

WHAT IS TO BE DONE: EVALUATING THE RITUAL HEALING THEORY¹

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ABSTRACT

The field of parapsychology has been criticized for not providing sufficiently replicable experiments. Researchers have found that their claims of achieving replicable experiments have not had the impact on mainstream science that might be expected. Content analysis of introductory psychology textbooks indicates that text authors tend to emphasize failure to replicate while ignoring evidence supporting parapsychological claims. The field of parapsychology demonstrates structural characteristics suggesting that it will not gain full legitimacy should it continue to follow present strategies.

The *Ritual Healing Theory* offers a means to bypass this problem. It is derived from research in the social psychology of anomalous experience, human genetics, and evolutionary psychology. It hypothesizes that dissociative abilities and the capacity for anomalous perceptions have physiological basis. It argues that early hominids developed dissociative capacities for coping with trauma. Later hominids devised therapeutic rituals that provided greater benefits to those with dissociative ability. Shamans conducted rituals that allowed those with dissociative abilities survival advantages and these individuals passed on dissociation genotypes more frequently. These processes caused the frequency of genes related to dissociation to increase. Experiences linked to dissociation (apparitions, waking and sleeping ESP, out-of-body experiences, and psychokinesis) were shaped and became more prevalent. These experiences generated beliefs in spirits, souls, life after death, and magical abilities, providing the foundation for shamanism, humankind's first religion. Shamanic healing practices, occurring over the last 30,000 years, continued selecting for dissociative and hypnotic genotypes, further shaping the physiological foundations for anomalous experience, religion, and ritual healing.

Ritual healing theory hypotheses are testable within the domains of psychical research, anthropology, archaeology, social psychology of religion, folklore, history, physiology, and medicine. Hypotheses include: (1) The extent of childhood trauma should be positively correlated with dissociative capacities. (2) Dissociative capacities should be positively correlated with propensity for anomalous experience. (3) Certain types of anomalous experience (apparitions, paranormal dreams, waking extrasensory perceptions, psychokinesis, and out-of-body experience) have biological basis and occur in all societies. (4) Certain types of experience, such as waking extrasensory perception and paranormal dreams have structural features associated with state of consciousness; waking extrasensory perceptions more often pertain to present events, lead to conviction, and provide less information than paranormal dreams which more often pertain to future events, fail to generate conviction, and provide greater information. These features are seemingly universal, implying physiological basis. (5) Propensity for anomalous experience is correlated with belief in spirits, souls, life after death, and magical abilities and certain experiences induce belief. (6) Researchers should find significant correlations between frequency of anomalous experience, temporal lobe signs, transliminality, and cognitive openness, traits hypothesized to be part of the shamanic complex. (7) Capacity for ritual healing should be positively correlated with dissociative/hypnotic ability. (8) Anthropologists can observe ritual healing processes through field studies. They can detect patterns indicating a shamanic complex. (9) Historians of medicine can document that all ancient medical practices contain rituals based on placebo and hypnotic processes.

INTRODUCTION

The ritual healing theory offers an alternative to parapsychological paradigms. Parapsychologists struggle with the demand to provide a fully replicable experiment. Skeptics have erected rhetorical obstacles; they

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argue that exceptional claims require exceptional proof and that parapsychological claims are so exceptional that present “proofs” are insufficient. Patterns within the history of science suggest that parapsychologists will find it difficult to overcome these arguments. In the past, successful innovative scientific fields have grown rapidly during their decade of origin (Griffith & Mullins, 1972; McClenon, 1984). This allowed these fields to use their political power to overcome rhetorical obstacles. The Parapsychological Association, the field’s major scientific organization, has not grown markedly. Membership was 205 in 1970, 279 in 1980, 306 in 1983, 275 in 1986, 246 in 1992, 251 in 1999, and 254 in 2001 (McClenon, 1994: 200; Varvoglis, 1999; Utts, 2001). The history of science indicates that successful scientific paradigms resolve central research questions, overcoming the objections of their critics. Parapsychology has not been able to do this. Analysis of the treatment of parapsychology within introductory psychology texts indicates continuing skepticism, lasting over many decades (Roig, Icochea, & Cuzzucoli, 1991; McClenon, et al, 2003). Parapsychology’s longevity, non-scientific financial support, and stagnant growth illustrate a “deviant science” (McClenon, 1984), suggesting that future claims of experimental replicability will also be treated skeptically.

This paper describes “what is to be done” to overcome obstacles to parapsychological legitimacy. As with political revolts, scientific revolutions require ideologies around which collective movements can be organized. The ritual healing theory provides an ideology allowing this process. It does not involve “extraordinary claims” but encourages research regarding anomalous perceptions within accepted evolutionary psychology paradigms. It provides a wide range of testable hypotheses. Findings within the suggested paradigm can be published in journals dealing with religion, mind-body medicine, evolutionary psychology, and anomalous experience.

Evolutionary psychology has gained increasing support among anthropologists and psychologists during the past few decades. The field generates hypotheses pertaining to a wide variety of topics ranging from mating strategies to altruism. Although various introductory psychology textbooks focus specifically on evolutionary psychology (Buss, 1998; Gaulin and McBurney, 2001; Palmer and Palmer, 2002), all major introductory psychology texts review evolutionary arguments regarding genetic influence of human behavior.

Behavioral geneticists argue that all behavior involves gene/environment interplay (McGuffin, Riley, & Plomin, 2001). Researchers are often surprised at the important role that genes play. For example, studies indicate that about 50% of the observed variance of measures of religious interest, attitudes, and values are genetically influenced (Waller et al., 1990).

The most solid genetic findings about individual differences in human behavior come from quantitative genetic research such as twin and adoption studies that consistently converge on the conclusion that genetic variation makes a substantial contribution to phenotypic variation for all behavioral domains. The best-studied areas are psychopathology, personality, and cognitive abilities and disabilities. There are two striking findings. The first is that nearly all behaviors that have been studied show moderate to high heritability—usually, to a somewhat greater degree than do many common physical diseases. Second, although environment plays a role, its contribution tends to be of the nonshared type, that is, environmental factors make people different from, rather than similar to, their relatives (McGuffin, Riley, & Plomin, 2001: 1232).

Ultimately, geneticists will identify impacts (or lack of impact) of the 30,000 human genes. Any trait that is universal constitutes a phenotype, a characteristic with genetic basis. For example, if the capacity for dissociation is universal, then this trait will be found to have genetic basis. Social scientists can contribute to this research through identifying universal features.

The Darwinian paradigm allows a theory explaining the origin of religious sentiment. The ritual healing theory argues that ancient hominids with dissociative capacities had survival advantages since they were better able to cope with the psychological effects of trauma. As dissociative genotypes increased, hominids devised therapeutic rituals using these capacities, further increasing the frequency of dissociative genotypes (McClenon, 1997a, 2002a). Eventually, *Homo sapiens* linked rituals with language, coupling suggestions with altered states of consciousness (ASC). As a result, trance rituals shaped human hypnotizability, a genetically-based trait (Duke, 1969; Morgan, 1973; Morgan, Hilgard, & Davert, 1970). This process also shaped spontaneously occurring anomalous experiences, linked to dissociation. Such experiences, including

apparitions, waking and sleeping extrasensory perceptions (ESP), psychokinesis (PK), sleep paralysis, out-of-body experiences (OBE), and near-death experiences (NDE), generated beliefs in spirits, souls, life after death, and magical abilities. These beliefs provided the foundation for shamanism. Shamanism was humankind's first religion, practiced by all hunter-gatherer societies (Winkelman, 1992, 2000). As a result, folk religious traditions regarding spirits, souls, life after death, and magical abilities exist in all large societies (McClenon, 1997a, 2002a).

Shamanism is defined as a religious system in which practitioners go into trance to contact spirits thought to affect living people. Shamanism can be operationally defined as including specific characteristics identified in the anthropological literature (Winkelman's (1992: 48). Paleolithic rock and cave art, indicating use of altered states of consciousness, suggests that shamanism has been practiced for over 30,000 years (Lewis-Williams & Dowson, 1988). The existence of ritual and hypnotic processes in animals implies that hominids gained an increasing capacity to use altered states of consciousness in ritual during human evolution (Hoskovec & Svorad, 1969; McClenon, 2002).

Evolutionists note that physiological change can occur within relatively brief time spans. Lumsden and Wilson (1983: 152) argue that the coupling of genes and culture drove human evolution in a rapid manner. They argue that significant genetic changes have occurred within a mere 50 generations, or approximately 1,000 years. Human teeth and bone structure changed with advances in Paleolithic technology, illustrating the effect of culture on human evolution. Increasing lactose tolerance, associated with human domestication of cattle, occurred within the past 10,000 years.

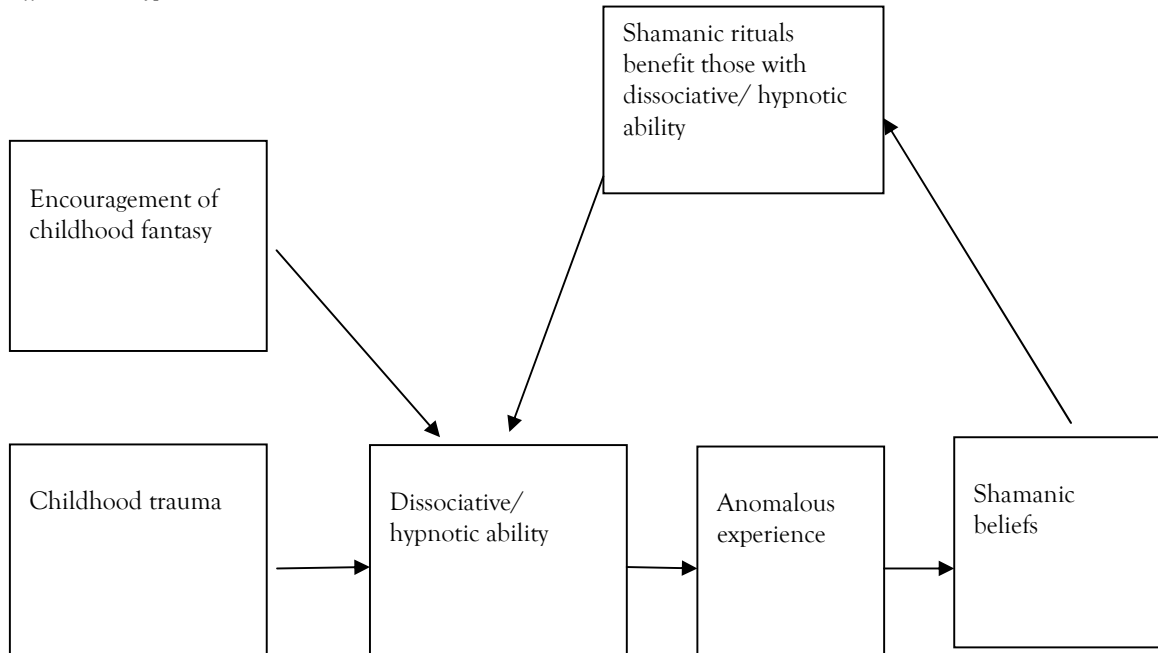
The ritual healing theory does not argue that humankind gained direct benefits from psi. It does not pass judgement on the authenticity of psi or other exceptional claims. It argues that certain anomalous experiences have universal features reflecting their physiological bases and that belief in ideologies associated with these experiences facilitate therapeutic rituals. These rituals provide greater benefits to those with dissociative/hypnotic capacities.

Dawkins (1999) explains the evolutionary orientation by noting that genes are like oarsmen in a racing boat. After a number of races, the winning oarsmen (genes) are randomly assigned to new boats (bodies) and the races continue. All boats contain incompetent oarsmen but there is a tendency for skillful teams to win. Genotypes, groups of genes with a specific purpose, are like oarsmen teams fulfilling complex functions. Such teams are often effective only in certain environments. The ritual healing theory argues that oarsmen allowing dissociation and hypnosis proved valuable during humankind's era of evolutionary adaptation. These winning dissociation/hypnosis teams contained members facilitating trance, apparitions, ESP, PK, OBE, NDE, and other anomalous perceptions sustaining shamanism. Ultimately, oarsmen teams were shaped to allow the modern propensity for religion.

Irwin (1992, 1993) provides a model hypothesizing relationships between psychological variables and cultural factors of particular interest to parapsychologists. His model can be modified to coincide with the evolutionary paradigm and to portray the ritual healing theory (see Figure 1). Within this model, "encouragement of childhood fantasy" and "childhood trauma" affect "dissociative ability." Paleolithic people (particularly children) with dissociative ability had greater survival advantages when exposed to trauma than those lacking this ability. Over time, genotypes associated with dissociation increased. These genotypes are linked to various anomalous experiences that generate beliefs providing the ideological foundation for shamanism (McClenon, 1997a, 2002a). Because shamanism involved therapeutic rituals that provided greater benefits to those with dissociative capacities, the frequency of dissociative genotypes continued to increase and be shaped by ritual process.

Using Dawkin's (1999) metaphor, dissociation genotypes contain oarsmen allowing anomalous experiences. Over time, the compositions of these teams were shaped by evolutionary selection, governed by ritual suggestion. Genotypes (oarsmen teams within each boat) related to dissociation/hypnotizability increased because they contributed to survival (the boat's victory). Because oarsmen on these teams facilitated trance and other anomalous experiences, shamanism developed in all hunter-gatherer societies.

Shamanic
effectiveness hypothesis



Trauma/dissociation hypothesis
Dissociation/anomalous experience source hypothesis
Experiential hypothesis

Figure 1: Ritual Healing Theory

Dissociative/hypnotic capacities could not increase infinitely because these traits had negative consequences. Highly dissociative people are fantasy prone and tend to suffer from psychosomatic and dissociative identity disorders. Not all such people recover when treated by shamanic ritual. The ritual healing theory portrays a process where those with moderate levels of dissociative/hypnotic capacity have optimal survival advantage.

The ritual healing theory can be evaluated within the context of four broad hypotheses: (1) The trauma/dissociation hypothesis specifies a positive correlation between childhood trauma and dissociative/hypnotic capacities (2) The dissociation/anomalous experience hypothesis specifies positive correlations between dissociative/hypnotic processes and incidence of anomalous experiences. (3) The experiential source hypothesis specifies that certain anomalous experiences instill belief in spirits, souls, life after death, and magical abilities. (4) The shamanic effectiveness hypothesis argues that ritual healing can be effective due to hypnotic and placebo effects.

THE TRAUMA/DISSOCIATION HYPOTHESIS

This hypothesis specifies that incidence of childhood trauma and neglect are correlated with capacity for dissociation and hypnosis. It is almost axiomatic within the therapy literature that traumatic events cause some children to develop dissociative capacities (Albini and Pease, 1989; Fink, 1988; Putnam, 1985; Spiegel, 1986). Although excessive use of dissociation results in identity disorders (Ross, 1997), dissociation is not

intrinsically pathological but is related to fantasy and imaginative ability (Putnam, 1991). The “dissociation benefit” argument, used within the ritual healing theory, is based on two assumptions: (1) Dissociation can protect against negative effects of stress. (2) Humans used this mechanism for sufficient time that related genes become more widespread.

Terms within the above hypotheses have been defined and operationalized. Dissociation is defined as “experiences and behaviors that exist apart from, or have been disconnected from, the mainstream of one's conscious awareness, behavioral repertoire, and/or self-concept” (Krippner, 1994: 357). Hypnosis is “a psychophysiological condition in which attention is so focused that there occurs a relative reduction of both peripheral awareness and critical analytic mentation, leading to distortions in perception, mood, and memory which in turn produce significant behavioral and biological changes” (Wickramasekera, 1987: 12). Standardized scales allow evaluation of childhood trauma (Kent & Waller, 1998; Sanders & Becker-Lausen, 1995), capacity for dissociation (Lynn and Rhue, 1994) and hypnotic suggestibility (Fromm and Nash, 1992).

The ritual healing model recognizes that dissociative/hypnotic genotypes have been shaped by both natural and cultural factors (such as “encouragement of childhood fantasy”) and that, as a result, “nature” and “nurture” cannot be completely differentiated. Modern evolutionary psychologists recognize that ecology and culture are linked since both elements shaped evolutionary selection.

Frequency of anomalous experience should be positively correlated with childhood trauma and neglect ~ with dissociative capacity as a mediating variable. The ritual healing theory does not specify a causal linkage. Dissociation does not necessarily *cause* anomalous experience and the reason for the hypothesized correlation is not specified. Dissociative genotypes may include genes facilitating anomalous experience and similar cognitive processes may generate dissociative and anomalous perceptions.

The term *anomalous experience* refers to specific forms of perception, having similar identifying features in all societies. Anomalous experiences include apparitions, waking and sleeping ESP, PK, OBE, NDE, and sleep paralysis. Scales measuring the incidence of these perceptions are described in peer-reviewed journal articles (McClenon, 1994, 2002; Kumar and Pekala, 2001).

Psychical researchers can evaluate hypotheses specific to their areas of expertise: (1) Groups claiming higher levels of anomalous experience should report higher rates of childhood trauma and neglect. (2) Samples of psychic practitioners and spiritual healers, who tend to use trance and dissociative techniques, should report higher levels of childhood trauma and neglect than general populations.

Ethologists (observers of animal behavior) might investigate additional hypotheses. The ritual healing theory predicts that dissociative and hypnotic capacities exist in alternate forms in various animals. Dissociative capacities aid these animals when confronted with certain stressful stimuli. For example, some animals react to threats using the Totstell reflect, often called “animal hypnosis” since it is parallel to human hypnosis (Hoskovec & Svorad, 1969). These animals “play dead,” adapting unusual forms of consciousness in order to avoid predators’ attacks. Such startle responses include rapid changes in consciousness, paralysis, and the “sleepy” appearance associated with human hypnosis. Ethologists note that repetitive, non-verbal rituals function as “hypnotic” inductions for some animals. Völgyesi (1966) induced trance in primates using non-verbal, repetitive techniques suitable for humans.

THE DISSOCIATION/ANOMALOUS EXPERIENCE HYPOTHESIS

The ritual healing theory argues that: (1) Researchers should find significant correlations between frequency of anomalous experience, dissociative experience, temporal lobe signs, transliminality, and cognitive openness (variables that might be regarded as part of a “shamanic complex”). (2) Researchers can observe universal features within spiritual healing rituals related to these variables.

Much evidence supports these hypotheses. Research indicates that the propensity for anomalous experience, hypnosis, dissociation, fantasy proneness, temporal lobe lability, and thinness of cognitive boundaries are inter-correlated (McClenon, 1994, 2002a; Targ, Schlitz, & Irwin, 2000). This literature

supports the argument that a “shamanic complex” governs the nature and incidence of shamanism.

(1) Dissociation and Paranormal Experience

Various researchers have found positive significant correlations between dissociative capacity and frequency of paranormal and anomalous experience (Pekala et al., 1995; Ross & Joshi, 1992; Ross et al. 1991; Richards, 1991). Richards' (1991) findings are typical. He concluded that the dissociation was most correlated with waking clairvoyance, precognition, apparitions, psychokinesis, and volitional telepathy. He argues that out-of-body experiences, trance channeling, and contact with spirit guides imply dissociative processes (as indicated by high significant correlations).

(2) Hypnotizability and Paranormal Experience

Kumar and Pekala (2001: 275-276) summarize findings regarding hypnotizability and paranormal experience: “A total of 23 correlations were reported in 11 different studies.... three were reported as nonsignificant ($-.20$, $p > .05$; $.13$, $p > .001$; [and one did not report an r value but reported that it was non-significant]; the rest varied between $.17$ and $.55$ (all at least $p < .05$). The median correlation (excluding the negative value) was $.31$. Studies.... examining group differences in experiences also support a relationship [except for one study] in the sense that participants with high hypnotizability tend to report a greater number of experiences than those with low hypnotizability.”

(3) Shamanic Complex

Other variables, correlated with each other, hypnosis, and dissociation, have been found significantly correlated with frequency of anomalous experience. Thalbourne and Delin (1994, 1999) conducted a principal-components analysis of variables such as belief in paranormal phenomena, magical ideation, manic and depressive experiences, and scores on a creative personality scale. They found that a single factor accounted for 52.5% of the variance in one study and 54.2% in a replication. They labelled this factor “transliminality,” the degree to which there is a gap in the barrier or gating mechanism between the unconscious (subliminal) and conscious mind (Thalbourne, et al., 1997). Transliminality was highly correlated with a measure of mysticism, and people who were high in transliminality were more susceptible to incursions of ideational and affective input from subliminal regions (Thalbourne & Delvin, 1999).

Hartmann (1991) conducted parallel studies, linking cognitive processes with anomalous experience. He hypothesized positive correlations between a measure of “thinness” of cognitive boundaries and factors equivalent to transliminality. He defined cognitive boundaries as barriers to the spontaneous flow of images and information within the brain. People with thin boundaries have the sense of merging with their perceptions. They reveal greater fluidity of thoughts and feelings since they have fewer barriers or walls separating them cognitively from the world. Thin cognitive boundaries allow hypnotic suggestions to affect unconscious processes, a characteristic associated with certain pathologies. Thinness facilitates the flow of anomalous perceptions into conscious awareness; as a result, those revealing thin boundaries on Hartmann's scale tended to report more frequent anomalous experiences and to be more hypnotizable (Hartmann, 1991).

Persinger and his associates conducted a series of studies indicating that responses to questionnaire items related to temporal lobe epilepsy (temporal lobe signs) are related to specific EEG patterns indicating temporal lobe lability (Kakarec & Persinger, 1990). These responses correlated with the propensity to report anomalous and religious experiences (Persinger, 1984a, 1984b, Persinger & Makarec, 1987, 1993; Persinger & Valliant, 1985). This body of evidence supports the argument that the propensity for anomalous experiences has physiological bases and is linked to other cognitive processes.

Studies linking frequency of anomalous experience with other parameters support arguments for the existence of a shamanic complex (McClenon, 1994, 2002a). Anthropologists observe that people with a propensity for anomalous experience often suffer from psychologically based disorders and culturally specific

pathologies (often attributed to spiritual forces). Such people may be healed by spiritual practitioners and, as part of this process, become spiritual practitioners themselves (Lewis, 1971). Shamanic healing rituals include elements involving hypnotic induction, suggestion, and changes in self-concept that seem designed to benefit those scoring high on shamanic complex variables.

EXPERIENTIAL SOURCE HYPOTHESIS

The ritual healing theory hypothesizes that physiologically-based anomalous experiences generate beliefs in spirits, souls, life after death, and magical abilities. Experiential source hypotheses are particularly amenable to evaluation by psychical researchers. Psychical researchers could replicate previous findings regarding anomalous experience: (1) Collections of anomalous accounts from any society should include stories regarding apparitions, waking ESP, paranormal dreams, psychokinesis, out-of-body experience, sleep paralysis, synchronicity, and spiritual healing. Universal features within these accounts imply physiological bases. (2) Apparitions, waking ESP, and paranormal dreams have structural features related to recurring elements and altered states of consciousness associated with family, death, temporal factors, and conviction, a finding implying physiological basis for these episodes (3) People who report one experience are more likely to report multiple experiences and to reveal particular beliefs and behaviors as a result. Although culture shapes experiencers' interpretations and reporting of any particular experience, experiential source hypotheses specify that physiologically-based, universal elements within accounts shape folk religious beliefs in a common direction in all societies.

Hufford (1982) developed early experiential source arguments. He described a dominant social scientific assumption that he termed the "cultural source theory." This orientation argues that anomalous accounts are merely cultural products, having no basis beyond the experiencer's own belief system. He set forth an alternate paradigm, the experiential source theory, arguing that some forms of anomalous experiences generate and shape folk religious traditions, independent of culture. Hufford's (1982) findings regarding sleep paralysis strongly supported the experiential source position.

McClenon's (1994) analyses of apparitions, waking ESP, paranormal dreams, out-of-body experiences, psychokinesis, synchronicity, and other anomalous episodes extended Hufford's arguments. These forms of anomalous experience reveal similar defining elements in all societies, bringing about parallel beliefs in spirits, souls, life after death, and magical abilities (McClenon, 1994, 2002a). For example, people who link an apparition or psychokinesis to a deceased person often come to believe in an after-life. Those who report an out-of-body experience are more likely to accept the existence of souls. Near-death experiences are particularly powerful for inducing belief in an after-life among non-believers. Those who report ESP episodes are more likely to believe in magical abilities. Although surveys establish correlations between experiences and belief, the direction of causality can be better investigated through interviews and participant observation.

Analyses of survey responses from Japan, China, Europe, and the USA reveal that all groups report ESP and contacts with the dead (McClenon, 1994). Collections of narrative accounts from Finland, Germany, Great Britain, and the USA indicate that people from different cultures report similar forms of apparitions, waking ESP, paranormal dreams, psychokinesis, out-of-body experience, and synchronicity (McClenon, 1994). Anomalous stories were classified into clearly defined categories using reliable coding systems (McClenon, 1994, 1997b, 2000). The data implied that these forms of anomalous experience have physiological basis, just as do dreams and trance perceptions. Dominant social scientific positions arguing that anomalous experiences are totally produced by culture are clearly false.

Studies also indicated that waking extrasensory perceptions, paranormal dreams, and apparitions have inherent structural features, consistent among cultures (McClenon, 2000). This evidence implies physiological bases for these cognitive events. Analysis of collections from Finland, Germany, China, and the USA revealed that: (1) ESP tends to pertain to family members. (2) Death is often an important theme within ESP accounts. (3) Paranormal dreams tend to pertain to future events while waking ESP tends to

pertain to present events. (4) Waking ESP tends to generate greater conviction, indicated by the respondent taking action, than do paranormal dreams. (5) Paranormal dreams tend to provide more information than do waking ESP episodes. (6) There is a tendency for “quality of information” to be negatively correlated with “severity of event” within paranormal dreams. Paranormal dreams often fail to reveal the identity of a person who died, while providing more complete information for events not associated with death. (7) Apparitions contain similar “abnormal features of perception” in all societies. These features include disappearance of image, insubstantial image, glowing image, white or black clothes, sickly or deformed image, partial body, abnormal walking or floating, and abnormal sound (Emmons, 1982; McClenon, 1994).

Correlational studies verify links between anomalous experience and belief (Pekala, Kumar, and Cummings, 1992; Targ, Schlitz, and Irwin, 2000) and qualitative studies indicate that many people report that anomalous experiences create specific beliefs (McClenon, 1994). Although a dominant paradigm within religious studies portrays anomalous experiences as products of belief, tests of this argument consistently demonstrate it to be false (Hufford, 1982; McClenon, 1994). For example, historical analysis of Icelandic mediumship revealed that psychic experiences and performances transformed Icelandic religious traditions in an innovative direction (Swatos and Gissurason, 1997).

Social-psychological research indicates that attitudes formed by direct experience are stronger than those gained through other means, and that experience-based attitudes are better predictors of later behavior than attitudes gained through other means (Millar and Millar, 1996). People reporting frequent anomalous experiences reveal particularly robust belief-systems that we would expect to affect their behavior. Researchers have found that anomalous experiences are not distributed normally – that the majority of experiences are reported by a small segment of any population. Such people tend to hold powerful convictions regarding spirits, souls, life after death, and magical abilities (Greeley, 1995, 1987; McClenon, 1994; Palmer, 1979).

Psychical researchers can engage in participant observation, designed to monitor creation of belief through experience. Some methods allow semi-controlled conditions. “Sitter groups” investigate PK through table tipping experiments (Batchelder, 1966, 1979, 1984; Owen & Sparrow, 1976). These groups sit regularly, often once a week, for an hour or more, with their hands on a table, seeking to generate psychokinetic effects. Groups often report anomalous table movements and unexplained auditory “rapping” thought to be generated by spirits. Although observational results have bearing on parapsychological theories, it is often impossible to verify psi within these settings. Whether authentic or not, people report that “sitter group” psi affects their beliefs.

The processes by which sitter groups generate belief through experience are similar to processes observed by anthropologists within shamanic groups. Shamanic, spiritualist, and sitter groups seem to experience similar forms of psychic phenomena even though cultures vary (McClenon, *in press*). Participants report seeing spirit lights, perceiving objects moving magically, hearing unexplained sounds and voices, and even feeling the whole room shake as during an earthquake. Psychical researchers could contribute to the anthropological literature regarding shamanism, anomalous experience, and belief (Young and Goulet, 1994). Such evidence refutes cultural source hypotheses and supports experiential source hypotheses.

Ethnographers can conduct haunting and poltergeist investigations within this paradigm. They should find that haunting and poltergeist experiences occur more often among those reporting previous anomalous experiences, that haunting accounts contain culturally universal features, and that resulting stories contribute to recurring features with folk religious traditions (McClenon, 2001).

THE SHAMANIC EFFECTIVENESS HYPOTHESIS

The ritual healing theory argues that shamanic ritual provides benefits to clients through hypnotic and placebo effects. It does not specify that paranormal events are impossible or that hypnotic and placebo effects are the *only* benefits that ritual healing provides. The shamanic effectiveness hypothesis specifies that people with shamanic complex traits tend to gain greater benefits from shamanic rituals.

Much evidence supports the shamanic effectiveness hypothesis. It is almost axiomatic within anthropology that spiritual healing can be effective due to psychological processes (Bergman, 1973; de Montellano, 1975; Finkler, 1985; Garrison, 1977; Harner, 1973; Kapferer, 1983; Kleinman and Sung, 1979; Kleinman, 1980; Laderman, 1987, 1991; Lambo, 1974; Moerman, 1979; Sharon, 1978; Vogel, 1970). This argument coincides with findings from the emerging fields of psychoneuroimmunology and mind-body medicine: health is influenced by psychological states affected by suggestion (Benson, 1996; Friedman, Klein, & Friedman, 1996).

Much evidence implies that spiritual healing effectiveness is due, in part, to hypnotic and placebo effects (McClenon, 1997a,b, 2002a). Ritual healing symptoms, procedures, and outcomes parallel those associated with hypnotic processes. Rituals induce altered states of consciousness (ASC) through sensory restriction or overload, fasting, ingesting drugs, repetitive movements, dancing, drumming, chanting, prayer, and prolonged postures. ASC, coupled with suggestion, typically constitute hypnosis. Cognitive states associated with shamanism are linked to hypnosis: alterations in thinking, changes in sense of time and body image, loss of control, changes in emotional expression, perceptual distortions, changes in meaning and significance, sense of ineffability, feelings of rejuvenation, and hypersuggestivity (Ludwig, 1966).

Paleo-anthropological evidence implies a link between ritual and ASC. This should be expected since repetitive rituals tend to induce ASC. Specific features within Paleolithic cave paintings, produced over 30,000 years ago, indicate that ancient peoples induced ASC (Lewis-Williams and Dowson, 1988). Paleolithic people, over 50,000 years ago, cared for their sick and engaged in symbolic actions seemingly for their benefit. Shamanism, having physiological basis, provided the foundation for all later religious forms (Winkelman, 1992, 2000). The ritual healing scenario encompasses sufficient time that shamanism would have affected the frequency of genotypes related to this process. With the invention of writing, humans left evidence connecting ritual healing and hypnosis. Ancient texts provide "abundant evidence which shows that hypnosis or a similar induced ASC was used in ancient Greece, Egypt, India, China, Africa, and pre-Columbian America" (MacHovec, 1975:215).

A content analysis of anomalous experience narratives implies that, among the various forms of experience, spiritual healing has had the greatest impact on human evolution. Judges evaluated 1215 anomalous experience narratives, determining the degree each account indicated positive emotion (which implies evolutionary benefit) and "direct benefit." Among the experience types, spiritual healing accounts were most associated with evolutionary benefits while waking and sleeping ESP were often linked to social costs (McClenon, 2002b).

Various studies indicate relationships between dissociation, ritual, and healing. Krippner (1994) reviewed studies of patients with dissociative identity disorders who benefited from ritual treatments and portrayed dissociative processes within spiritual healing. Krippner and Colodqin (1989) noted the use of Native American and Oriental healing methods to treat combat veterans with posttraumatic stress disorders. Goodwin, Hill, and Attias (1990) encouraged psychotherapists to familiarize themselves with historical and folk techniques of exorcism since these techniques might be adapted to treat dissociative disorders. Anthropologists describe processes within spiritual healing that imply hypnosis and dissociation (McClenon, 2002a). Csordas (1997), for example, linked successful spiritual healing among charismatic Christians with transformations of identity. The processes he described seem related to the shamanic complex. A person suffering from psychosomatic symptoms may be healed through gaining a healthy identity. Psychical researchers can contribute to this literature by documenting the types of individual that are more likely to benefit from magical therapeutic performances.

Symptoms treated through spiritual healing and hypnosis coincide. Clinical studies indicate that hypnosis is particularly effective for pain, asthma, warts, headache, burns, bleeding, gastrointestinal disorders, skin disorders, insomnia, allergies, psychosomatic disorders, and minor psychological problems (Bowers and LeBaron, 1983; Brown, 1992). Folk healing methods also effectively deal with these problems, often through suggestion. Researchers note that hypnotic suggestion does not require trance induction to be effective. Hypnosis can change the response of human skin to heat, probably through reducing edema and fluid retention following thermal injury (Margolis et al. 1983). It can also accelerate healing - perhaps

through mechanisms involving hypnotic control of blood flow (Chapman, Goodell, and Wolff, 1959; Ullman, 1947, Moore and Kaplan, 1983; Barber, 1984). This process may explain some of the extremely anomalous healing stories found in all societies (McClenon, 2002a). For example, patients may cut off blood flow to cancerous tumors as a result of hypnotic suggestion, causing cancerous growths to wither away.

The argument that spiritual healing generates hypnotic and placebo effects does not preclude the possibility that unexplained processes may also occur. The ritual healing theory takes no position regarding the existence of magical or psi effects. Psychic researchers have investigated various unusual phenomena associated with shamanism and spiritual healing. Such phenomena include alleged extrasensory perception, psychokinesis, and firewalking. The ritual healing theory argues that such perceptions contribute to hypnotic and placebo healing since they inspire belief. Psychical researchers can document the effects of these performances on people's belief. People witnessing and accepting psychic performances are predicted to benefit more from associated therapeutic suggestions than those not exposed or believing. Healed people should reveal more dissociativity, hypnotizability, frequency of anomalous experience, temporal lobe lability, and thinner cognitive boundaries than those not healed.

CONCLUSIONS

The ritual healing theory provides a variety of hypothesis that psychical researchers can test. These hypotheses pertain to spontaneous anomalous experience, spiritual healing, and anomalous performance. The ritual healing theory allows researchers to transcend conflicts between skeptics and believers regarding the authenticity of psi, and facilitates the investigation of anomalous claims within mainstream scientific paradigms. This orientation can contribute to the scientific study of religion and lead to more effective treatments of psychologically influenced disorders.

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