question was whether there was any evidence for the successful use of psi in intelligence operations. Most of the reports on the operational use of psi were classified and not available to the reviewers. According to May (1996), even unclassified information was not evaluated. This information included documents that indicated remote viewing had produced

critical intelligence reported to the highest echelons of our military and government, including such national level agencies as the Joint Chiefs of Staff, DIA, NSA, CIA, DEA, and the Secret Service, producing crucial and vital intelligence unavailable from any other source. (May, 1996, p. 8)

May indicated that the government agencies did not want the project and that the project evaluation was “restricted so as to preclude positive findings” (p. 22).

From the perspective of an outside observer, the internal opposition to the project does not seem consistent with the idea that critical information had been provided to the highest echelons of government intelligence. Two possibilities for explaining this inconsistency appear to be likely. One possibility is that the intelligence agencies were impressed with the operational results and planned to start a top secret program. The negative evaluation and formal halting of the project would be a diversion and misinformation strategy to cover the secret program. Another possibility is that the results of the operations work were similar to other efforts to apply psi and gave basically anecdotal cases that were impressive to those favorable to psi, but were not sufficiently reliable to sway those who were skeptical. Given the results of other efforts to apply psi, this possibility seems more likely to me.

The use of psychics in police investigations is another situation that has produced some striking anecdotal successes within a larger domain of unreliable results (Lyons & Truzzi, 1991; Truzzi, 1995). Also, the initial research with intercessory prayer for healing appears to have the same issues of unreliability as other types of psi studies (Kennedy, 2002).

In addition, the great majority of spontaneous psi cases have not involved a practical benefit. For example, in Louisa Rhine's collection, approximately 90% of the precognition cases did not involve any effort to change the outcome of the event (L. E. Rhine, 1981). At the same time, a small proportion of the spontaneous cases have valuable, practical benefits. McClenon (2002) reported that his case collection did not support the hypothesis that psi experiences generally provide direct benefits (but they may provide "spiritual healing" benefits). Eisenbud (1992a) similarly commented:

That psi-derived information is on the whole quite useless in the ordinary sense of the word is one of the most obvious facts of parapsychology. For every person who, warned by a presentiment of catastrophe, turned back at the last minute from boarding a plane that was shortly to crash, thousands (by now) did not. Tots do get burned, fall out of windows and in other ways come to grief From the standpoint of the much heralded vigilance or alarm-system of the individual, psi would appear to be about on a par with the watchdog who licks the hand of a burglar. (p. 13)

In summary, attempts to apply psi have resulted in some very impressive individual cases that are among a much larger number of unsuccessful results. Declines and other evidence for evasive psi are apparent.

THE DECLINE OF PARAPSYCHOLOGY

Hansen (2001) suggested that the overall decline in funding and research in parapsychology is due to and indicative of the trickster nature of psi. Activity in the field of parapsychology generally increased in the decades up to the 1980s but has declined significantly since then. Hansen described the closing of several research laboratories, lower research output, and reduced circulation of journals.

White (1994) noted these same trends and interpreted them as evidence for the failure of research attempting to control psi. She advocated shifting research efforts to investigating the effects of psi experiences and learning from these experiences.

Schlitz (2001) commented that research on psi is moving to disciplines outside of parapsychology that rarely refer to parapsychology. She finds it necessary to "re-story" psi research to obtain funding.

Research on psi appears to be continuing a long history of periodically changing terminology and research methods in an effort to achieve acceptance. Each new round of dissociation from the past and optimism

for the future initially seems very promising but then becomes mired in the same issues of trying to prove the existence of phenomena that seem to become actively evasive. This “succession of false dawns and frustrated hopes” (Beloff, 1994, p. 7) has been noted by both proponents of psi (Beloff, 1994; Pratt, 1978) and skeptics (Alcock, 2001; Hyman, 1995).

DISCUSSION

The overall evidence indicates that psi sometimes manifests consistently for periods of time and then almost universally becomes actively evasive. After a century of repeatedly confronting this situation, it may be time to consider this pattern as a basic property of psi. In fact, understanding this property appears to be necessary to make progress in parapsychology.

Psi cannot simply be categorized as either reliable or evasive. Psi effects appear to shift from reliable to evasive. In the evasive phase, psi may not appear at all or may appear in a form that is not expected or desired.

Because the term *unsustainable* captures both the reliable and evasive phases of psi and allows for the possibility of predictable patterns of psi effects, I use it here to refer to this property of psi. The reliable phase may continue for several experiments, or the shift to the evasive phase may occur within one study.

The reliable phase can occur during attempts to apply psi. According to Broughton (1991, p. 339), the first nine trials in the project to predict silver futures resulted in a \$120,000 profit for Targ and his associates. Subsequently, the predictive effect and the interpersonal relationships of those involved deteriorated significantly (Harary, 1992).

Certain special experimenters who frequently change research topics appear to minimize the shifts to evasive results. Notable examples include Helmut Schmidt, William Braud, and Marilyn Schlitz. Although research by these individuals has a large role in the parapsychological literature, their results are not representative of what other researchers can expect. The generally positive results for these experimenters appear to be due to their unusual psi abilities combined with frequent changes of research interests. One of the most sustained lines of research for this group is the investigation of intentionality influences on electrodermal response by Braud and Schlitz. A summary of that research listed 15 experiments (Schlitz & Braud, 1997). The first 3 studies had the largest effect sizes, and only 1 of the last 8 studies was statistically significant. This suggests that even these special experimenters are susceptible to decline effects.

EXPLANATIONS FOR UNSUSTAINABLE PSI

Inconsistent psi effects are not just due to many uncontrolled variables and a poor signal-to-noise ratio. Investigation of a phenomenon with many

uncontrolled variables will have either increases in effects as some variables are controlled or uniformly flat results. The declines and evasiveness found in psi research indicate methodical changes in the characteristics of psi, not just a signal buried in noise.

The skeptical explanation that the declines are due to correcting initially flawed methodology also does not adequately explain the unsustainable nature of psi. Although this hypothesis probably does apply in some situations and likely has introduced significant noise in the overall parapsychological literature, other factors appear to have a larger role in the unsustainable nature of psi. This hypothesis does not explain cases when the initial methodology is adequate or cases when declines in intended effect occur with constant or lower quality methodology.

The unsustainable nature of psi is consistent with the concept that psi effects are a dynamic or fluctuating equilibrium between opposing forces. The net results are dampened, misdirected, and perhaps sometimes oscillating effects.

Three general categories of factors that could oppose or suppress psi effects are (a) human motivations, (b) a mechanistic property of nature, or (c) some type of higher consciousness. These topics are discussed below. Recent review articles have discussed several possible explanations for the declines and elusive nature of psi (Bierman, 2001; Kennedy, 2001). Those discussions are noted here only to the extent that they relate to the actively evasive characteristics of psi.

What Is Known About Psi

As background for this discussion, it may be useful to summarize some findings related to psi that are reasonably well established.

1. The incidence of psi varies greatly among people (Kennedy, 2000, 2001; Palmer, 1979; Pratt, 1975). This is true for experimenters, participants, and the occurrence of spontaneous cases.
2. The most prominent effects of psi experiences are to alter a person's worldview, sense of meaning in life, and spirituality (Kennedy & Kanthamani, 1995; McClenon, 1994, 2002; Palmer, 1979; White, 1990, 1994). Psi experiences rarely have practical benefit, and those cases may actually serve as vehicles for an altered worldview.
3. Some people have an intractable opposition to and hostility toward the possibility of psi. Others have a strong interest in and fascination with psi phenomena. National surveys in the United States indicate that about half of adults believe in ESP, about 30% do not believe in ESP, and the remainder are not sure (Gallup & Newport, 1991; Newport & Strausberg, 2001).

Human Motivation

The initial hypothesis for explaining declines in psi effects was declining motivation, enthusiasm, and novelty by the experimenters and/or participants (Pratt, 1978; J. B. Rhine & Pratt, 1957). This hypothesis may contribute to a loss of effect, but it does not explain the full range of actively evasive effects. The overall evidence suggests that the intended, motivated effects are avoided during the actively evasive phase. Something more than reduced motivation by the experimenters and participants seems to be involved.

Historically, inconsistent psi effects were attributed to unconscious processes (J. B. Rhine, 1946c). However, labeling the unknown factors as unconscious has provided little explanatory or predictive value after 50 years of discussion and research. More specific hypotheses are needed.

The most frequently discussed motivation that could inhibit psi is fear of psi (Batchelder, 1984; Braud, 1985; Eisenbud, 1963/1992b; Tart, 1984). The arguments supporting and opposing this hypothesis have been discussed previously (Kennedy, 2001). There is little evidence suggesting that people fear the weak statistical effects in experimental research, yet these effects become actively evasive. Further, the fact that some people devote great effort to attempting to elicit psi does not seem consistent with fear of psi. If fear or resistance to psi causes the inhibition of psi effects, the source would seem to be external to those directly attempting to elicit psi.

An alternative approach recognizes that psi experiments may be carried out against a background of powerful supporting and opposing motivation and psi influence. This possibility follows directly from the traditional assumption in parapsychology that psi is basically independent of space and time and is related to human motivation. Taken at face value, experimental outcomes could be influenced by many people who hear about or care about the results.

This possibility appears consistent with the chronic state of psychical research: There is sufficient evidence for psi to maintain the interest and enthusiasm of those strongly interested in psi, but not the consistent evidence that would threaten the ardent skeptics. A dynamic and nearly balanced equilibrium between opposing forces appears to characterize the situation. As noted earlier, many people have strong motivations on both sides of the psi issue.

The key question is to what extent does skepticism cause unsustainable psi versus unsustainable psi cause skepticism? If the primary direction of causation is that unsustainable psi causes skepticism, then it may be more productive to look for another explanation for unsustainable psi.

However, there is a rationale that the strongest opposition to psi may derive from genetically based personality characteristics. The extreme skeptics are predominantly males who place great value on rational thinking and

who focus their efforts on trying to influence others¹ (Blackmore, 1994; Hansen, 1992). Studies of belief in ESP indicate that disbelief is associated with male gender and a greater internal locus of control (belief that they control the events in their lives; Irwin, 1993). However, discussion of these findings has usually focused on belief in psi being associated with females and external locus of control.

From an evolutionary perspective, a rational, practical style of thinking, combined with a drive to influence and control the world around them, would provide an impetus to develop tools and technology and an ability to successfully compete for resources and produce descendants. Geary (1998) brought together a wide diversity of converging evidence across species, human cultures, and human stages of life that shows that “men are biologically destined to compete with each other for social status and for the attainment of cultural success” (p. 324). He also summarized extensive evidence that from infancy onward, males tend to have more interest in inanimate objects and females more interest in people (pp. 217–239). The traits commonly associated with males across 25 countries include aggressive, rational, enterprising, inventive, and resourceful (Williams & Best, 1986).

People who do not share the drive for rational thinking and control may be a threat and natural target for the more extreme members of this group. The possibility that different values and less rational, less controlling styles of thinking could lead to prominence and status may be fundamentally threatening. This may explain the irrational degree of ridicule in the writings of the extreme skeptics and their equally irrational fear that belief in psi is a dangerous threat (Hansen, 1992).

Feelings of threat and hostility were defining characteristics for the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP). Martin Gardner, a member of the all-male founding board, described the early split that resulted in Marcello Truzzi leaving the group:

[Truzzi] wanted our periodical to provide scholarly discussion between skeptics and fringe scientists. He disliked calling anyone a crank. Marcello has always had a friendly, at times admiring, attitude toward pseudoscientists and psychic con artists. He seldom perceives them as any sort of threat to science or to the public For the rest of us on the founding board, to expect our periodical to treat outrageous pseudoscience with respect was

¹ Susan Blackmore, a parapsychologist who became increasingly skeptical, described the “worst kind of pseudoskepticism”:

There are some members of the skeptics' groups who clearly believe they know the right answer prior to inquiry. They appear not to be interested in weighing alternatives, investigating strange claims, or trying out psychic experiences or altered states for themselves (heaven forbid!), but only in promoting their own particular belief structure and cohesion . . . I have to say it—most of these people are men. Indeed, I have not met a single woman of this type. (Blackmore, 1994, p. 235)

like expecting a liberal or socialist magazine to seek articles by right-wing extremists. (Gardner, 2001, p. 360)

As Gardner indicates, CSICOP is more like a political propaganda organization than a scientific organization.

The other pole with regard to attitude toward psi may be those who have a strong innate sense that life is interconnected and has a higher purpose. Those with these characteristics often view psi as evidence for and a natural manifestation of this interconnectedness and higher purpose. These characteristics are associated with spirituality and may have natural selection advantages because they promote cooperation, and optimism and resilience when confronting situations that cannot be controlled. Epidemiological studies indicate that religion or spirituality is associated with better physical and mental health (Koenig, McCullough, & Larson, 2001; Mueller, Plevak, & Rummans, 2001). Women tend to be more religious or spiritual than men (Stark, 2002) and to develop altruistic, reciprocal relationships, whereas men tend to base relationships on power and dominance (Campbell, 2002; Geary, 1998). The extreme skeptics tend to consider that both religion and belief in paranormal phenomena are irrational (Hansen, 1992).

The hypothesis of a genetic component for attitude toward psi is also supported by evidence for genetic components for (a) the psi-related personality characteristics absorption (Tellegen et al., 1988) and hypnotic susceptibility (Morgan, 1973), (b) interest in religion and spirituality (Bouchard, McGue, Lykken, & Tellegen, 1999; Kirk, Eaves, & Martin, 1999; Waller, Kojetin, Bouchard, Lykken, & Tellegen, 1990), and (c) possibly psi ability (Cohn, 1999). Stark (2002) concluded that the difference in spirituality between men and women appears to have a genetic component.

Both the rational, controlling and interconnected, spiritual personality characteristics may have adaptive value and contribute to the optimum diversity of the human species, and to a balanced background of motivations supporting and opposing psi. A more detailed examination will likely find that these characteristics consist of multiple factors and some of the factors may be separate dimensions rather than extremes of a continuum. People who are unsure or indifferent to psi and those who want to use psi instrumentally must also be recognized.

Various aspects of this model can be tested. Using the methods of behavioral genetics to investigate the genetic aspects of belief and skepticism is an obvious starting point. The fact that skeptics are a minority of the population may indicate that all people do not contribute equally to the background psi. The background opposition could be due to a subgroup of people with psi ability and high motivation. Also, the evidence that males may typically demonstrate greater PK influence than females (Dunne, 1998) is consistent with the male drive to assert themselves and may have implications for a disproportionate background influence by skeptics.

Strategies that influence psi effects may also be tested. Although this model can be precisely handled as an observational model, the critical assumptions are the independence of time and space rather than the act of observation.

Bierman (2001) suggested that the number of people becoming aware of and potentially influencing psi experiments increases as experiments are repeated. Presumably, the background opposition to psi has an increasing role with replication, while the motivation and novelty for the experimenters may decline. The evidence that psi effects abruptly drop after meta-analyses (Houtkooper, 1994, 2002) is particularly relevant. Bierman (2002) also suggested that the reported stability of the classified Star Gate research may reflect limitations on the number of persons potentially influencing the results. Houtkooper (2002) extended this idea by suggesting that the restricted information of classified research may allow the skeptics to dismiss findings without being confronted with strong evidence. Similarly, the idea that stronger psi occurs with weak methodology also may reflect less attention and negative motivation by skeptics.

If these ideas are correct, the optimum conditions for psi results would be for one person or a few people with psi ability to carry out self-tests with the firm constraint that no one else will ever learn of any positive outcomes. This is consistent with the strategy "go and tell no one" recommended by some proponents of psi (e.g., Sinetar, 2000). Other experiments could be carried out with varying degrees of information distribution, including simulating classified research. One interesting strategy would be to attempt to reverse the declines by having more restricted distribution of information and perhaps lower quality methodology as the research progresses.

Although these ideas are interesting and should be tested, I personally doubt that they will turn out to explain the unsustainable nature of psi. This expectation is based on my experience with psi (Kennedy, 2000) and the likelihood that psi is not as anthropocentric as assumed with these ideas. At the same time, I think the idea that genetic and gender factors are significant in the polarization of psi beliefs is almost certainly true.

A Mechanistic Property of Nature

Eisenbud (1963/1992b) proposed that the declines and lack of usefully repeatable results in psi research reflect a fundamental, insurmountable property of nature. He suggested that psi has a role in and is constrained by the basic laws of probability. Beloff (1994) proposed ideas with similar conclusions. However, these speculations focus on the actively evasive phase and offer no explanation or insights for the reliable phase of psi or for the transition between reliable and evasive psi.

Lucadou (1988, 2001, 2002) proposed that usefully reliable psi is not possible based on a general systems theory model that includes the meaning

of the psi event as a critical factor. This model attempts to combine physical and psychological aspects into one overall system that has boundaries and limitations determined by the meaning or “pragmatic information” of the situation. Experimental outcomes change as this meaning changes.

The model predicts that psi effects can occur in situations that are novel for those involved, but the effects will vanish or change if useful or confirming information is involved. Lucadou (2001) suggested that psi researchers should make sufficient changes when replicating studies to maintain novelty and that the ideal situation would be to keep the experimenters and participants unaware of the previous outcomes for a line of research. The model appears to preclude practical application of psi. At a minimum, this model is a stimulating effort to deal with the perplexing properties of psi.

However, it appears to me that the reliable phase of psi sometimes involves successful confirmation or useful information that conflicts with the basic predictions of this model. Also, human meaning has a pivotal role in this model. Here too, I think it is likely that psi is not as anthropocentric as assumed in this model. However, the key concepts and terms in the model (“pragmatic information,” “organizationally closed system,” etc.) cannot be quantified at present and are sufficiently ambiguous and complex that the model can probably be adapted to a wide range of outcomes.

It may be useful to note that researchers can develop similar hypotheses based on inferences from previous empirical findings without the need for the esoteric jargon and equations from systems theory. In fact, with the current state of knowledge, it is not clear that the jargon and equations contribute value beyond simple predictions based on consistency with the experience from previous research.

The ideas discussed in this section focus on the attitudes and knowledge of those directly involved in a study, whereas the ideas discussed in the previous section focus on the attitudes and knowledge of those outside the experimental setting. In principle, these differences can be tested by controlling the dissemination of information about experimental outcomes. For example, cases when multiple studies are initially reported publicly at one time can be compared with cases when sequential studies are reported individually.

Higher Consciousness

The most obvious, empirically grounded model for the unsustainable nature of psi is that the primary function of psi is to induce and maintain a sense of mystery and wonder. To fulfill this purpose, psi effects must remain mysterious and unsustainable. William James’s (1909/1960) comment that psi appears to be intended to be baffling would be precisely correct. Psi effects may inspire and maintain the interconnected, spiritual dimension of humanity by inducing a sense of mystery and

wonder. In addition, some psi effects seem consistent with intervention or guidance by a higher consciousness (Kennedy, 2000).

This hypothesis is similar to, but may qualify, the idea that psi effects are a process of personal transformation. Several writers have suggested that psi can best be understood by examining the personal meaning and transformative effects of psi experiences (Kennedy, 2000, 2001; Taylor, 1995; White, 1990, 1993, 1994). White (1993) suggested that the best research strategy may be to let psi lead us rather than to try to control or apply psi.

However, looking to psi to guide one's personal growth or research may be another form of application of psi that overlooks the unsustainable nature of psi. The role of psi may begin and end with inducing a sense of wonder. Personal transformation and growth may be inspired by the mystery of psi experiences, but psi may be an unsustainable source of information of any type—whether the information relates to personal growth or to predicting commodities markets.

This hypothesis does not indicate who or what is the source of psi. Presumably, psi effects result from the motivations and meanings of individuals interacting with another agency that allows or causes a psi effect to occur if the effect inspires mystery and wonder. For the present, labeling the unknown agency as a "higher consciousness" without attempting further clarification is probably as useful as offering untestable speculations about its nature or relationship to human consciousness and unconsciousness.

Once the scientifically uncomfortable step of considering that a higher consciousness may cause the unsustainable nature of psi is taken, more diverse properties of psi become plausible. In particular, the higher consciousness could allow psi effects in accordance with more complicated rules involving motivation and meaning, and particularly personal growth and spirituality. From a scientific perspective, the guiding principle must be to focus on the simplest, most testable models that are consistent with available data.

With this approach, the first empirical question is whether psi has any function in addition to inducing a sense of mystery and wonder. This requires more than a superficial listing of some cases in which psi appeared to save someone from harm. If there are many psi cases that induce wonder without a practical benefit and a comparatively small number that have a practical benefit as well as induce wonder, it is likely that the practical benefit is incidental to the main function of the experience. More sustained patterns of consistent experiences converging on a specific outcome would seem to be needed.

Another empirical strategy is to try to identify patterns or rules about when efforts to apply psi are successful and when the evasive phase starts. Most previous explorations along these lines have been limited by focusing on mechanistic principles from quantum physics. The concept of a higher consciousness offers more flexibility for developing testable models.

For example, psi could promote or create diversity for evolution. Psi would not directly guide evolution as various writers have suggested (reviewed in Stokes, 1997), rather psi would influence or enhance the random processes generating the diversity that underlies natural selection. This diversity could apply to human consciousness as well as to traditional biological diversity. Psi would be a creative principle that acts briefly at transition points to generate new states but would not maintain those states or produce sustained effects. The traditional forces of competition and natural selection would determine which states survived. The sense of mystery and wonder resulting from psi could be a side effect or special case of the enhanced diversity.

CONCLUSION

Psi effects are unsustainable. They are sometimes impressive and reliable, but then become actively evasive. One of the most testable models for this property is that psi effects occur against a background of supporting and opposing motivation and psi influence due to the extreme polarization of attitudes toward psi in the population. A more likely explanation is that some type of higher consciousness influences or guides the occurrence of psi. Psi effects induce a sense of mystery and wonder, which may be the primary function of psi. However, other functions are possible and need to be investigated.

REFERENCES

- ALCOCK, J. (2001). Science vs. pseudoscience, nonscience, and nonsense: Twenty-five years of CSICOP. *Skeptical Inquirer*, **25**, 50–54.
- BATCHELDOR, K. J. (1984). Contribution to the theory of PK induction from sitter-group work. *Journal of the American Society for Psychical Research*, **78**, 105–122.
- BATCHELDOR, K. J. (1994). Notes on the elusiveness problem in relation to a radical view of paranormality. *Journal of the American Society for Psychical Research*, **88**, 90–115.
- BELOFF, J. (1994). Lessons of history. *Journal of the American Society for Psychical Research*, **88**, 7–22.
- BIERMAN, D. J. (1981). Negative reliability: The ignored rule [Abstract]. In W. G. Roll & J. Beloff (Eds.), *Research in parapsychology 1980* (pp. 14–15). Metuchen, NJ: Scarecrow Press.
- BIERMAN, D. J. (2001). On the nature of anomalous phenomena: Another reality between the world of subjective consciousness and the objective work of physics? In P. van Locke (Ed.), *The physical nature of consciousness* (pp. 269–292). New York: Benjamins.

- BIERMAN, D. J. (2002). [Letter to the editor]. *Journal of Parapsychology*, **66**, 102–106.
- BLACKMORE, S. J. (1994). Women skeptics. In L. Coly & R. White (Eds.), *Women and parapsychology* (pp. 234–236). New York: Parapsychology Foundation.
- BOUCHARD, T. J., MCGUE, M., LYKKEN, D., & TELLEGEN, A. (1999). Intrinsic and extrinsic religiousness: Genetic and environmental influences and personality correlates. *Twin Research*, **2**, 88–98.
- BRAUD, W. G. (1985). The two faces of psi: Psi revealed and psi obscured. In B. Shapin & L. Coly (Eds.), *The repeatability problem in parapsychology* (pp. 150–175). New York: Parapsychology Foundation.
- BRIER, R. M., & TYMINSKI, W. V. (1970a). Psi application: Part I. A preliminary attempt. *Journal of Parapsychology*, **34**, 1–25.
- BRIER, R. M., & TYMINSKI, W. V. (1970b). Psi application: Part II. The majority-vote technique—analysis and observations. *Journal of Parapsychology*, **34**, 26–36.
- BROUGHTON, R. S. (1991). *Parapsychology: The controversial science*. New York: Ballantine Books.
- CAMPBELL, A. (2002). *A mind of her own: The evolutionary psychology of women*. Oxford, England: Oxford University Press.
- COHN, S. A. (1999). Second sight and family history: Pedigree and segregation analyses. *Journal of Scientific Exploration*, **13**, 351–372.
- DEAN, D., & TAETZSCH, R. (1970). Psi in the casino: Taetzsch method [Abstract]. In W. G. Roll, R. L. Morris, & J. D. Morris (Eds.) *Proceedings of the Parapsychological Association: Number 7, 1970* (pp. 14–15). Durham, NC: Parapsychological Association.
- DUNNE, B. (1998). Gender differences in human/machine anomalies experiments. *Journal of Scientific Exploration*, **12**, 3–55.
- DUNNE, B. J., & JAHN, R. G. (2002). Information and uncertainty: 25 years of remote perception research (Technical Note PEAR 2002.01). Princeton, NJ: Princeton University, Princeton Engineering Anomalies Research, School of Engineering/Applied Science.
- EISENBUD, J. (1992a). *Parapsychology and the unconscious*. Berkeley, CA: North Atlantic Books.
- EISENBUD, J. (1992b). Psi and the nature of things. In *Parapsychology and the unconscious* (pp. 149–168). Berkeley, CA: North Atlantic Books. (Original work published 1963)
- GALLUP, G. H., & NEWPORT, F. (1991). Belief in paranormal phenomena among adult Americans. *Skeptical Inquirer*, **15**, 137–146.
- GARDNER, M. (2001). Confessions of a skeptic. In P. Kurtz (Ed.), *Skeptical odysseys: Personal accounts by the world's leading paranormal inquirers* (pp. 355–362). New York: Prometheus Books.

- GEARY, D. C. (1998). *Male, female: The evolution of human sex differences*. Washington, DC: American Psychological Association.
- HANSEN, G. (1992). CSICOP and the skeptics: An overview. *Journal of the American Society for Psychical Research*, **86**, 19–63.
- HANSEN, G. P. (2001). *The trickster and the paranormal*. Philadelphia: Xlibris Corporation.
- HARALDSSON, E., & HOUTKOOPER, J. M. (1995). Meta-analyses of 10 experiments on perceptual defensiveness and ESP: ESP scoring patterns and experimenter and decline effects. *Journal of Parapsychology*, **59**, 251–271.
- HARARY, K. (1992). The goose that laid the silver eggs: A criticism of psi and silver futures forecasting. *Journal of the American Society for Psychical Research*, **86**, 375–409.
- HOUTKOOPER, J. M. (1994). Does a meta-analysis demolition effect exist? *Abstracts of the 18th International Conference of the Society for Psychical Research*, 14–15.
- HOUTKOOPER, J. M. (2002). [Letter to the editor]. *Journal of Parapsychology*, **66**, 329–333.
- HYMAN, R. (1995). Evaluation of the program on anomalous mental phenomena. *Journal of Parapsychology*, **59**, 321–351.
- IRWIN, H. (1993). Belief in the paranormal: A review of the empirical literature. *Journal of the American Society for Psychical Research*, **87**, 1–39.
- JAHN, R., & DUNNE, B. (2001). A modular model of mind/matter manifestations (M5). *Journal of Scientific Exploration*, **15**, 299–329.
- JAHN, R., DUNNE, B., BRADISH, G., DYBYNS, Y., LETTIERI, A., NELSON, R., ET AL. (2000). Mind/machine interaction consortium: PortREG replication experiments. *Journal of Scientific Exploration*, **14**, 499–555.
- JAMES, W. (1960). The final impressions of a psychical researcher. In G. Murphy & R. D. Ballou (Eds.), *William James on psychical research* (pp. 309–325). New York: Viking. (Original work published 1909)
- KENNEDY, J. E. (2000). Do people guide psi or does psi guide people? Evidence and implications from life and lab. *Journal of the American Society for Psychical Research*, **94**, 130–150.
- KENNEDY, J. E. (2001). Why is psi so elusive? A review and proposed model. *Journal of Parapsychology*, **65**, 219–246.
- KENNEDY, J. E. (2002). Commentary on “Experiments on distant intercessory prayer” in *Archives of Internal Medicine*. *Journal of Parapsychology*, **66**, 177–182.
- KENNEDY, J. E., & KANTHAMANI, H. (1995). An exploratory study of the effects of paranormal and spiritual experiences on people’s lives and well-being. *Journal of the American Society for Psychical Research*, **89**, 249–264.
- KENNEDY, J. E., & TADDONIO, J. L. (1976). Experimenter effects in parapsychological research. *Journal of Parapsychology*, **40**, 1–33.

- KIRK, K. M., EAVES, L. J., & MARTIN, N. G. (1999). Self-transcendence as a measure of spirituality in a sample of older Australian twins. *Twin Research*, **2**, 81–87.
- KOENIG, H. G., MCCULLOUGH, M. E., & LARSON, D. B. (2001). *Handbook of religion and health*. Oxford, England: Oxford University Press.
- LUCADOU, W. V. (1988). The model of pragmatic information (MPI) [Abstract]. In D. Weiner & R. L. Morris (Eds.), *Research in parapsychology 1987* (pp. 18–22). Metuchen, NJ: Scarecrow Press.
- LUCADOU, W. V. (2001). Hans in luck: The currency of evidence in parapsychology. *Journal of Parapsychology*, **65**, 3–16.
- LUCADOU, W. V. (2002). Theoretical contributions to psi: Does parapsychology go mainstream? In V. G. Rammohan (Ed.), *New frontiers of human science* (pp. 79–94). Jefferson, NC: McFarland.
- LYONS, A., & TRUZZI, M. (1991). *The blue sense: Psychic detectives and crime*. New York: Mysterious Press.
- MAY, E. C. (1996). The American Institutes for Research review of the Department of Defense's Star Gate program: A commentary. *Journal of Parapsychology*, **60**, 3–23.
- MCCLENON, J. (1994). *Wondrous events: Foundations of religious beliefs*. Philadelphia: University of Pennsylvania Press.
- MCCLENON, J. (2002). Content analysis of an anomalous experience collection: Evaluating evolutionary perspectives. *Journal of Parapsychology*, **66**, 291–316.
- MCCONNELL, R. A. (1989). Psychokinetic data structure. *Journal of the American Society for Psychical Research*, **83**, 217–226.
- MORGAN, A. H. (1973). The heritability of hypnotic susceptibility in twins. *Journal of Abnormal Psychology*, **82**, 55–61.
- MUELLER, P. S., PLEVAK, D. J., & RUMMANS, T. A. (2001). Religious involvement, spirituality, and medicine: Implications for clinical practice. *Mayo Clinic Proceedings*, **76**, 1225–1235.
- NEWPORT, F., & STRAUSBERG, M. (2001). *Gallup Poll—June, 2001 on psychic and paranormal phenomena* [Press release]. Princeton, NJ: Gallup News Service.
- PALMER, J. (1979). A community mail survey of psychic experiences. *Journal of the American Society for Psychical Research*, **73**, 221–251.
- PALMER, J. (1981). Review of J. B. Rhine's research findings: I. Extrasensory perception. *Journal of Parapsychology*, **45**, 25–39.
- PRATT, J. G. (1975). Outstanding subjects in ESP. *Journal of the American Society for Psychical Research*, **69**, 151–160.
- PRATT, J. G. (1978). Prologue to a debate: Some assumptions relevant to research in parapsychology. *Journal of the American Society for Psychical Research*, **72**, 127–139.

- PUTHOFF, H. E., MAY, E. C., & THOMPSON, M. J. (1986). Calculator-assisted psi amplification: II. Use of the sequential-sampling technique as a variable-length majority-vote procedure [Abstract]. In D. H. Weiner & D. I. Radin (Eds.), *Research in parapsychology 1985* (pp. 73–77). Metuchen, NJ: Scarecrow Press.
- RAO, K. R. (1965). The bidirectionality of psi. *Journal of Parapsychology*, **29**, 230–250.
- RHINE, J. B. (1946a). Confirmatory experiments in PK research. *Journal of Parapsychology*, **10**, 71–77.
- RHINE, J. B. (1946b). The psychokinetic effect: A review. *Journal of Parapsychology*, **10**, 5–20.
- RHINE, J. B. (1946c). The source of difficulties in parapsychology. *Journal of Parapsychology*, **10**, 162–168.
- RHINE, J. B. (1971). Location of hidden objects by a man-dog team. *Journal of Parapsychology*, **35**, 18–33.
- RHINE, J. B. (1974). Security versus deception in parapsychology. *Journal of Parapsychology*, **38**, 99–121.
- RHINE, J. B., & PRATT, J. G. (1957). *Parapsychology: Frontier science of the mind*. Springfield, IL: Charles C. Thomas.
- RHINE, L. E. (1981). *The invisible picture: A study of psychic experiences*. Jefferson, NC: McFarland.
- RUSSELL, W., & RHINE, J. B. (1942). A single subject in a variety of ESP test conditions. *Journal of Parapsychology*, **6**, 284–311.
- SCHLITZ, M. J. (2001). Boundless mind: Coming of age in parapsychology. *Journal of Parapsychology*, **65**, 335–350.
- SCHLITZ, M. J., & BRAUD, W. G. (1997). Distant intentionality and healing: Assessing the evidence. *Alternative Therapies in Health and Medicine*, **3**, 62–73.
- SINETAR, M. (2000). *Sometimes enough is enough*. New York: Harper Collins.
- STARK, R. (2002). Physiology and faith: Addressing the “universal” gender difference in religious commitment. *Journal for the Scientific Study of Religion*, **41**, 495–507.
- STOKES, D. M. (1997). *The nature of the mind: Parapsychology and the role of consciousness in the physical world*. Jefferson, NC: McFarland.
- TARG, R., BRAUD, W. G., STANFORD, R. G., SCHLITZ, M. J., & HONORTON, C. (1991). Increasing psychic reliability. *Journal of Parapsychology*, **55**, 59–83.
- TART, C. (1984). Acknowledging and dealing with the fear of psi. *Journal of the American Society for Psychical Research*, **78**, 133–143.
- TAVES, E., & DALE, L. A. (1943). The Midas Touch in psychical research. *Journal of the American Society for Psychical Research*, **37**, 57–83.

- TAYLOR, E. I. (1995). Mortality and self-realization. In L. Coly & J. D. S. McMahon (Eds.), *Parapsychology and thanatology: Proceedings of an international conference held in Boston, Massachusetts, November 6–7, 1993* (pp. 86–98). New York: Parapsychology Foundation.
- TELLEGEN, A., LYKKEN, D. T., BOUCHARD, T. J., WILCOS, K. J., SEGAL, N. L., & RICH, S. (1988). Personality similarity of twins reared apart and together. *Journal of Personality and Social Psychology*, **54**, 1031–1039.
- TRUZZI, M. (1995). Reflections on *The blue sense* and its critics. *Journal of Parapsychology*, **59**, 99–128.
- UTTTS, J. (1995a). An assessment of the evidence for psychic functioning. *Journal of Parapsychology*, **59**, 289–320.
- UTTTS, J. (1995b). Response to Ray Hyman's report "Evaluation of the program on anomalous mental phenomena." *Journal of Parapsychology*, **59**, 353–356.
- WALLER, N. G., KOJETIN, B. A., BOUCHARD, T. J., LYKKEN, D. T., & TELLEGEN, A. (1990). Genetic and environmental influences on religious interests, attitudes, and values: A study of twins reared apart and together. *Psychological Science*, **1**, 138–142.
- WHITE, R. A. (1990). An experience-centered approach to parapsychology. *Exceptional Human Experience*, **8**, 7–36.
- WHITE, R. A. (1993). About applications. *Journal of Religion and Psychical Research*, **16**, 2–4.
- WHITE, R. A. (1994). Seek ye first the kingdom of heaven: What are EHEs and what can we do about them. In R. A. White (Ed.), *Exceptional human experience: Background papers I* (pp. 34–46). Dix Hills, NY: Exceptional Human Experience Network.
- WILLIAMS, J. E., & BEST, D. L. (1986). Sex stereotypes and intergroup relations. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 244–259). Chicago: Nelson-Hall.

72130.1210@compuserve.com

Return to: [Spirituality and Paranormal Phenomena](#)