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Editor's Foreword

This issue's lead article is a theoretical essay by Malaysian sociologist Raymond Lee, in which he compares consciousness in the dream state with consciousness in dying, and the light seen in near-death experiences (NDEs) with the clear light encountered in dream yoga. Lee presents the case for the two experiences of light being related phenomena, but suggests that dream yoga, which fosters a unitary experience of being one with the light, imparts an understanding of the continuum between mind and light, whereas NDErs often experience the light in dualistic terms as a distinct entity separate from the self.

Next, Dutch anesthesiologist G. M. Woerlee argues that NDEs experienced during cardiac arrest are explicable entirely by the known physiology of oxygen deprivation. Woerlee outlines physiological explanations of many features common to NDEs, including veridical perceptions during periods of "flat" EEGs; and he suggests that a reductionistic physiological interpretation is compatible with the NDE's profound, life-changing aspect.

Next psychologist William Roll presents the results of a pilot study of evocation of deceased entities with a psychomanteum, a technique introduced by Raymond Moody (1993). He reports that "reunion" experiences in the psychomanteum are associated with previous experiences of contact with the deceased, and can help alleviate bereavement. Then English professor Stafford Betty revisits psychoanalyst Carl Jung's interpretation of the NDE described by one of his patients as a prime example of what Jung called *synchronicity*. Betty argues that the concept of synchronicity introduced needless confusion into the interpretation of NDEs, and he suggests a more straightforward, causal interpretation.

Finally, psychologist John McDonagh extends the suggestion by Austrian psychologist Engelbert Winkler (2003) that information about NDEs may be helpful in treating suicidal clients. McDonagh, who first presented this concept at an American Psychological Association conference a quarter century ago, discusses ethical issues in introducing spirituality into the psychotherapeutic relationships and also notes the value of NDE-related material for bereaved clients.

This issue of the Journal includes a book review by psychologist Clark Power of psychologist John Gibbs' *Moral Development and Reality*, which uses NDEs to suggest a inherently moral reality undergirding our ordinary experience of morality. We also include two letters to the editor: NDEr and author P. M. H. Atwater challenges the comparison by physician Jeffrey Long and attorney Jodi Long (2003) of NDEs occurring before and after 1975, and warns about the risks of relying solely on Internet surveys rather than face-to-face interviews; and psychologist Charles Tart corrects the assumption by psychologist Ken Vincent (2003) that Tart had coined the term *scientism*, notes the much earlier provenance of that term, and mentions some other common terms in our field that he *did* invent. We end this issue of the Journal with the obituary of parapsychologist and author Raymond Bayless, whose work popularized research into the question of survival of bodily death.

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Bruce Greyson, M.D.

The Reimagination of Death: Dream Yoga, Near-Death, and Clear Light

Raymond L. M. Lee, Ph.D.
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ABSTRACT: This article brings together three areas of research on disembodied consciousness: death, near-death, and dreaming. Research on lucid dreaming suggests that there is a close connection between consciousness in the dream state and that experienced in dying. More specifically, it is dream yoga as a special form of lucid dreaming that relates to the near-death experience (NDE) as the occasion for encounter with the clear light. I discuss the meaning of the clear light in dream yoga and in the NDE in order to inquire into the interpretation of its role in spiritual emancipation.

KEY WORDS: near-death experience; dying; dream yoga; clear light; Tibetan Buddhism.

Death terrorizes and fascinates us regardless of race, creed, or religion. The terror of death keeps us in denial of our inevitable demise. At the same time, it enthralls us with its mysterious power to take us beyond this life. Reports of the near-death experience (NDE) have given us a brief insight into this power. The NDE reinforces the view that dying is not the end of life but a transition to new levels of existence. It allegedly provides a glimpse into the meaning of self-renewal in other dimensions of existence. The old physical self is left behind but the new self enters other worlds to gain nonphysical perspectives of existence. However, the NDE is only a temporary sojourn to the other worlds because the new self soon returns and reverts to the old physical self. It is like entering a dream to experience unusual worlds and then waking up to a life of mundane routines.

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Unlike dreaming, however, the NDE empowers a radical transformation in a person's life.

In a contemporary spiritual classic *The Tibetan Book of Living and Dying*, the Tibetan lama Sogyal Rinpoche (1992) devoted an entire chapter to the NDE (pp. 319–336). He explained that his teacher, Dilgo Khyentse Rinpoche, referred to the NDE as belonging to the “natural bardo of this life” (that is, our lifetime between birth and death) because the consciousness of the near-death experiencer (NDER) was still tied to this world and wandering temporarily in other realms. Moreover, the NDER was merely standing on the threshold of the other bardos without actually entering them and returning to this life (Rinpoche, 1992). According to Tibetan Buddhist teachings, the bardos are the intermediate states experienced during and after dying (Rinbochay and Hopkins, 1979; Lama Lodö, 1987).

By comparing the NDE to the bardo states, Rinpoche (1992) came to see many similarities between the NDE and the bardo of becoming (*Sipai Bardo*), the bardo that occurs just before a deceased person takes rebirth in one of six realms (gods, demigods, humans, animals, hungry ghosts, and hell beings). These similarities include out-of-body experiences, invisibly watching living relatives, clairvoyance, meeting dead people, and so on. Like the deceased person, the NDER is exposed to the clear light or ground luminosity (*dharmakaya*) but if he or she is not trained to recognize it as the natural or primordial mind, then the experiencer will not attain ultimate liberation. The deceased person moves on to other bardo states and eventually takes rebirth in one of six realms. The NDER, on the other hand, returns to the human realm but does not forget the encounter with the clear light. Rinpoche (1992) explained that the clear light is the all-encompassing space of truth that is beyond birth and death, signaling the supreme moment for liberation from all worldly existence. His explanation suggests that the NDE does not represent a merging with the clear light; otherwise it would not be considered an NDE but a death experience resulting in liberation.

Since the NDE is, according to the Tibetan Buddhist perspective, merely a peripheral experience of death and the clear light, it is actually like an unplanned expedition into the bardo realms. For that reason, such an experience is somewhat akin to dreaming where the dreamer wanders into uncharted territories of consciousness. In fact, Rinpoche (1992) pointed out that “How your mind is in the sleep and dream state indicates how your mind will be in the corresponding bardo

states... . This is why the yoga of sleep and dream plays such an important part in the preparation for death" (p. 108). In other words, there is something about dreaming and near-death that connects to the consciousness in dying.

We often hear of people dying in their sleep as if they departed in their dreams. If these people had generally been in good health and there was no specific medical reason for their deaths, the most logical conclusion would be their hearts stopped functioning; that is, they experienced a fatal heart attack while asleep. Assuming that their consciousness was not interrupted by the trauma of heart failure, would this suggest that their consciousness in dreaming could have converged with their consciousness in dying? If we take all the studies of the NDE as plausible evidence for the survival of consciousness after death, we can reasonably speculate that the state of mind in dying and that in dreaming are of the same mental continuum since both are consequences of the disembodiment of consciousness.

In our everyday lives, we tend not to make any connection between dreaming and dying. Rather, we expect to awake from dreaming but not from dying. This expectation is ingrained in most people because of the naïve assumption that death marks the end of consciousness and therefore cannot be seen as continuous with dreaming. The NDE provides a very strong case against such an assumption. Since the NDE demonstrates the dynamism of consciousness without active support of the physical body (Sabom, 1998), it is not too farfetched to imagine its parallel with dreaming which is possible only under conditions of physical inertness. The stilling of the physical body in near-death and sleep is, perhaps, a necessary condition for the increased activation of consciousness to levels not usually experienced in ordinary waking life. This is not a new observation. In many shamanic cultures, dreaming and dying are not sharply distinguished to produce a compartmentalized view of life and death. Shamans in these cultures may enter a trance comparable to an NDE for several hours or days in order to empower their consciousness to reach other realms of existence (Eliade, 1964).

What makes near-death comparable to dreaming is that both phenomena are experienced under conditions in which reality is perceived without reference to the physical body. The consciousness of the NDEr and dreamer continues to function, perhaps even in an enhanced mode, as if it were totally independent of the physical body. This apparent separation between body and mind in the NDE and dreaming suggests the possibility of disembodied consciousness as an

alternative source of reality formation. Parallels between the NDE and dreaming can be thought of as the perception of reality by disembodied consciousness not dissimilar to the Tibetan Buddhist theory of bardo consciousness. The aim of this article is to explore these parallels in order to address the continuity of states of mind experienced in waking life, dreaming, and dying.

The Stuff of Dreams

Like death, dreams fascinate and terrorize human beings. We are intrigued by the surreal nature of dreaming and frightened by nightmares. This ambivalence toward dreaming is partly influenced by the way the modern mind bifurcates consciousness into a waking state defined as *the* embodied reality and a dreaming state construed as far from real.

The Freudian analysis of dreams exemplifies this bifurcation (Freud, 1954/1900). Dreams represent the unspoken, repressed aspects of the waking state. They are formed in the unconscious moments of sleep, their contents derived from inexpressible desires not monitored by the sleeping mind. Unlike the rational processes of the waking state, dreaming disguises all sorts of thoughts that seek expression during the mentally unguarded hours of sleep. These thoughts include a combination of recent and distant memories of events that are warped in such a way as to give unconditional release to repressed impulses in circumstances where consciousness cannot function as a watchdog. Thus, dreaming is not considered real in the sense that the dream referents, while grounded in the events of waking life, are not logically related as in the mundane relations of everyday life. Put another way, dreams are bizarre movies about our hidden motives in the ordinary waking world. Fascination with dreams is, therefore, a way of dealing with the meaning of dreams for the accomplishment of social relationships in the physical world. But the terror of dreaming, especially nightmares, lies in the unreal or surreal nature of dreaming where control is lacking for interpreting or manipulating events.

This type of theorizing about dreams has already been challenged by the work of David Foulkes and other dream researchers in the 1960s (Foulkes, 1964). Basically, the challenge lies in the contention that it is naive to assume clearly discrete moments of pristine conscious activity as found in the waking state and of vague, unrealistic thought processes as found in the dreaming state. Research from that period

suggests that differences in consciousness between waking and sleeping moments cannot to be taken as absolute. In the words of Foulkes (1964, p. 240): "Apparently no point of absolute dream onset exists, in the sense that there is no point in the sleep cycle at which consciousness suddenly appears. It seems to be there all along." Empirical findings from this research have shown that background thoughts in waking experience come to life as dreams not during rapid eye movement (REM) sleep but rather in non-REM sleep, in the period preceding REM sleep associated with fertile dream activity. However, dreaming in early REM sleep may contain distorted elements of waking experience but not necessarily related to unfulfilled desires or personal problems. In short, dreaming is a complex unfolding of consciousness in multiple directions that are not yet fully understood.

In the light of the above challenge, the question of dream consciousness has become even more intriguing because we can now ask whether dreams can be manipulated at will, since the difference between waking and dreaming moments need not be perceived as absolute. Charles Tart, a well-known psychologist in sleep and dream research, reported a type of dream he called "high dream" that dissolved boundaries between sleep, dreaming, and waking. Tart defined the "high dream" as

an experience during sleep ... in which you recognize *during* the dream that you are in an altered state of consciousness which is similar to (but not necessarily identical with) the high induced by a chemical psychedelic. It is important to emphasize that it is not the *content* of the dream, but *what* is dreamed about that distinguishes the high dream from the ordinary dream: one could dream of taking LSD, e.g., without the change in the mental processes that constitute the high dream, just as one can dream of waking up without it being a lucid dream. (Tart, 1972, p. 174).

This state of high feeling may not vanish at the end of dreaming but actually carry over into the waking state. To what extent a high dream can be manipulated by a dreamer who is aware of the condition is an area open to investigation.

Although a high dreamer may recognize his or her peculiar condition, it is the lucid dreamer who simultaneously becomes aware of dreaming and involved in testing and changing the dream environment. Lucid dreaming differs from the high dream in the way rationality spontaneously enters the dream state to affect the dreamer's perception so clearly that the dreamer is not only awake in his or her dreams, but is also emotionally high without necessarily

making any reference to chemical psychedelics or hallucinogens. Waking up in one's dreams introduces a type of consciousness that is exhilarating and receptive to the continuity between sleeping and waking. There is a growing literature in this field of dream research and practice (Green, 1968; Green and McCreery, 1994; LaBerge, 1985; LaBerge and Rhinegold, 1990). What is important to note in this literature is the emphasis on the high degree of freedom available to the dreamer to test and change the dream scenarios. Lucid dreaming opens up new dimensions of consciousness previously unknown to most people who assume dreaming to be unreal or lacking in substance as compared to the embodied experiences of waking life.

The quest for lucid dreaming is, on the one hand, a concerted effort to master the intricacies of inner space and, on the other hand, a continuing search for the meaning of higher consciousness. Mastering inner space has been a long-standing goal of humankind to probe and control the workings of the mind through various mystical and shamanic techniques. There is no systematic science of inner space in the same sense that one speaks of a medical science, physical science, or behavioral science. Because the mechanism of inner space draws upon the subtle qualities of the mind, any attempt to understand and manipulate it cannot be privileged by *reductio ad absurdum* methodologies. One cannot prove the falsity of walking through a mountain in a dream any more than one can disprove water is liquid. In other words, mastery of inner space does not comprise an exact science in the same manner as the methodologies of the natural sciences. For that reason, lucid dreaming is more appropriately defined as an art of dreaming that activates new patterns of mindfulness or awareness reaching into the unconscious.

In a lucid dream that I experienced, I was walking on a narrow garden path surrounded by high walls with no exits. As soon as I became aware that I was dreaming, I told myself that I should be able to walk through the wall. On my first attempt I knocked myself against the wall. Then I tried a different approach. I closed my eyes, relaxed and merged with the wall. I felt myself going through the wall, my dream body tingling with a strange sensation. Then I was on the other side of the wall. I was on a busy street and it was night. In becoming lucid I attempted to test the dream environment, as suggested by researchers of lucid dreaming, to assess the new levels of freedom in movement. Walking through walls was indeed a way of mastering inner space by experimenting with the newfound potential of disembodied consciousness.

The exploration of inner space through lucid dreaming provides a new view of reality concealed from the embodied perspectives of waking life. This new view of reality does not imply that the dream world is more real than the ordinary world in waking life. Rather, it demonstrates that a radical change in consciousness redefines the very nature of reality. Awakening in a dream leads to another level of consciousness that can turn surrealism into a living experience, just as being in a stupor has certain experiential consequences in waking life. A task of lucid dreaming is to attain realization of consciousness as an independent variable capable of penetrating the constructed nature of reality. The lucid dreamer should come to realize that walking through walls in a dream merely represents a way in which disembodied consciousness apprehends dream reality. This too is the aim of dream yoga, the technique for manipulating dreams in order to achieve a state of mind that transcends the compartmentalization of consciousness. In recent years, dream yoga of the Tibetan Buddhist variety has received wide attention (Norbu, 1992; Rinpoche, 1998). The Tibetan practice of dream yoga is not only meant to develop mindfulness in dreaming but also to rehearse for the moment of death. In Tibetan Buddhist teachings, there is a correspondence between sleeping, dreaming and dying. Thus, knowing how to dream provides the basis for knowing how to die. Manipulation of dreams is secondary to the higher goal of directing consciousness toward the clear light of death.

Dream Yoga and Clear Light

Dream yoga comprises special techniques for training the mind to develop awareness in dreaming in order to attain spiritual liberation. It is a method of meditation for cultivating disembodied consciousness to reach a state of realization that recognizes the clear light of sleep. In the Tibetan Buddhist system, sleep is regarded as analogous to death since it is taught that the primordial mind manifests as clear light during sleeping and dying moments. Although the clear light manifests in sleep, it is not considered as profound as the clear light encountered in death. According to the Dalai Lama,

the clear light of sleep is not as deep as the clear light of death. Vajrayana [Tantric] Buddhism speaks of five primary and five secondary types of vital energy, as well as gross and subtle aspects of these two sets of five. In the clear light of sleep, the grosser forms of these various energies dissolve, or withdraw, but the subtle forms do not. (Varela, 1997, p. 44)

In other words, practicing dream yoga to experience the clear light of sleep is a preparation for the more profound recognition of the clear light of death, when all the vital energies dissolve.

In this system of meditative realization, attaining the state of clear light is considered the highest spiritual goal because the clear light is asserted to be the ultimate reality that frees us from all worldly illusions and delusions. The doctrine of the clear light forms part of the Yogini or Shakti Tantras, which is traceable to Lawapa of Urgyan (now a region in Afghanistan) and later to Padmasambhava who introduced Buddhism to Tibet in the 8th century (Evans-Wentz, 1958). The clear light has been described in the following terms by Walter Evans-Wentz (1958, p. 166): "As being colourless, without qualities, It is the Clear Light; as being without limitations, It is All-Pervading Intelligence; as being unknowable in terms of *sangsāric* [phenomenal] consciousness, and without form, It is the Formless Void." Furthermore, Evans-Wentz explained that the clear light is momentarily experienced by all human beings at the time of death, but for Buddhas and masters of yoga the experience of clear light can be willed and maintained indefinitely. From the soteriological point of view, the opportunity to cultivate realization of the clear light while alive should not be ignored because in death this realization would not be available for the untrained mind.

The clear light also manifests in sleep but it is generally not noticed by the ordinary mind. The purpose of dream yoga is to awaken the sleeping mind in order to cut through the illusory nature of dreams, thus preparing the dreamer to encounter the clear light of sleep. In the words of the Dalai Lama:

In Tantric Buddhism or Vajrayana, there are four stages in the process of falling asleep, culminating in the so-called clear light of sleep. ... [A] person who is well trained in Vajrayana meditation can recognize a strict order in these four states of falling asleep, and is well prepared to ascertain an analogous order in the dying process. ... If you can recognize the dream state while in it, then you can visualize and deliberately reduce the grosser level of mind to return again to clear light sleep. At that point the subtlest level of mind—the clear light of sleep – is easier to ascertain. (Varela, 1997, p. 40)

More specifically, the Dalai Lama pointed out that:

The main purpose of dream yoga in the context of tantric practice is to recognize the dream state as dream state. Then, in the next stage of the practice you focus your attention on the heart center of your dream body and try to withdraw the vital energy into that center.

That leads to an experience of the clear light of sleep, which arises when the dream state ceases. (Varela, 1997, p. 129)

The Dalai Lama's exegesis on dream yoga is congruent with the doctrine of dreams as explicated in the Yogini Tantras. As Evans-Wentz (1958, p. 166) put it, "The whole purpose of the Doctrine of Dreams is to stimulate the *yogin* to arise from the Sleep of Delusion, from the nightmare of Existence, to break the shackles in which *māyā* [illusion] thus has held him prisoner throughout the aeons."

Hence, dream yoga as taught in these tantras is meant to train the practitioner to realize the dream state is no more illusory than the waking state. Once the practitioner is able to cut through the inauthenticity of both these states, realization of the clear light becomes possible:

By concentrating the mind upon the forms of the deities seen in the dream-state, and by keeping the mind free of thoughts, in the quiescent condition, the forms of the deities are attuned to the non-thought condition of mind; and thereby dawneth the Clear Light, of which the essence is of the Voidness. (Evans-Wentz, 1958, p. 222)

In the contemporary practice of dream yoga, techniques are taught not only for realizing the illusory nature of dreams, but more importantly to gain awareness of the clear light. For instance, Namkhai Norbu, a Tibetan master of the Dzogchen tradition, emphasized that developing clarity in dreaming helps to generate awareness of the natural light, which is similar to the clear light:

In the practice we do, there has to be an awareness of, or mastery of, the state of natural light. When one has an awareness of the presence of this state of natural light, then even if afterwards the state of dreams arises, one spontaneously becomes lucidly aware that one is dreaming while dreaming, and automatically one achieves mastery of one's dreams. This means that the dream does not condition the person, but the person governs his or her dream. For this reason, the practice of dreams is secondary, and I cannot overemphasize how extremely important it is to do the practice of the natural light. (Norbu, 1992, pp. 48–49)

The reason for his emphasis on the practice of the natural light in dreaming has to do with familiarizing oneself with the "mother light" or the clear light encountered in death. Thus, dream yoga prepares a person to gain instant recognition of the clear light at the moment of death, even though that person may not have achieved complete spiritual realization while alive. But practicing dream yoga in order to

establish some familiarity with the clear light is said to be an arduous process. A practitioner can develop awareness of the clear light only when he or she has become adept in non-dual perception, that is the ability to perceive without reference to a subject-object relationship. Tenzin Wangyal Rinpoche, a lama in the Bön tradition of Tibet, had this to say about non-dual perception in dream yoga:

The clear light is generally spoken of in the teachings about sleep yoga and indicates a state free from dream, thought, and image, but there is also a clear light dream in which the dreamer remains in the nature of mind. This is not an easy accomplishment; the practitioner must be very stable in non-dual awareness before the clear light dream arises. . . . The clear light dream, while emerging from the karmic traces of the past, does not result in dualistic experience. The practitioner does not reconstitute as an observing subject in relation to the dream as an object, nor as a subject in the world of the dream, but abides wholly integrated with non-dual rigpa [awareness]. (Rinpoche, 1998, pp. 63–64)

Although Tenzin Wangyal Rinpoche construed a difference between the clear light of sleep and clear light dream, it is likely to be a difference of degree, in which the clear light dream represents a deeper experience of the clear light of sleep. To be able to remain in the nature of mind as a clear light dreamer suggests that the practitioner would face few or no obstacles in meeting the mother light at the moment of death.

Compared to dream yoga, lucid dreaming lacks spiritual direction since it is mainly concerned with manipulating the dream environment and not with training to recognize the clear light. A lucid dreamer is one who recognizes the dream as a dream but not necessarily the manifestation of clear light. Only by further training in dream yoga can a lucid dreamer possibly advance into the stages of clear light recognition. In short, dream yoga accomplishes what lucid dreaming cannot by actualizing awareness of the clear light and its variant expressions (mother light, clear light dream) as a rehearsal for death when the practitioner can gain complete liberation.

How is dream yoga related to the NDE? The experience of light is common to both dream yoga and the NDE. In dream yoga, however, the clear light represents the final stage in a yogic effort to recognize the nature of mind, whereas the experience of light is a serendipitous event in the NDE. In the literature on NDEs, no one has compared the experience of light to the clear light of sleep. In fact, most NDErs who have had such an experience referred to it as a *divine light* or a *being of light*. This difference with dream yoga needs further exploration.

Near-Death and the Experience of Light

Pediatrician Melvin Morse wrote: "The Light is the key element of the NDE" (Morse and Perry, 1990, p. 117), and yet brain researchers have not come close to explaining it. Like other near-death researchers, he wanted to know the location of the light experienced by many NDErs. Was it outside the body or within the brain? From his own research, he came to the conclusion that the light was located outside the NDEr's body. He ended his chapter on the pure light by writing: "I would like to believe that the Light is where we go when we die. Like a birth into a bright new world, the Light of the NDE represents the beginning of a new beginning" (Morse and Perry, 1990, p. 134).

Morse's optimistic conclusion focuses on the relationship between the NDEr and the light in dualistic terms. According to his interpretation, the experience of light in an NDE is alleged to occur externally, as if the experiencer as subject is separate from but perceptually responsive to the light as an object of visualization and affective attachment. Unlike dream yoga, which cultivates a non-dual awareness of the clear light, this type of interpretation in near-death research advances understanding of the light experience without inquiring into the basis for identifying it as an external source. Mark Fox warned against this unexamined assumption:

In one crucial sense ... oversimplistic attempts to claim definitive interpretations and identifications of NDE motifs ... say more about the identity of those doing the identifying than about the identity of the light itself...

... Indeed, as regards the light's identity, we cannot even ... attempt to identify it by function, for it appears to do a number of things, as we have also noted: sometimes merely acting as a destination, sometimes lighting the way, sometimes judging, sometimes asking questions, and sometimes simply returning NDErs to where they came from. (Fox, 2003, pp. 139–140)

Even Fox himself seemed to treat the light as an external object, since he interpreted its multiple role as acting on the NDEr rather than being part of the NDEr's own identity.

In dream yoga, non-dual awareness of the clear light implies that the practitioner does not perceive the light as being somewhere out there to be apprehended and recognized. Such awareness is internally self-contained, so no need arises to identify the light as something discrete and having a role or many roles to fulfill at that particular moment. Instead, an advanced practitioner would see no difference

between his or her mind and the clear light once the recognition is made. The differentiation between the practitioner's consciousness and the clear light collapses when the practitioner's own realization no longer supports the subject-object distinction in meditation. This is construed as the yogic liberation of mind that is no longer conditioned by dualistic categories. The mind of the practitioner becomes the clear light itself. Does this mean that the clear light experience in dream yoga is not the same as the experience of light in the NDE?

Since there is no direct correspondence between the NDE and dream yoga, one might be inclined to argue that the light of the NDE might not be experientially similar to the clear light encountered by the practitioner of dream yoga. Yet the experience of light is central to both the NDE and dream yoga, this experience being the connecting link to the clear light that supposedly manifests at the time of death. Unlike the NDEr, the practitioner of dream yoga trains to recognize the clear light in order not to be distracted at the moment of death and forgo the opportunity for spiritual liberation.

The NDEr, on the other hand, is not likely to be a dream yogi, and therefore has no prior knowledge of the clear light. The dualistic interpretation given by most NDErs to their experience of light as an encounter with a divine being suggests the absence of training that one finds in dream yoga for developing a non-dual awareness of the clear light. Such awareness does not necessarily result in an attribution of divinity to the light, but brings to attention the lack of distinction between the mind of the practitioner and the clear light. Unless the NDEr has had some prior training in non-dual recognition of the clear light, the experience of light would merely constitute an instance of ineffable awe and emotional effulgence. The experience would also create an impression of the light as something external to the NDEr, who might in turn address liberation as going toward or being absorbed by the light. For the dream yogi, a successful non-dual recognition of the clear light implies that his or her mind and the light are already inseparable.

The core of light experience in the NDE and dream yoga, therefore, suggests that it is the same experience that impacts on the NDEr and the dream yogi, but only the latter applies a non-dualistic interpretation as part of his or her spiritual training. Without such training, the NDEr cannot become cognizant of the continuum between mind and light. This does not imply that a dualistic interpretation of the light experience is less plausible than a non-dualistic one. A dualistic interpretation would merely condition the

interpreter to assume a subjective position in relation to the light as an objective thing to be scrutinized and felt. There is indeed a sense of reality to this interpretation, but it would not deliver the same profundity of truth as that sought and experienced by the dream yogi. Naturally, it is not possible to know if a complete absorption of an NDEr into the light would automatically result in a non-dual experience, since such an event is likely to mean an irreversible transition from this world with no prospects of returning as an NDEr.

Conclusion

Having brought together the question of death, near-death, and dreaming, what conclusions can we draw about the conjunction of these three areas of inquiry?

Theoretically, all three areas concern the disembodiment of consciousness. The stilling of the physical body does not produce an inertness of mind but increases the scope of consciousness to include new dimensions of mental activity not experienced in the ordinary waking state. Accounts of out-of-body experiences given by NDErs suggest that consciousness does not terminate even when the physical body stops functioning. Research on lucid dreaming has opened up new ways of thinking about the meaning of consciousness and its manipulation during sleep when the physical body is quiet. The disembodiment of consciousness in lucid dreaming and near-death provides new understanding of the mind not under the direct influence of physical processes. Under these circumstances, we can speak of the emergence of the dream or subtle body that functions independently of the physical body. The consciousness inherent in the dream or subtle body implies that the physical decline in dying is not a nihilistic event, but underlies the process in which consciousness appears to renew itself from the chrysalis of the physical form into the imago of a non-physical form. Given the cumulative data on the NDE and lucid dreaming, death should not be feared as the annihilation of the self or end of consciousness, but as a special occasion for the transformation of identity on a level of existence that transcends the physical form. The disembodied consciousness evident in the NDE and lucid dreaming provides the ground in which such a transformation can be enacted.

The disembodied state also provides the condition for the manifestation of clear light. NDErs have reported encounters with this light, although they tend to attribute a dualistic explanation to it. The

techniques of dream yoga, which constitute a special type of lucid dreaming, offer a non-dualistic approach to the clear light, so that transformation of identity is not addressed as a mere renewal of self but as liberation from egocentric consciousness. The light experience in an NDE is, therefore, an introduction to the clear light of the natural or primordial mind. Unless the NDEr is already a dream yogi, he or she will not necessarily seek a transformation based on yogic recognition of the clear light. Whether NDEs can provide the basis for future yogic training in non-dual perception of the clear light is a compelling question that remains unexplored, but which can be considered a possibility in bringing together two forms of human experience that will change the meaning of death and dying.

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Cardiac Arrest and Near-Death Experiences

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ABSTRACT: Recent prospective studies of the incidence and character of near-death experiences (NDEs) during cardiac resuscitation have aroused new interest in the true nature of these profound experiences. Those who believe in the reality of an invisible and immaterial soul claim these studies support their belief. However, careful analysis reveals these experiences can be explained by changes in body function. This article describes the process of cardiac resuscitation in some detail, explains how known data on cardiac resuscitation predict the incidence of these experiences, as well as how the functioning of the body during cardiac resuscitation explains the experiences undergone during NDEs such as out-of-body experiences, tunnel and darkness experiences, sensations of transcendence, and ineffability. Furthermore, the functioning of the human body during cardiac resuscitation also explains the veridical observations made during some NDEs. This article offers a full explanation of NDEs occurring during cardiac resuscitation based solely upon human physiology.

KEY WORDS: out-of-body experiences; near-death experiences; cardiac arrest; neurocognitive changes; oxygen starvation; hypoxia.

The heart is a pump made of meat instead of metal, and the heartbeat is a manifestation of the pumping action of the heart. Normally the heart pumps a flow of blood into the tissues and organs of the body, transporting vital substances such as oxygen, nutrients, hormones, and many other substances into these tissues and organs.

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Cessation of this vital pumping action of the heart is called *cardiac arrest*. But cardiac arrest is not a single disorder. Instead it is a collective name for the effects of an abnormal heartbeat that has either ceased altogether, or is so abnormal that the heart no longer pumps blood into the tissues and organs of the body. All bodily tissues and organs rapidly fail and die when the heart ceases to pump blood. Cardiac arrest is a medical disaster that, when untreated, always causes death.

A person who suddenly experiences a cardiac arrest experiences all the effects of sudden cessation of blood flow to all organs and tissues of the body. Of all the tissues and organs of the body, the eyes and the brain are most sensitive to the effects of sudden cessation of blood flow. Everyone is unconscious 4 to 20 seconds after sudden cardiac arrest (Aminoff, Scheinman, Griffin, and Herre, 1988; Rossen, Kabat, and Anderson, 1943), and ever-increasing degrees of brain damage occur in direct proportion to the time that a cardiac arrest lasts longer than 3 minutes (Safar, 1988). After about 10 minutes the degree of brain damage is so severe that brain death, which is irreversible death of the brainstem, is present (Safar, 1988), and the body of the affected person will never regain consciousness. The body of the affected person is then truly dead.

Cardiac Resuscitation

Upon making a diagnosis of cardiac arrest, doctors and nurses in all modern hospitals immediately initiate a standard chain of events. They sound an alarm summoning a special resuscitation team, while at the same time rapidly beginning the initial phases of resuscitation. The resuscitation team members place a hard plank under the chest of the person, perform artificial respiration with a mask and balloon, insert an intravenous line through which medicines necessary to treat the cause of the cardiac arrest can be administered, and perform cardiac massage. This whole procedure is called *cardiac resuscitation*, a dramatic and intense medical treatment.

Those applying cardiac massage vigorously and forcefully compress and release the chest 60 to 120 times per minute. It is a tiring and exhausting procedure. The purpose of cardiac massage is to pump blood around the body during periods that the heart does not pump because of a cardiac arrest. How does cardiac massage work? The heart is a hollow ball of muscle tissue with four one-way valves. Compression of the chest forces blood out of the cavities of the heart and the chest, and

because of the one-way valves in the heart, blood emerges out of the heart into the arteries, which conduct it into the various tissues and organs of the body. Releasing the chest causes the chest to rebound to its original form, creating a negative pressure within the chest and heart, thereby sucking blood into the chest and the heart. Compression of the chest repeats this cycle.

Breathing always stops in those people rendered unconscious by a cardiac arrest, so artificial respiration is also applied so as to provide oxygen to the body. Cardiac massage and artificial respiration are the two absolutely essential components of cardiopulmonary resuscitation (CPR). Cardiac massage together with artificial respiration pumps oxygen-containing blood around the body, thereby sustaining the viability of all body tissues and organs until normal breathing, heart-beat, and pump action of the heart is restored. Cardiac massage and artificial respiration are always applied during cardiac arrest. Failure to do so means that no oxygen-containing blood is pumped around the body of the person with a cardiac arrest, and that person will die.

Near-Death Experiences During Cardiac Arrest

Some people successfully resuscitated from a cardiac arrest report undergoing wondrous experiences during resuscitation. They tell of meeting God, other deities, spirits, angels, and deceased relatives. They tell of passing through tunnels to enter a heavenly light. They tell of undergoing out-of-body experiences (OBEs) during which they observed all that happened to and around their bodies during resuscitation. These reports are called *near-death experiences* (NDEs). Indeed the NDE reports of some people contain verifiable details of events occurring at a time these people were apparently dead. People telling these things had no heartbeat and no respiration at the time; indeed, they appeared very unconscious and very dead at the time the things they reported occurred. These *veridical* accounts are a source of amazement, giving rise to much speculation and hope about the possibility of a life after death. Many people even regard them as positive proof of a life after death, pointing out that OBEs and veridical observations made during *clinical death*, defined as absence of heartbeat and respiration, are proof of an invisible and immortal human soul.

Pim van Lommel and his co-workers performed an outstanding prospective study of the incidence and manifestations of NDEs in cardiac arrest survivors in The Netherlands (van Lommel, van Wees,

Meyers, and Elfferich, 2001). They found that 62 (18 percent) of the 344 survivors interviewed reported undergoing an NDE. A similar study was performed by Sam Parnia and his co-workers in England, who found that 7 (11.1 percent) of the 63 interviewed survivors reported undergoing an NDE (Parnia, Waller, Yeates, and Fenwick, 2001). The authors of both articles were at a loss to explain the fact that some of these patients could have undergone conscious experiences such as NDEs at a time when they not only were very evidently unconscious, but also at a time they had neither heartbeat nor breathing activity. One of the patients interviewed by van Lommel and his co-workers even underwent a veridical experience during a period he appeared to be unconscious. A coronary care unit nurse reported his experience as follows:

During a night shift an ambulance brings in a 44-year old cyanotic, comatose man into the coronary care unit. He had been found about an hour before in a meadow by passers-by. After admission, he receives artificial respiration without intubation, while heart massage and defibrillation are also applied. When we want to intubate the patient, he turns out to have dentures in his mouth. I remove these upper dentures and put them onto the 'crash car.' Meanwhile, we continue extensive CPR. After about an hour and a half the patient has sufficient heart rhythm and blood pressure, but he is still ventilated and intubated, and he is still comatose. He is transferred to the intensive care unit to continue the necessary artificial respiration. Only after more than a week do I meet again with the patient, who is by now back on the cardiac ward. I distribute his medication. The moment he sees me he says: 'Oh, that nurse knows where my dentures are.' I am very surprised. Then he elucidates: 'Yes, you were there when I was brought into hospital and you took my dentures out of my mouth and put them onto that car, it had all these bottles on it and there was this sliding drawer underneath and there you put my teeth.' I was especially amazed because I remember this happening while the man was in deep coma and in the process of CPR. When I asked further, it appeared that the man had seen himself lying in bed, that he had perceived from above how nurses and doctors had been busy with CPR. He was also able to describe correctly and in detail the small room in which he had been resuscitated as well as the appearance of those present like myself. At the time that he observed the situation he had been very much afraid that we would stop CPR and that he would die. And it is true that we had been very negative about the patient's prognosis due to his very poor medical condition when admitted. The patient tells me that he desperately and unsuccessfully tried to make it clear to us that he was still alive and that we should continue CPR. He is deeply impressed by his experience and says he is no longer afraid of death. 4 weeks later he left hospital as a healthy man. (van Lommel, van Wees, Meyers, and Elfferich, 2001, p. 2041)

Van Lommel and Parnia and their co-workers were at a loss to explain how people could undergo such conscious veridical experiences or other conscious experiences such as NDEs while evidently unconscious. Van Lommel and his co-workers summed this up:

With lack of evidence for any other theories for NDE, the thus far assumed, but never proven, concept that consciousness and memories are localised in the brain should be discussed. How could a clear consciousness outside one's body be experienced at the moment that the brain no longer functions during a period of clinical death with flat EEG? Also, in cardiac arrest the EEG usually becomes flat in most cases within about 10 s from onset of syncope. Furthermore, blind people have described veridical perception during out-of-body experiences at the time of this experience. NDE pushes at the limits of medical ideas about the range of human consciousness and the mind-brain relation.

Another theory holds that NDE might be a changing state of consciousness (transcendence), in which identity, cognition, and emotion function independently from the unconscious body, but retain the possibility of non-sensory perception. (van Lommel, van Wees, Meyers, and Elfferich, 2001, p. 2044)

Yet no invisible and immaterial soul or separate consciousness is required to explain all the experiences reported in these two prospective studies. All the experiences reported, even the veridical experiences, can be explained by the functioning of the body. I will begin by first addressing the matter of the use of electroencephalographic apparatus during cardiac resuscitation, as well as the phenomenon of consciousness.

Brain Activity and Consciousness

Recent popular literature makes much of the fact that people had flat or absent electroencephalograms (EEGs) during the NDEs they reported undergoing during cardiac resuscitation. This is a very dubious statement. During a medical career spanning more than 20 years, in which I have attended cardiac resuscitations in three different countries, I have never seen EEG electrodes being attached to people undergoing an unexpected cardiac resuscitation. Attachment of EEG electrodes to a person's head is a laborious process, difficult to do accurately. There is simply no opportunity to do this during a cardiac resuscitation: the head is shaking due to cardiac massage, and moving due to artificial respiration with a face-mask, a situation during which

it is also almost impossible adequately to set up a sensitive EEG machine. Sometimes people *are* attached to EEG machines during cardiac arrests, but these are situations where people unexpectedly develop cardiac arrests while already attached to EEG machines, or research situations where people undergo experimental cardiac arrest (Aminoff, Scheinman, Griffin, and Herre, 1988).

Now the main purpose of cardiac resuscitation is to restore some flow of blood containing oxygen to the brain; otherwise, cardiac arrest would invariably be fatal. Restoration of oxygen and blood flow to the brain partially or completely restores brain nerve cell electrical activity. But an EEG machine only measures electrical activity in the surface layers of the brain, and does not directly register electrical activity of deeper lying brain tissues. A functioning upper brainstem is absolutely essential for the manifestation of consciousness, a fact well established by countless human and animal experiments. And the brainstem is located deep within the brain, far from the locations of EEG electrodes. This is why normal EEG electrode positions do not specifically register brainstem electrical activity. Instead they measure only the effects of brainstem nervous activity on brain surface electrical activity, as measured with EEG electrodes in the standard positions. So absence of EEG activity does not always mean that a person is unconscious. Accordingly, statements to the effect that NDEs during cardiac arrest occur during periods of absent brain electrical activity correspond neither with physiological fact nor with common medical practice.

Consciousness is a truly wondrous phenomenon. The exact meaning of consciousness and the actual nature of consciousness are exceedingly difficult subjects, yet most people know when it is present and when it is not. For example, when we look at an awake person, we know that person is conscious. But if that same person has been rendered unconscious due to anesthetic drugs, oxygen starvation, or a blow to the head, we know that person is unconscious, because that person does not move, does not react, does not interact with his or her surroundings, and has no memory of events during the period of unconsciousness. This is a very bare and basic approach to a dazzlingly complex subject, when one considers that the complex human mind is defined by consciousness. Yet consciousness is a function of a functioning brainstem, and when the brainstem ceases to function due to any one of a multitude of factors, such as anesthetic or other drugs, oxygen starvation, or a blow to the head, consciousness – and with it human mind – cease to be. This is why true death of the body is defined

as terminal loss of consciousness caused by irreversible brainstem death (Woerlee 2003).

There are many who believe consciousness is generated by the soul, or something “spiritual,” insubstantial, or wondrously isolated from the body. This concept is impossible to prove, because even if the soul generates consciousness and is the seat of the mind, the soul must still arouse the body to consciousness by means of the mechanisms of the brainstem. After all, when the brainstem no longer functions, bodily consciousness is not present, whether or not the soul exists. Accordingly, it is impossible to differentiate whether the soul generates consciousness, or whether the brainstem generates consciousness. If the soul generates consciousness, then the brainstem is still required as a physical conduit for the manifestation of consciousness; otherwise, consciousness simply will not manifest. And if there is no soul, then the brainstem is the generator of human consciousness (Woerlee 2003).

Effects of Oxygen Starvation

This brings us to the effects of oxygen starvation on tissue function. The function of the lungs is to get oxygen from the air into the body, while the heart is a pump, pumping oxygen-containing blood from the lungs, together with nutrients and many other substances, to all the tissues and organs of the body. All body tissues and organs need oxygen and nutrients to sustain function and life. Most tissues and organs of the body contain a small reserve of nutrients; but no bodily tissues and organs contain any reserves of oxygen. Furthermore, the oxygen consumption of bodily tissues and organs is so high that a continuous flow of blood containing oxygen is absolutely necessary to sustain function and life. And the eyes and the brain require more oxygen than any other tissues and organs of the body, although the eyes require more oxygen to function than does the brain, and the cortex of the brain requires more oxygen than does the brainstem (Liere and Stickney 1963; Woerlee 2003). This is why sudden cessation of the flow of blood to the head, such as occurs during cardiac arrest, causes rapid failure of the eyes and the brain, which manifests as blindness and paralysis of all muscles after 3 to 19 seconds, followed by loss of consciousness after 4 to 20 seconds, shortly after which the EEG becomes flat (Aminoff, Scheinman, Griffin, and Herre, 1988; Rossen, Kabat, and Anderson, 1943). Unconsciousness and death due to cardiac arrest are always due to failure of oxygen supply to the brainstem.

Most of the patients involved in the studies of van Lommel and Parnia were certainly unconscious at the time the resuscitating physicians and nurses arrived. But once cardiac resuscitation was commenced, restoration of a degree of circulation restored some oxygen supply to their brains. So some blood and oxygen did circulate through their brains, sustaining the life in their brains and bodies until normal heartbeat and circulation could be restored. And in some of these people undergoing cardiac resuscitation, the efficiency of the cardiac massage was such that enough blood and oxygen was pumped through their brains to sustain partial or even full consciousness. But how much blood is pumped out of the heart during cardiac massage, and how much oxygen-containing blood must be pumped out of the heart to sustain consciousness? Here are some figures and calculations.

First, pressure of oxygen in the blood of people undergoing cardiac resuscitation is, on average, 0 to 250 mm Hg (Ornato, Gonzalez, Starke, Morkunas, Coyne, and Beck, 1985; Smithline, Rivers, Rady, Blake, and Nowak, 1994; Steedman and Robertson, 1992; Tucker, Idris, Wenzel, and Orban, 1994). The ranges of measured oxygen pressures in the arterial blood of these people is such that the hemoglobin of all resuscitation patients was nearly always more than 90 percent saturated. This means that the blood pumped by the heart during cardiac resuscitation contains a normal amount of oxygen.

Second, the hemoglobin concentration of people undergoing sudden cardiac arrest is normal, which means that the oxygen content of the arterial blood pumped out of the heart into the body during cardiac arrest is also normal to maximal. In this situation, the supply of oxygen to the tissues and organs of the body is solely determined by the volume of blood pumped by the heart.

Third, the amount of blood pumped by the normally beating adult heart at rest is 4.5 to 6.5 liters/minute.

And fourth, the amount of blood pumped by the heart as a result of external cardiac massage is 0 to 2.2 liters/minute (Christensen, Stadeager, and Siemkowicz, 1990; Del Guercio, Coomaraswamy, and State, 1963; Del Guercio, Feins, Cohen, Coomaraswamy, Wollman, and State, 1965).

If blood contains normal amounts of oxygen, then what flow of blood through the brain is needed to sustain consciousness? The adult human brain weighs about 1500 grams. Normal flow of blood to the adult brain is about 54 milliliters/100 grams of brain tissue/minute, which means a total flow of blood through the adult brain of about 810 milliliters/minute. Minimum flow of blood needed to sustain con-

sciousness in humans is about 15 milliliters/100 grams of brain tissue/minute (Sundt, Sharbrough, Piepgras, Kearns, Messick, and O'Fallon, 1981; Trojaborg and Boysen, 1973), which means a total minimum blood flow of about 225 milliliters/minute in the average 1500 gram adult brain. About 13 percent of the blood pumped by the heart goes to the brain; the rest sustains the rest of the body. So the heart must pump at least 1730 milliliters of blood with normal oxygen content per minute to sustain some sort of consciousness in an average adult body. Studies of the efficiency of cardiac massage reveal that cardiac massage generates a flow of blood greater than 1730 milliliters/minute in no more than 20 to 24 percent of persons undergoing cardiac massage (Christensen, Stadeager, and Siemkowicz, 1990; Del Guercio, Coomaraswamy, and State, 1963; Del Guercio, Feins, Cohen, Coomaraswamy, Wollman, and State, 1965).

This means that as many as 20 to 24 percent of people undergoing cardiac massage during a cardiac arrest may be getting enough oxygen to their brainstems to be partially or fully conscious. Most of these people will only be partially conscious, but a few may be fully conscious. And these people may be conscious but unable to move, because even though the flow of oxygen (transported in blood) to their brains may be sufficient to sustain consciousness, it may not be sufficient to enable normal movement. This sounds surprising, but people undergoing moderate to severe brain oxygen starvation due to cardiac arrest (or any other form of oxygen starvation) can be in a condition in which they are paralyzed and unable to move, yet conscious and able to hear all that is happening around them (Lier and Stickney, 1963; Rossen, Kabat, and Anderson, 1943). All this explains how it is that unmoving, unresponsive, apparently dead people undergoing cardiac resuscitation for cardiac arrest can undergo conscious experiences such as an NDE. Furthermore it explains why only 11 to 18 percent of these people undergo, or rather can remember, such conscious experiences. This is the situation in which the patients reporting NDEs after successful resuscitation from cardiac arrest found themselves during their NDEs.

Physiology of Cardiac Arrest

So what usually happens during a cardiac arrest? Most people are discovered in a hospital ward, on a street, or elsewhere, and usually more than a minute has passed before resuscitation is started. This means that most of these people are certainly unconscious at the time

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cardiac resuscitation commences, because all people are unconscious 4 to 20 seconds after cessation of heartbeat, as noted above. Cardiac resuscitation is started: artificial respiration inflates and deflates the lungs with air, oxygen in the air in the lungs combines with the hemoglobin in blood passing through the lungs, cardiac massage pumps this oxygen-enriched blood into all the tissues and organs of the body, and drugs such as adrenaline are administered to increase the blood pressure generated by cardiac massage. Such cardiac resuscitative measures are sufficient to restore some degree of consciousness in about 20 percent of those undergoing resuscitation, even though these people neither breathe nor have any heartbeat.

But restoration of consciousness means simply that the upper brainstem functions sufficiently to sustain consciousness. Consciousness does not mean that the rest of the brain functions normally. The effects of total brain oxygen starvation lasting for more than 60 seconds, such as is caused by cardiac arrest, can last several minutes, or even be permanent if total oxygen starvation lasts more than three minutes (Dougherty, 1994; Safar, 1988). So even though these people are conscious, their brains do not function normally. The human brainstem, cortex, and eyes have the same structure and function in all humans, regardless of race or sex. This is why the manifestations of each degree of brain oxygen starvation are essentially the same for each person, although these manifestations may be covered with a sheen resulting from individual psychological and sociocultural factors. So what are the basic changes in mental function due to severe oxygen starvation that people may experience (Woerlee 2003)?

First, prefrontal cortex malfunction results in sensations of calm, serenity, indifference, and sometimes even exultation, despite full appreciation of the seriousness of one's situation during resuscitation for cardiac arrest. Furthermore, pain is no longer perceived as pain.

Second, supplementary motor cortex failure means people do not even think of moving, even though they realize the dire nature of their situation during OBEs where they observe their apparently dead bodies being resuscitated.

Third, precentral cortex (primary motor cortex) malfunction causes paralysis of voluntary muscles so that people cannot move, even though they may try to do so. Paralysis of the adjacent areas of the motor cortex controlling eye muscles, as well as speech muscles in Broca's area, means that people also cannot move their eyes or speak, even though they try their hardest to move their eyes and speak. All they can do is to lie unmoving, unable to move – and they look horrible, even dead.

Fourth, postcentral gyrus malfunction causes failure of conscious perception of sensations of touch.

Fifth, parietal cortex malfunction causes disintegration of differentiation between body and space, resulting in a sense of oneness and union with the universe.

Sixth, malfunction of the angular gyrus, together with muscle spindle malfunction, can cause displacement of body image, together with sensations of movement and flying, which when combined with conscious and unconscious perceptions of their own bodies as well as their surroundings, result in the OBE.

Finally, the amygdala and the hippocampus are also very sensitive to the effects of oxygen starvation. Malfunction of these deeper parts of the temporal lobe can arouse memories of people, music, and a life review.

This attribution of specific functions to specific parts of the brain may sound like a modern form of phrenology to some people. Indeed some neurologists even laughingly dub it "neurophrenology," but a veritable flood of published magnetic resonance imaging (MRI) studies during the last 15 years, together with earlier radioisotope studies as well as clinical data, all confirm that many functions are indeed localized in specific parts of the brain.

Physiology of Visionary Experiences

This brings this discussion to the subject of visionary experiences. The basic nature of the visionary experiences is certainly a product of the degree of brain failure caused by oxygen starvation, although personal expectations, upbringing, and sociocultural factors certainly do influence the content of the visionary experiences, as is proven by various aspects of visionary experiences. (See <http://www.mortalminds.org> for a more extensive discussion on the visionary aspects of NDEs.)

First, people expecting to undergo a life-threatening experience are more likely to undergo affective and transcendental NDEs than cognitive NDEs, while those who unexpectedly find themselves in a life-threatening situation are equally likely to undergo affective, transcendental, or cognitive NDEs (Greyson, 1985).

Second, people expecting to die often see visions of deceased relatives; presumably these will act as their guides in the world of the dead (Greyson, 1985).

Third, the nature of the deceased relatives seen during these NDEs differs from one culture to another (Osis and Haraldsson, 1977).

Fourth, Hindus have Hindu NDEs, Buddhists have Buddhist NDEs, and Christians have Christian NDEs (Evans-Wentz, 1957, pages 33–34).

Fifth, the reason for return to life differs from one culture to another (for example, Pasricha and Stevenson, 1986).

Some people may report apparently paranormal perceptions. But paranormal perceptions are no more than an ancient human illusion (Woerlee 2003).

Tunnel and light experiences are also products of changes in body function occurring during resuscitation (Woerlee, 2003, 2004). Pupil widening due to adrenaline, which is normally administered during cardiac resuscitation, as well as oxygen starvation, allows more light to enter the eyes, so they see a “bright light which does not hurt the eyes.” Pupil widening reduces eye focal depth, so that that at which they look is seen clearly, but everything else is vague and “bathed in light.” So people with pupils widened by oxygen starvation and adrenaline see vague forms of light; these are the angels and heavenly figures sometimes seen during NDEs and deathbed experiences.

Because these experiences are so powerful, have such an impact, and seem so coherent and logical, people consider them strange and wondrous, believing it is impossible for these things to originate in a sick, oxygen-starved brain. However, it should always be remembered that the perceptions of people undergoing a toxic or abnormal mental state, such as is caused by oxygen starvation, are very different from those of their observers. The mental state of oxygen-starved people has been beautifully described as follows:

Hypoxia (oxygen starvation) quickly affects the higher centers, causing a blunting of the finer sensibilities and a loss of the sense of judgement and of self-criticism. The subject feels, however, that his mind is not only clear but unusually keen. (Liere and Stickney, 1963, p. 300)

This is why people recovering from cardiac resuscitation never say their mental state during a period of consciousness such as an NDE was confused or befuddled.

Final Facts

People reporting an NDE after resuscitation from a cardiac arrest are always reporting a remembered experience. After all, none of the

people who have undergone NDEs during cardiac arrest ever successfully indicates *during* the resuscitation that he or she is awake. Instead they report their NDEs only after arousing and recovering to a condition during which they can tell of their experiences. This means that what they are reporting is actually a composite memory: memories of observed fact, memories of hallucinations induced by drugs and oxygen starvation, as well as memories of bodily sensations experienced during resuscitation. The totality of these memories forms a complete experience whose content is interpreted and modified by individual sociocultural experiences and expectations, to be ultimately molded into a coherent NDE report containing these elements. Brain oxygen starvation is a major determining factor in cardiac arrest NDEs, because brain oxygen starvation inhibits formation of memories, and some degree of brain oxygen starvation is always present during cardiac resuscitation. This is why not everyone who was conscious during cardiac resuscitation can remember the details of every experience undergone during cardiac resuscitation.

Knowledge of all these things makes it possible to explain the veridical experience cited above (van Lommel, van Wees, Meyers, and Elfferich, 2001). The patient van Lommel and colleagues described was conscious as a result of efficient cardiac resuscitation. He could see and he could hear, because when resuscitation is this efficient, the senses of hearing and sight are restored. The residual effects of extreme oxygen starvation on his brain paralyzed him, making it impossible for him to move or speak, so he was unable to tell those resuscitating him to continue. The effects of oxygen starvation meant he felt no pain, and also aroused his OBE. He felt his dentures being removed, and he heard them being placed in a metal drawer; a metal drawer opening and closing makes a very typical sound, and metal bedside cabinets are standard hospital furniture in The Netherlands. His eyes were partially open, or were opened every now and then to check pupil size as an indication of brain oxygen starvation; so he was able to see his brother and others in the room. This is why he was later able to recognize people, as well as to describe the room. In addition, the sounds and the movements heard and felt during resuscitation also aided him in building a composite picture of all that happened during his resuscitation. After awakening, he was able to tell a composite story of all that happened during his resuscitation. So this ostensibly supernatural experience is actually readily explained by the functioning of the body, together with conscious and unconscious observations.

Supernatural or paranormal explanations are not needed to explain what those undergoing NDEs during resuscitation for cardiac arrest experience. Nor are explanations such as a soul, or a mind that exists separately from the body, required. The functioning of the body predicts the incidence of NDEs occurring during cardiac resuscitation, as well as explaining every experience undergone during such NDEs. The functioning of the body, together with natural physical laws, explains all these phenomena. All these things reduce the likelihood that the NDE is a manifestation of the reality of an invisible and immaterial mind able to separate from the body. Even so, this explanation can only be considered an alternative explanation. After all, an invisible, immaterial mind able to separate from the body may also be the explanation for NDEs, even though it cannot be sensed or detected in any way, and in no way predicts the incidence or nature of the experiences reported.

Nonetheless, physical explanation of the genesis of the NDE in no way reduces the intensity, or the profound and life-changing nature, of these experiences. The NDE is an intense remembered human experience undergone during a period when the very existence of the person undergoing the experience is threatened. It is an experience whose nature tells us much about the deepest recesses of the individual and collective human psyche, as well as the more wondrous aspects of the functioning of that vehicle of the human mind, the human body.

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Psychomanteum Research: A Pilot Study

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ABSTRACT: Fifty-seven persons participated in 31 workshops seeking visionary and other reunion experiences with departed loved ones by means of a mirror-gazing procedure developed by Raymond Moody (1992; Moody and Perry, 1993). The study was an attempt to repeat Moody's findings, to alleviate the grief of the participants, and to explore psychological factors related to their experiences. Forty-one participants completed three questionnaires before the workshop: the Psi Experiences Questionnaire (PEQ), the Inventory of Childhood Memories and Imaginings (ICMI) (Wilson and Barber, 1983), and the Complex Partial Epilepsy Survey (CPES) Inventory of Common Experiences (Roberts, Varney, Hulbert, Paulson, Springer, Sheperd, Swan, Legrand, Harvey, and Steuben, 1990). Nine of the participants (22 percent) reported strong reunion experiences, compared to 50 percent of Moody's group. A positive relationship was found between reunion experiences during the workshop and reports of prior contact with the departed, as reported on the PEQ. The correlations with the ICMI and CPES were positive but insignificant.

KEY WORDS: psychomanteum; mirror-gazing; apparitions; bereavement; temporal lobe; fantasy-proneness.

In the attempt to facilitate visions of the departed, Raymond Moody (1992; Moody and Perry, 1993) created a modern form of the psychomanteum, the "oracle of the dead," where the ancient Greeks used to evoke the deceased. Moody has taught the method, which involves mirror-gazing in a darkened room, to others, including me. Moody reported that approximately 50 percent of the individuals he

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had taken through the procedure experience apparitions. He has found that these are mostly people who report hypnagogic images. I therefore used the Inventory of Childhood Memories and Imaginings (ICMI), devised by Sheryl Wilson and Theodore Barber (1983), to identify people with a rich imagination, whom Wilson and Barber called "fantasy-prone" individuals, a label that conceals the fact that psychic impressions often take the form of mental images. According to Wilson and Barber (1983), 4 percent of the population may be fantasy-prone.

I used the Psi Experiences Questionnaire (PEQ), a previously unpublished 14-item Likert scale (see Appendix), in order to determine whether individuals who experience reunions in the psychomanteum have a history of psychic experiences, including apparent visits from the departed. A third questionnaire, the Complex Partial Epilepsy Survey (CPES) Inventory of Common Experiences (Roberts, Varney, Hulbert, Paulson, Springer, Sheperd, Swan, Legrand, Harvey, and Steuben, 1990), concerned hypersensitivity, or lability, in the temporal lobes. Elson Montago and I have speculated that the temporal lobes may be the sensory organ for psi (Roll and Montagno, 1985). If that is the case, then individuals with labile temporal lobes may be more psychic than others.

Methods

The workshops had three main purposes: to elicit visionary and other reunion experiences, to help the participants complete the grieving process, and to discover personal and other factors that may facilitate such experiences. I do not address in this paper the question of whether reunion experiences may provide evidence for psychic ability or for survival after death.

Facilities

The sessions took place in a research facility in my home. The space consisted of a consulting room, a room with an enclosure housing a mirror and reclining chair, a bathroom, a kitchenette, and a patio. The area was surrounded by trees, and the patio faced a lake. A walking path led from the patio to a nature preserve.

The mirror was 2 feet by 3 feet and tilted upwards to reflect the ceiling, which was covered by black velvet, as were the back and sides of the enclosure. A reclining chair stood 4 feet from the mirror.

Hours and Conditions

Thirty-one one-day workshops were conducted during a one-year period. The hours were from 10:00 AM to 6:00 PM. The rooms were usually illuminated by natural light and artificial white light. In the last eight workshops, I attempted to reduce waking-state mentation and to facilitate the alpha brainwave pattern by using 25-watt red light bulbs for illumination and by conducting the workshops later in the day, from 2:00 PM to 10:00 PM. A white noise generator by the reclining chair masked extraneous sounds.

Materials

Three questionnaires were used in the attempt to correlate psychomanteum experiences with other factors: the Psi Experience Questionnaire (PEQ), the Inventory of Childhood Memories and Imaginings (ICMI), and the CPES Inventory of Common Experiences.

The consulting room had an audiotape recorder and a tape deck that played Gregorian chants and similar music. Workshop participants were asked to bring photographs and personal items from the deceased individuals they hoped to contact.

Participants

Fifty-seven individuals took part in 31 workshops. Forty-one participants completed the three questionnaires, including 31 women and 10 men; 16 failed to return the questionnaires. Most of the workshops were oriented to a particular deceased individual, the participants usually consisting of one or two family members. There were two group sessions. The first one consisted of seven individuals who were members of a support group for parents of murdered children. The second consisted of six individuals with a general interest in the topic. Fourteen of the participants sought reunion with a child, nine with a parent, seven with a spouse, ten with other relatives, and one with a friend. The time elapsed since the passing of the deceased ranged from about one year to more than 10 years.

Procedure

On arrival, the participants filled out the three questionnaires. This was followed by a discussion about the participants' reasons for coming, their relationship to the deceased, and the program for the day. To

prepare myself for the mirror-gazing session, I sometimes examined the participant's responses to the ICMI at this point. Also at this time, the participants usually brought out the pictures and belongings from the deceased and discussed their significance. Weather permitting, the participant(s) and I then walked through the nature preserve, usually stopping to talk at the bridges that cross a stream.

On returning, the participant was seated in the mirror enclosure. The light was adjusted to illuminate the frame, leaving the mirror itself mostly dark, and the white noise generator was activated. After suggestions for relaxation and for accepting whatever might or might not occur, the participant was left in the enclosure for 90 minutes.

The participant was then brought into the consulting room and asked to describe any experiences. That description was recorded on audiotape. If there was another participant, the procedure was repeated for the second participant. Verbal communications between the two participants were postponed until the second participant had had a mirror session. There was no verbal communication between the participants during the mirror sessions. A light dinner and resting period typically followed.

In most of the workshops, a psi session was conducted after dinner. This procedure, which is a combination of the spiritualistic seance and the "empty chair" method of Gestalt psychology, was intended to augment the mirror session by providing additional information about the deceased and his or her relationship to the participant, in particular unresolved issues, and the opportunity to complete these. The psi session included the two workshop facilitators (Beth Braun and myself), the workshop participants (if there was more than one participant, they did the psi session as a group), and Lydia Roll, who guided the session. Lydia Roll is a psychotherapist in private practice and has also received training as a psychic at the Patricia Hayes School of Inner Sense Development in Georgia. She was shown photographs and personal effects from the deceased before the session to establish a link, but otherwise had no prior information about the persons involved.

The workshop finished with a discussion about the day's events and how to integrate them into the participant's life. This was sometimes followed by a group meditation.

Statistical Analysis

Following the workshops, the audiotapes were transcribed and the scores for the questionnaires computed. The Psi Questionnaire was

divided into four parts: extrasensory perceptual (ESP) experiences (questions 1–5), aura and out-of-body experiences (questions 6–7), survival-related experiences (questions 8–11), and psychokinetic experiences (questions 12–14). Only the ESP and survival items were used in this study. The response to each question received a numerical value: “never” was scored 0, “one time during my life” was scored 1, “less than one time a year but at least twice during my life” was scored 2, and so on. Since there were six possible answers for each question, discounting “never,” the highest possible score was 6 points per question, or 30 for the five ESP questions and 24 for the four survival questions. Because there are no means available for the general population in the Psi Questionnaire, I used the means for the group of workshop participants as a comparison value for individual scores.

The CPES inventory was evaluated the same way. There were 36 questions and six possible responses for each question. The score therefore an range from 0 to 216. Michael Persinger has computed the mean score for the general population as 20.4 (S.D. = 14.2) (M. Persinger, personal communication, 1994).

For the ICMI, each question checked as “true” received a score of 1. With 52 questions, the range of possible scores was from 0 to 52. Persinger has found the mean score for males to be 14.6 (S.D. = 5.6), and the mean score for women to be 19.5 (S.D. = 6.5) (M. Persinger, personal communication, 1994).

To obtain psychomanteum scores, the workshop co-facilitator and I independently rated the experiences of each participant on a scale from 0 to 10, with 0 indicating no experience and 10 indicating seeing an apparition outside the mirror. Other reported incidents, such as seeing faces in the mirror, feeling touched by someone, or sensing the presence of the deceased, received intermediate scores. Our two independent evaluations were then summed.

The evaluations of the psychomanteum experiences were not done blindly with respect to the three questionnaires because I sometimes examined the questionnaires to prepare myself for the psychomanteum session.

On the basis of their psychomanteum scores, participants were placed in one of three groups: individuals who received a rating between 0 and 4.0 were placed in the low-scoring group; those who received a rating between 4.1 and 5.9 were placed in the intermediate group, and those who scored between 6.0 and 10 were placed in the high-scoring group.

The values were entered into 2×2 tables to show how individuals with high and low psychomanteum scores responded to the three

Table 1
Mean questionnaire scores of high- and low-scoring psychomanteum participants

<i>Measurement</i>	<i>High-scorers (N = 9)</i>	<i>Low-scorers (N = 28)</i>
Psychomanteum score	7.0	2.5
PEQ: ESP items	12.0	9.0
PEQ: survival items	6.0	2.5
ICMI	32.0	25.0
CPES	29.0	26.0

questionnaires. Results were analyzed qualitatively. Tests of statistical significance were not carried out because specific predictions about correlations between the variables were not specified prior to analysis.

Results

Twenty-eight participants, including 18 women and 10 men, were assigned to the low-scoring psychomanteum group. Four participants, all women, were assigned to the intermediate group. Nine participants, all women, were assigned to the high-scoring group. As shown in Table 1, the high-scoring psychomanteum group obtained high means on the ESP and survival items of the PEQ, the ICMI, and the CPES. The differences between the high-scoring and low-scoring groups were not large, however, except for the PEQ survival items, for which the mean for the high-scoring group was more than twice that of the low-scoring group.

Table 2 shows the ratings of the nine high-scoring participants and the 28 low-scoring participants according to the questionnaires. Again, the best separation between the two groups was on the PEQ survival items. Eight of the nine high-scoring participants were above the mean on the PEQ survival items (one, not shown in the table, was exactly on the mean), whereas 18 of the 28 low-scoring participants were below the mean. If predicted, this difference would have been statistically significant. The figures for the other two questionnaires follow the trends shown in Table 1, but weakly. The PEQ ESP items and ICMI responses gave a separation of 19 versus 15, and the CPES responses a somewhat better 20 versus 14.

Table 2
Comparison of high-scoring and low-scoring
psychomanteum participants

<i>Measurement</i>	<i>High-scorers</i> (<i>N</i> = 9)	<i>Low-scorers</i> (<i>N</i> = 28)
PEQ ESP items		
above the mean	5	11
below the mean	4	14
PEQ survival items		
above the mean	8	6
below the mean	0	18
ICMI		
above the mean	5	12
below the mean	3	14
CPES		
above the mean	6	12
below the mean	2	14

Note: Participants who scored exactly on the mean are not shown.

Discussion

In terms of my first objective, to elicit apparitions of deceased loved ones and other striking reunion experiences, I did not succeed nearly as well as did Moody. Only nine of my 41 participants (22 percent) reported significant experiences, as contrasted to 50 percent of Moody's. In addition, not all of my nine experiencers saw full-fledged apparitions.

With regard to my second purpose, to help the participants complete the grieving process and get on with their lives, it seemed that the strong reunion experiences reduced grief. This was one of the main conclusions that Moody reached in his research as well. The psychomanteum procedure also seemed to assist the grieving process for many of the participants who had no strong experiences during the mirror session.

In several cases, veridical information about the deceased obtained in the post-psychomanteum psi sessions contributed to a sense of presence of the departed. For instance, the session leader saw an image of the deceased, a boy, taking a shower crouched on the floor of the shower stall. When the workshop participants, a friend of the boy and the

friend's mother, returned home, the mother of the deceased boy told them that that was how he used to shower. That piece of information, which was unknown to the workshop participants, convinced both them and the deceased boy's mother that he had communicated with them.

In another session, a woman who had been unable to overcome feelings of abandonment and anger toward her deceased husband had hoped to see him in the psychomanteum and resolve those issues. She had no clear impressions and asked to be regressed hypnotically to a previous life, hoping to find him there. During the hypnotic regression, a scene from another lifetime unfolded, but with the husband in the role of the abandoned and grieving party. The experience gave rise to intense emotions in the woman but, because the roles were reversed, had the effect of relieving them. She was made aware that the regression experience might have been imagery from her imagination, but that did not seem to diminish its cathartic effect.

The death of a child may be the most difficult to overcome. A woman had lost her 14-year-old son 8 years prior to her psychomanteum session. He had been injured in a truck accident and had been comatose for several days before he died in her arms, about 6 months after the woman's husband, the boy's father, had died under almost identical circumstances. A psychiatrist had used hypnotic regression to the time of passing so that the woman might experience more fully her grief and thereby reduce it, but with no significant effect.

I proposed a different form of regression. People sometimes report undergoing something like a near-death experience (NDE) when someone close to them dies (Howarth and Kellehear, 2001; LeHew, 1979), as if they participate in the NDE of their loved one. The experience has a similar effect as familiar forms of NDEs insofar as it increases the joy of living and reduces the fear of death in the experiencer. I discussed this form of shared NDE with the woman and offered to regress her to her son's passing so that she might have the experience of participating in his NDE. The woman reported following her son to a place where his father and other deceased relatives were present. She saw him torn between returning to her and going with his father to the other world, finally choosing the latter. She also saw "the light" and saw the boy being drawn to it. She accepted his choice and they said their good-byes, the woman with the conviction that life continues for her son and that they will be reunited some day. The experience was a powerful one for the woman and also for me.

My third purpose was to explore personal and environmental factors that may facilitate reunion experiences. We conducted only eight

workshops with the different hours and illumination, which was not sufficient to ascertain what effect the new conditions may have had.

The best predictor of a reunion experience in the psychomanteum consisted of reports by the workshop participants of having had such experiences previously. It needs to be kept in mind that this study was not conducted under blind conditions. That lack of blindness could have affected the correlations; in future research, it would be preferable to have the psychomanteum sessions rated by a researcher blind to the questionnaire results. If the ICMI response was low, indicating little visual imagination, I spent more time inducing a state of relaxation. Whether or not this contributed to reports of reunion experiences, I found it encouraging that the people who had these experiences in my facility tended to be the same ones who had such experiences in other surroundings. This may suggest that it is possible to duplicate reunion experiences in the controlled environment of the research laboratory.

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Appendix: Psi Experiences Questionnaire

Instructions: For each of the following items, indicate how frequently you have the experience by circling one of the choices. The seven possible choices are: (1) never, (2) one time in my life, (3) less than once a year, but at least twice in my life, (4) less than once

per month, but at least once per year, (5) at least once per month, (6) about once per week, or (7) more than once per week.

1. Do you sometimes gain information about the future that you could not know by reasoning or other familiar means?
2. Do you sometimes gain information about the present that you could not know by reasoning or other familiar means?
3. Do you sometimes gain information about the past that you could not know by familiar means?
4. Do you sometimes feel certain of who is calling you before you answer the phone, when you have no reason to expect that person to call, and then discover you are correct?
5. Do you sometimes when touching an object gain information about its owner or others associated with the object that you could not know by reasoning or other familiar means?
6. Do you sometimes see lights or colors around a person's head, shoulders, hands, or body that are not caused by familiar sources or light?
7. Do you sometimes have the experience that your self or I is located at a different place from your physical body?
8. Do you sometimes have the experience of a previous lifetime when you are not hypnotized?
9. Do you sometimes when awake have a vivid impression of seeing, hearing, smelling, being touched by, or being strongly aware of another being who is not present in the familiar physical sense?
10. Do you sometimes feel you communicate with the dead, or believe yourself to see or hear the spirit of someone who is deceased?
11. Do you sometimes feel you are controlled or possessed by a spirit?
12. Do you sometimes experience yourself healing or improving the health of someone without medical procedures, as by therapeutic touch?
13. Do you sometimes experience your wristwatch or computer stopping or malfunctioning for no apparent reason?
14. Do you sometimes experience objects in your vicinity moving or bending without physical contact?

Jung's Synchronistic Interpretation of the Near-Death Experience: An Unnecessary Mystification

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ABSTRACT: In his long essay on synchronicity, Carl Jung enlisted the help of a relatively complete but little known near-death experience (NDE) to illustrate his thesis. This NDE was not the famous one he himself had in 1944, but one related to him by a patient. It contained all four of Bruce Greyson's NDE components, most notably the paranormal. Jung regarded the patient's experience as a good example of synchronicity, by which he meant "the simultaneous occurrence of a certain psychic state with one or more external events." What is remarkable, and problematical, about his view of synchronicity was that it was acausal. I develop and defend an alternative epistemology involving causality: While paranormal knowledge is hard to explain, there is no good reason to remove it from cause-and-effect discourse. I close by speculating why Jung chose to conceive of synchronicity in a manner so mystifying.

KEY WORDS: near-death experience; Jung; synchronicity; paranormal; materialism.

Carl Jung died in 1961, a few years before anyone knew that the near-death experience (NDE) was a common enough phenomenon to study in a systematic way. Yet he himself had had an NDE in 1944 (Jung, 1961, pp. 289–93), and he described another that one of his patients had (Jung 1969, pp. 507–09) sometime before 1952. We know, furthermore, that he was familiar with two other NDEs described by George Tyrrell (1947, pp. 197–201). Needless to say, Jung never referred to any of these as a "near-death experience," as that term was

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not coined until 1975 (Moody, 1975), and he was understandably unaware that his own NDE was anything other than “an extremely strange thing” (Jung 1961, p. 289).

It is not on this more famous NDE, which Bruce Greyson (1993) classified as predominantly “transcendental” in content and feeling, that I will focus on here. Rather it is on his patient’s. For it is this case, buried deep in a long and difficult essay on quite another topic, that Jung used as an illustration of “synchronicity.” I will try to show why, and to what degree, he resorted to an unnecessary mystification to explain elements of the NDE and how we might more intelligibly speak of it now.

The Case

Jung introduced the case in these words: “I would like to give an example from my own medical experience. A woman patient, whose reliability and truthfulness I have no reason to doubt, told me that her first birth was very difficult” (1969, p. 507). He proceeded to describe a young woman near death due to loss of blood following a forceps delivery. The NDE commenced in a familiar manner:

The next thing she was aware of was that, without feeling her body and its position, she was *looking down* from a point in the ceiling and could see everything going on in the room below her: she saw herself lying in the bed, deadly pale, with closed eyes. Beside her stood the nurse. (Jung, 1969, pp. 507–508)

She went on to describe a flustered doctor pacing the floor and her mother and her husband looking on with alarm. Simultaneously she was aware of “a glorious, park-like landscape shining in the brightest colours, and in particular an emerald green meadow with short grass, which sloped gently upwards beyond a wrought-iron gate leading into the park” (Jung, 1969, p. 508). She was certain this scene of “indescribable splendour” was the world she would enter at death, but she was also certain that she would not die. She was so certain of her recovery that “she found the agitation of the doctor and the distress of her relatives stupid and out of place” (p. 508). Altogether she was unconscious for about 30 minutes.

On coming to, she “described in full detail what had happened during the coma” and forced the nurse to admit that the doctor had been “hysterical.” The patient “had perceived the events exactly as they happened in reality,” Jung wrote (1969, p. 508).

Jung was most impressed by the coincidence between what the comatose patient observed and what actually happened in the room. He was certain the woman “was in a coma and ought to have had a complete psychic black-out and been altogether incapable of clear observation and sound judgment” (1969, p. 509), yet she saw everything that happened. Not only that: “she saw the whole situation from above, as though ‘her eyes were in the ceiling,’ as she put it” (Jung, 1969, p. 509).

This case is so typical that it sounds as if it might have been lifted from Raymond Moody’s *Life After Life* (1975), the book most responsible for introducing the world to the NDE. Yet Jung was writing 20 years before the appearance of Moody’s book. That fact by itself makes the case interesting. Also interesting is the relative “completeness” of the case. It has all four of Greyson’s (1993) elements: it is cognitive, affective, paranormal, and transcendental. But it is what Jung did with the case, especially its paranormal component, that makes it especially interesting to me. Judging by its placement in the text, the case was a “star witness” for his famous theory of “synchronicity.” This case, along with the other paranormal phenomena Jung surveyed, could have been analyzed in a different, less mystifying way.

Before giving a more coherent interpretation of the NDE and other paranormal experiences, we must first see what Jung had to say about this rather slippery term, *synchronicity*.

Synchronicity

Jung explored synchronicity most thoroughly in a long paper titled “Synchronicity: An Acausal Connecting Principle” (1969), originally published in 1952 and translated into English in 1955. At the essay’s outset he defined synchronicity as “the simultaneous occurrence of a certain psychic state with one or more external events” (1969, p. 441), but the psychic state, he explained, “is not causally derivable” (1969, p. 445) from the external events. He mainly had in mind knowledge derived by telepathy, the existence of which he did not question. As he saw it, then, there was a situation in the external world, and there was extrasensory knowledge of the situation. One might suppose that the knowledge was *caused* by the situation, but Jung denied this:

How could an event remote in space and time produce a corresponding psychic image when the transmission of energy necessary for this is

not even thinkable? However incomprehensible it may appear, we are finally compelled to assume that there is in the unconscious something like an *a priori* knowledge or an "immediacy" of events which lacks any causal basis. At any rate our conception of causality is incapable of explaining the facts. (Jung, 1969, p. 447)

It was at this point that the problem seemed on the verge of clarifying itself. In the last sentence Jung seemed to make a distinction between causality understood in the abstract and "our conception of causality." By that last phrase he meant the materialist's conception of causality, the kind of causality that is "bound up with the existence of space and time and physical changes, and consists essentially in the succession of cause and effect" (Jung, 1969, p. 446–447) and depends on a "demonstrable quantity" (p. 446). Was Jung denying only that *particular version* of causality as it related to extrasensory perception, while allowing some other version of causality at the time ungrasped? Was he implying that our commonsensical (as opposed to a strictly scientific) understanding of causality might apply to extrasensory perception and might undergird what he is calling synchronicity?

Later in the essay he postulated "some other nervous substrate in us, apart from the cerebrum, that can think and perceive ... events which have no causal connection with organic processes" (Jung, 1969, p. 509). This substrate "is absolutely different from the cerebrospinal system in point of origin and function" and "can evidently produce thoughts and perceptions just as easily as the latter" (pp. 510–511). It might seem, therefore, that Jung was denying only a particular kind of causality: that which is based on organic processes. And synchronicity would be the term for a *different kind* of causal relationship, one that was not based on organic processes, "one that has nothing to do with materialism" (p. 512).

For whatever reason Jung did *not* develop this line of thought. Instead he wrote that the equivalence between the external situation and the extrasensory perception of the situation was acausal in a more radical sense. It was not the case merely that the cause of the perception was unknown; rather "a cause is not even thinkable in intellectual terms; ... for a causality which presupposes space and time for its continuance can no longer be said to exist and becomes altogether unthinkable" (Jung, 1969, p. 519). So unthinkable was the relation between external situation and extrasensory knowledge of it that a new word had to be introduced to suggest it; and that word, *synchronicity*, "produces a picture of the world so irrepresentable as to be completely baffling" (p. 513). Doing his best to reduce the mystery,

Jung supplied for the reader a synonym of dubious helpfulness: “acausal orderedness” (p. 516).

An Alternative to Synchronicity

I think that Jung exaggerated the “unthinkability” of paranormal knowledge, and therefore of the paranormal NDE like the one he described. I think that most of us, regardless of our education, know in a general way what causality is: the quality that something has when it brings about or in some way triggers a change in something else. I do not know why we should feel compelled to grasp *exactly how* the change occurs before we use the language of causality. Doctors tell us that migraine headaches are “caused by” the release of serotonin into the bloodstream from its storage sites in the body. But have they really told us what causes *the pain*? No, they have told us only what creates the condition resulting in the pain. How brain states generate conscious experience is completely unknown. Yet we do not hesitate to speak of the brain as the *cause* of experience. Why, then, should we hold ourselves to a higher standard when trying to account for paranormal knowledge?

I therefore think Jung went too far when he wrote that a cause for paranormal knowledge or extrasensory perception was “not even thinkable in intellectual terms” (p. 519). I think he should have said that *the mechanics* of the cause were unthinkable. If he had applied the word *synchronicity* to a mysterious *kind* of causation whose mechanics were presently unknown, I would have no quarrel with him.

How the Alternative Applies to the Paranormal NDE

Jung’s patient’s NDE would be considered “paranormal” in Greyson’s classification because its most interesting feature is the woman’s ability to describe in detail and with accuracy what was happening in her hospital room when she was in a coma. We have seen how she looked down from a point near the ceiling and “saw” her own body, the nurse, the desperate doctor, and her relatives interacting. Her case is typical of paranormal NDEs. More interesting cases involve patients who not only leave their body but the room, the hospital, and sometimes even the country, but who also “see” people or things or events in these distant places that are later verified by witnesses who were there. The most remarkable paranormal cases involve blind

people who accurately see real situations for the first time in their lives during their NDE (Ring and Cooper, 1999).

In addition there are cases of comatose NDErs who report seeing the spirits of deceased relatives and friends. The same are reported by dying but still conscious (not comatose) people (Barrett, 1926; Callanan and Kelley, 1992). While it is tempting to dismiss these apparitions as hallucinations, there are good reasons for not doing so, though they are outside the scope of this paper.

So what causes all this mysterious seeing that NDErs report? Or does it make more sense to deny causality to them? I do not hesitate to ascribe causality to them, and in the following straightforward manner. Jung's patient really did see what was happening in her hospital room – on this point Jung and I are in agreement – and there were identifiable causes of her experience. These causes were the actual presence of bodies – her own, the nurse's, the doctor's, and her relatives' – in the room. If they had not been there, she would not have seen them. They were causes in the same sense that the people and pets we see in our homes are causes of our experience of them. It is true that we know more about the physiological mechanics of seeing our family members than we know about NDErs who see real things while out of their body, but the difference is not all that great since in the last analysis all conscious experience, whether in the body or out of it, is utterly unexplainable.

Someday we may be able to give an account of how people see during an out-of-body experience. Perhaps the explanation will resemble that of the ancient Hindus who described layers of subtler bodies just under our skin with subtler senses intact. Many NDErs tell us they have a definite sense of being embodied while out of their physical bodies. If they are embodied, then they may be thinking with subtle brains and seeing with subtle senses. If that is so, we are closer to solving the mystery that Jung found so baffling. Rather than saying there is *no causality* for the NDEr's paranormal knowledge, we could say that there are two aspects to the cause: the actual presence of what is seen, and a subtle sensory apparatus belonging to a subtle body that does the seeing. Beyond that we could not say, but saying that much is helpful, helpful in the sense that it helps us grasp why NDErs accurately report what they have no business seeing according to conventional, materialistic science. In normal situations we use the language of causality to account for the things that we see. There is no compelling reason to drop the habit when NDErs describe with accuracy the things that they see.

Postscript: Why Jung Packaged Synchronicity the Way He Did

Why did Jung resist this accommodation to common sense so tenaciously? The key lies in his rejection by his colleagues, especially Sigmund Freud, who had been a father figure to him. The rejection came in 1912 with the publication of Jung's *Symbols of Transformation*. Jung wrote many years later: "After the break with Freud, all my friends and acquaintances dropped away. My book was declared to be rubbish; I was a mystic, and that settled the matter" (1961, p. 167). In his book *C. G. Jung: Lord of the Underworld* (1984), Colin Wilson presented compelling evidence that Jung fretted about his professional isolation for the rest of his life. About Jung's essay on synchronicity specifically, Wilson wrote: "all this is dressed up in talk about causality and non-causality ... to give it the appearance of a scientific hypothesis" (1984, p. 116). He added that Jung was "obviously worried about his scientific image" (p. 122).

Jung never got over the need to court his materialist colleagues even as he scorned them. He might have been a mystic, he might have believed in the soul, even an afterlife, but at least he thoroughly understood what *they* believed in. They believed in cause and effect; they believed that the mind was at best an epiphenomenon of chemical events in the material brain; they believed in matter and rejected spirit; and they believed that so-called paranormal events were figments of the imagination and needed no theory to explain them because they did not exist. He understood their biases and he could speak their language, even accommodate his theories to that language, and thereby show the world that he was as legitimate a scientist as they.

James Forsyth shared this conviction about Jung and wished, as I do, that Jung had gone in a different direction: "Instead of insisting on the scientific nature of his work, perhaps Jung would have better served his cause by insisting on the validity of this experiential type of knowledge as complement to scientific knowledge as that term is generally understood" (Forsyth, 2003, p. 58). If he had, he might not have felt the need to "clip out" paranormal knowledge from more conventional knowledge and dress it up so mystifyingly. Perhaps he would have resisted the temptation to surrender cause-and-effect thinking to his materialist colleagues, as if they alone would know what to do with it. Instead of courting their good opinion of him, he might have staked out a different kind of territory where causes and their effects were more shadowy and mysterious and harder to pin

down, but not any the less real for being so. If that had happened, I doubt that he would have invented the word *synchronicity* to explain the paranormal aspects of his patient's NDE when already existing terms like out-of-body experience, extrasensory perception, and telepathy served perfectly well (Wilson, 1984).

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Introducing Near-Death Research Findings into Psychotherapy

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ABSTRACT: Traditionally, it has been regarded as inappropriate for a therapist to introduce issues of spirituality or religion into a psychotherapy session. I departed from this convention and discussed the rationale and results of doing so with adult and adolescent suicidal patients originally in 1979, and have been doing so ever since. Engelbert Winkler (2003) recently discussed his experience in using information about near-death experiences (NDEs) with a suicidal child. This paper discusses the rationale for introducing such material in cases of bereavement as well. I discuss introducing the client to empirical findings in the NDE area as "psycheducational."

KEY WORDS: bereavement; near-death experience; psychotherapy; psychoeducation; suicide.

The dominant policy in the field of psychotherapy regarding spiritual and religious beliefs is that the therapist must remain scrupulously neutral when such topics are presented by the client. No doubt this may have its origins in the theoretical underpinnings of psychoanalysis, which required that the analyst remain as an unknown quantity so that the analysand could project his or her psychological material onto a blank screen without any contamination by the analyst's psychological make-up. The requirement to avoid offering any opinions on spiritual or religious matters was probably further strengthened by the fact that many of the early psychoanalysts were either nonreligious or antithetical to religion or spirituality. Therefore, it was a sharp break from my training when I decided to introduce certain findings of Raymond Moody (1975, 1977) on the

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near-death experiences (NDEs) of suicidal patients into the therapy of one of my suicidal clients.

What had impressed me in Moody's account of his interviews with suicidal NDE survivors is that none of them ever attempted suicide again. Furthermore, several of the nonsuicidal survivors corroborated the lessons from the suicidal survivors that in the NDE state they "learned" that suicide was not desirable and that it could lead to a perpetuation of the dilemma that prompted them to kill themselves (Moody, 1977).

At the time that I discovered Moody's writings (1977), I was seeing a teenaged girl in therapy who was suffering from chronic major depression. This young woman was also being seen by a psychiatrist and had tried several antidepressant medications with no significant lifting of her symptoms. I had been working with her for about a year, with no sustained improvement. She would exhibit short-term improvement, but as soon as another crisis surfaced in her life, her depressed mood deepened and she returned to a preoccupation with suicide. In reading Moody's accounts, I was also impressed by the fact that he devoted some of his discussion to examining the independent verification of the content of what the NDE survivors reported. So, it seemed to me that this was not just another wild claim that one might see in a grocery store tabloid, but a reasoned and sober account by a respected psychiatrist. Even though Moody disavowed that his accounts "proved" the existence of an afterlife, I reasoned that he at least had presented some evidence that was suggestive of a degree of personal survival of bodily death. To someone such as myself, raised in the Catholic faith, but at that time disbelieving in the afterlife, these accounts seemed very significant.

Many of us may have searched for "truth" in various philosophies and religions, and have been confused by the great plethora of philosophical systems and religions that abound. Out of all of these varied systems, the pragmatism of William James (1907) seemed to offer to me some framework from which to evaluate Moody's findings. Moody said that after experiencing the NDE, no suicidal patient in his acquaintance ever attempted suicide again. James had pointed out that if actions taken in accord with certain beliefs resulted in observable changes that were in accord with these beliefs, then this demonstrated that such beliefs had some truth value. It could then be said that the beliefs "worked."

What I took from this was that whatever the NDE survivors learned during the NDE "worked" insofar as their behavior changed perma-

nently: they did not attempt suicide again. That is what I wanted for my client: to learn that suicide was not an option. Would this belief "work" for my client the way it worked for Moody's NDE survivors? The difference between Moody's patients and my client is that the former had NDEs. However, I reasoned, if my client were exposed to the accounts given by Moody's patients, she could learn vicariously. The input would change her belief system in a way that traditional cognitive therapy had not been able to do. With the foregoing as my rationale, I decided to introduce my client to Moody's findings.

Because my client's ability to focus her attention was impaired, I doubted that she would read Moody's books if I lent them to her, so I decided to read selected passages to her. What occurred was quite dramatic. She cried profusely when she heard the report of the NDE survivor that the dilemma that plagued her in this life would continue into the next plane of existence. However, after this very tearful session, my client began to dig much deeper into herself to come to grips with the dilemmas that were causing her such distress. In the weeks that followed, there was more psychological movement than there had been in many months. It was as if the desperation option of suicide no longer existed for her, so she would have to focus more energy on her remaining options. I cannot say that this intervention resulted in the total remission of her depression, but I can say that she was no longer suicidal (McDonagh, 1979).

Encouraged by the positive effect of introducing NDE-related material on suicide, I did the same with another client and witnessed virtually the same result. Even though this second client was not planning suicide, he frequently fantasized about dying and sometimes pictured himself committing suicide. After the introduction of the above material, these fantasies stopped. My use of NDE material in psychotherapy sessions has evolved to the point that when clients begin to express suicidal ideation, I ask them what they think happens after death. Not surprisingly, there is a variety of responses.

Many say that after death, they cease to exist and there is nothing. A large percentage say they do not know what happens and have never given it much thought. I then discuss with them that there are a number of NDE survivors who have come back with very interesting reports, and that it might benefit them to listen to what they have to say. In more recent years since these first interventions, I have used a videotape narrated by Moody (1992) in which he interviewed several NDE survivors. Over the 25 years since I began using NDE material, about 20 cases have involved suicidal clients, some with previous

suicidal attempts. In all of that time, the suicidal ideation of all of these clients has diminished or disappeared, and none to my knowledge ever attempted suicide. A few of them have contacted me years later and have said things such as, "That tape saved my life."

Another group of clients that I have found to benefit from watching Moody's videotape are the bereaved. My observation has been that those clients who already believe in some kind of afterlife are better able to deal with the death of a loved one than those who have no such belief. The reason seems obvious: those who believe in an afterlife have hope that they will one day be reunited with their loved one, while for those who have no such belief, the separation by death is final. After watching the Moody videotape, my clients begin to question their assumptions about death. The statements by NDE survivors in the tape, on the importance of behaving in a loving way in this life, also sometimes begin a process of reevaluation by the client of his or her own priorities. Some clients who were not able to visit their loved ones before they died have derived solace from realizing that the recently deceased person may well have been aware of their efforts to visit, and of the love which the client was not able to express. In summary, the material in the videotaped interviews often gives comfort to the grieving client, but it also generates movement on personal issues that go beyond the grieving process.

Sometimes the introduction of the NDE material results in a reaction of skepticism. I usually reply that many people are skeptical of the validity of the data, but that I want the clients to be informed about the research, and if they feel so inclined, to continue reading on their own. One resource I refer them to is Kevin Williams' website (<http://www.near-death.com/>) which discusses the case of Pam Reynolds, first described by Michael Sabom (1998). Reynolds had undergone brain surgery to remove an aneurysm. Because of the size and location of the aneurysm, her body temperature had to be lowered to 60 degrees; blood was drained from her head; her heartbeat and breathing stopped; and her brainwaves were flattened. She remained in this clinically dead state for about an hour while the surgery was performed. She emerged from her clinical death reporting many detailed observations of occurrences coincident with the surgery that were independently verified (Sabom, 1998).

I see this dialogue with my clients as similar to educating them with results of empirical research in any other field that is pertinent to their clinical concerns, such as child-rearing issues or side-effects of psychotropic drugs. It falls clearly under the rubric of "psychoeducation." As

with other categories of psychoeducation, I would be failing in my professional responsibility if I deprived them of such important information that my experience causes me to believe would be helpful to them. The fact that this particular type of “psychoeducation” involves empirical data that might lead one to explore the “spiritual realm” should not disqualify it as legitimate psychoeducational material.

In summary, the research that has so painstakingly explored and documented the NDE over the years, and my reading of and listening personally to the accounts of experiencers, have opened my eyes to a valuable psychotherapeutic tool. This whole field of inquiry has enriched me many times over as I have been able to share it with my clients whose lives have also been enriched and, in many cases, lengthened.

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BOOK REVIEW

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Moral Development and Reality: Beyond the Theories of Kohlberg and Hoffman, by John C. Gibbs. Thousand Oaks, CA: Sage Publications, 2003, 299 pp., \$39.95 pb.

Moral Development and Reality: Beyond The Theories of Kohlberg and Hoffman offers a much needed synthesis of Lawrence Kohlberg's and Martin Hoffman's pioneering studies of the development of moral reasoning and empathy. Yet this is much more than a book about moral development. The linking of moral development with the term *reality* in the title suggests that this book not only goes beyond the theories of Kohlberg and Hoffman, as stated in the subtitle, but also goes beyond psychology itself. At the conclusion of his penetrating analysis and careful criticism of Kohlberg's and Hoffman's theories, author John Gibbs dares to ask about a deeper moral reality undergirding ordinary moral experience. Through an analysis of key features of documented near-death experiences, Gibbs points to a reality that underlies all moral experience, a reality which is itself moral and is the condition for the possibility of all moral experience. Here Gibbs crosses the borders between psychology and metaphysics. Is such border crossing warranted? Gibbs answers as a psychologist with an open mind. The psychological experiences of individuals reporting near-death experiences provide a window into the domain of what many call religion – into ultimate moral reality.

This book is likely to attract to two different audiences: those who want to learn more about the relationship between Kohlberg's and

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Hoffman's theories of moral development, and those who want to learn more about the relationship of near-death experiences to contemporary moral psychology. Neither audience will be disappointed. Gibbs is one of the most highly regarded moral psychologists in the world today. No other psychologist has studied Kohlberg's and Hoffman's theories so assiduously over such a long period of time. Those who know Gibbs's work know that he has never been content only to comment on or to clarify the prodigious output of these two great psychologists. Gibbs provides a profound insight into Kohlberg's and Hoffman's achievements by reconstructing their major ideas within a highly original framework. *Moral Development and Reality* offers an intriguing rendition of Kohlberg's and Hoffman's theories and contributions and a penetrating exploration of the implications of their contributions.

Gibbs notes at the outset of *Moral Development and Reality* that Kohlberg's and Hoffman's theories are based on a common conception of morality as objective and universal and of moral development as based in role-taking, that is, the ability to see an action from the perspective of others affected by it. When one steps back and considers that most social science theories are relativistic and do not emphasize the role-taking dimension of development, Kohlberg's and Hoffman's theories seem remarkably alike. Gibbs rightly notes, however, that the theories, while broadly related, are significantly different. Although Gibbs does not believe that it is possible to integrate them fully, he does argue that they largely complement one another.

Kohlberg's moral development theory, as Gibbs points out, is fundamentally cognitive; and Kohlberg's stages of moral judgment describe distinctive ways of moral reasoning. Although Kohlberg is typically regarded as having extended Jean Piaget's theory of moral development, Gibbs rightly credits Kohlberg's life span stage theory as going well beyond Piaget's contribution. On the other hand, Gibbs criticizes Kohlberg for adopting John Dewey's developmental scheme, which depicts development as progressing from pre-conventional, to conventional, and finally to post-conventional stages. In Gibbs's view, Kohlberg's appropriation of Dewey's scheme suggests that development in the conventional stages involves the internalization of moral content. Yet Kohlberg was very clearly committed to Piagetian constructivism, in which children do not simply appropriate their environmental input but interact with it and thereby adapt. Unfortunately, Kohlberg never addressed the

confusion his choice of terminology engendered, and Gibbs's clarification is most welcome.

Gibbs also takes issue with the nature of Kohlberg's post-conventional stages. Noting that the post-conventional stages involve philosophical reflection on moral thought and action, Gibbs argues that post-conventional modes of thought are not really stages in the Piagetian sense, but existential phases of meta-ethical thinking. In his reconceptualization of Kohlberg's post-conventional stages, Gibbs includes not only Stages 5 and 6 but also Kohlberg's Stage 7. Kohlberg would have objected to such a move, not only because he thought of Stage 7 as a "metaphorical" stage but because he did not think of Stage 7 as a stage of moral judgment *per se*. On the other hand, Kohlberg, like Gibbs, also claimed that the Stage 7 insight into ultimate reality could ground a morality of *agape* or self-sacrificial love, which goes beyond the demands of justice.

After discussing Kohlberg's stages, Gibbs takes up Hoffman's "empathy-based" approach to moral development. Gibbs describes the transition from Kohlberg's theory to Hoffman's as a transition from the *right* to the *good*, insofar as Hoffman's theory emphasizes the affective, desiring dimension of morality, a dimension many find neglected in Piaget's and Kohlberg's cognitive developmental theory. Gibbs describes Hoffman's theory as drawing on three interrelated processes involving biology, cognitive development, and socialization. Although Gibbs faults Hoffman for not recognizing the logical dimension of morality (moral reciprocity) as having a distinctive motive-power, Gibbs credits Hoffman with presenting a more "balanced" and "comprehensive" theory than Kohlberg (p. 108). Hoffman's theory understands moral functioning as fraught with conflict. Empathic concern for others vies with the egoistic motives; others make competing demands on the self. Gibbs concludes that while both Kohlberg's and Hoffman's theories have much to offer, they are incomplete. Each needs what the other lacks. This leads Gibbs to attempt to integrate the two theories by examining the psychological underpinnings of prosocial and antisocial behavior.

Gibbs's treatment of prosocial behavior not only brings Kohlberg's and Hoffman's theories together, but invokes other psychological constructs operative in moral functioning and prosocial behavior, for example the moral identity. Gibbs is not content to show how these various factors interrelate to produce positive behavior; he also discusses how moral functioning can go awry, by analyzing the cases of Timothy McVeigh and Osama bin Laden. Gibbs notes that both men

possess many of the characteristics associated with heroic moral and prosocial action. Both men wholeheartedly committed themselves to their ideals; both displayed great ego strength, self-efficacy, and empathy. Yet, as Gibbs argues, both lacked a mature moral perspective leading to ideal reciprocity and forgiveness and both men had seriously distorted perceptions of morality.

Gibbs's chapters on understanding and treating antisocial behavior summarize his own seminal research on the roots of antisocial behavior and his very successful EQUIP program for rehabilitating juvenile offenders. While heavily relying on Kohlberg's and Hoffman's theories for the EQUIP approach, Gibbs liberally draws on a variety of resources to produce a very powerful treatment program.

Readers may find the transition from Gibbs's presentation of the EQUIP Program to his discussion of near-death experiences and the "deeper reality" that they reveal somewhat abrupt. Gibbs, the engaged therapist, suddenly becomes Gibbs the contemplative philosopher. Yet the continuity of the volume becomes evident as the reader attends to the way in which throughout the volume Gibbs's analysis becomes increasing more personal, engaged, and inward. Gibbs's opening chapters on Kohlberg and Hoffman provide judicious commentary from the detached perspective of a critical psychologist. Gibbs's middle chapters, which aim at integrating Kohlberg and Hoffman, reveal much of Gibbs's own perspective. When Gibbs presents the EQUIP program, he is no longer describing the moral experience of others; he is reflecting on his own experience as a devoted moral educator/therapist interacting with a needy and vulnerable population of young people. The empathic reader will, I believe, come to Gibbs's concluding chapters asking with Gibbs for the ontological ground of moral commitment. Gibbs's turn to a consideration of ultimate reality is certainly a fitting response to the age-old question of "Why be moral?"

Gibbs's treatment of that "deeper reality" is similar in many ways to what Kohlberg referred to as Stage 7. Kohlberg coined the term "Stage 7" as a metaphor to signify that, although one could reach a final equilibrium in determining one's moral principles at Stage 6, the question, "Why be moral?" still remains. This question should not be confused with the question, "What is moral?" The question "Why be moral?" asks about the ground of morality or, as Gibbs might put it, the deeper reality in which we seek to pursue our moral ideals. Does that deeper reality correspond in any way to our most cherished moral ideals? or is that deeper reality without meaning or value?

Gibbs, like Kohlberg, marvels that the logical-mathematical constructions of mature cognitive development are found at the deepest core of the physical world. If the mind's logical mathematical constructions are so related to the depths of physical reality, why are not the mind's moral constructions similarly related to the depths of moral reality? Mind and reality are, Gibbs and Kohlberg speculate, uncannily one.

The encompassing oneness of reality becomes existentially relevant when individuals confront life crises that raise questions of meaning. Kohlberg emphasized the reassurance that a pantheistic or religious cosmic perspective on reality might bring to the anxious moral agent. Gibbs finds interesting parallels between Kohlberg's depiction of Stage 7 and the content of near-death experiences.

Near-death experiences appear to represent another window on ultimate reality. These experiences share, in my view, certain features of the existential crises that Kohlberg and I thought of as leading to explicit reflection on metaphysical and religious questions (Kohlberg and Power, 1981). Moreover, near-death experiences appear to affirm the nature of ultimate reality as deeply moral. This realization appears to bring forth both a sense of comfort and moral challenge to those reporting near-death experiences. Those individuals Kohlberg and I considered as exemplifying Stage 7 thinking also derived a certain comfort and challenge from their Stage 7 contemplation.

Gibbs carefully appraises claims that near-death experiences can provide extrasensory perceptions. Even the most skeptical reader will find his discussion of these experiences probing and balanced. While he clearly concludes that near-death experiences provide an access to ultimate reality, Gibbs seems to value these experiences more for the moral motivation that they provide than for their extrasensory attributes. The near-death narratives that Gibbs reports echo scenes from Dante's *Divine Comedy* (Alighieri, 1955/14th century) and other religious classics. Humans have never simply accepted their finitude as a brute fact but have seen themselves in a cosmic drama reaching into infinity.

Gibbs's *Moral Development and Reality* is a book that will inspire as well as inform. It will certainly have a significant influence on moral psychology and its applications to juvenile delinquency and criminal justice. Most importantly, in my view, it will challenge all of us as readers to take stock of our lives in the light of a reality beckoning us beyond our mundane sense of justice and goodness.

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Letter to the Editor

Near-Death Experiences Before and After 1975

To the Editor:

In the Fall 2003 issue of the Journal, an excellent study by Jeffrey Long and Jody Long appeared, describing their Internet survey comparing near-death experiences (NDEs) occurring before and after 1975. They concluded from analysis of a questionnaire posted on their website that there was no appreciable difference with regard to near-death demographics, experience elements, or aftereffects between cases that occurred before the publication of Raymond Moody's seminal book, *Life after Death* (Moody, 1975), and afterward.

The study they conducted freed the research community to pursue older as well as newer cases, and established Internet survey methodologies as valid. What concerns me are some of their other comments, especially in regard to "copycat" or plagiarized or fraudulent accounts. These do happen, and have happened on their website: one of my own cases fell prey to a "copycat" submitted to them, which they in turn recommended to Kenneth Ring, and which unfortunately was not discovered until after Ring and Sharon Cooper had published the fraudulent account (Ring and Cooper, 1999). Long and Long's statement that it is highly unlikely such incidents happen in any significant number is probably true, but then that leaves us begging the question of what number is significant. It only takes a few "bad apples" to spoil the mix. I am certain they would agree with me that researchers need to remain vigilant and cross-check their sources.

I remain sensitive to this issue because of my own experience as a researcher of near-death states, a career that has spanned more than a quarter of a century. During that time, there have been notable changes in some elements, not in aftereffects nor in general patterning, but rather in imagery and how it is described. Let me cite a few examples:

The first national survey conducted by Gallup Poll (Gallup and Proctor, 1982), reported the frequency of those who experienced seeing

or going through a tunnel at 9 percent. Fifteen years later, I found a figure of slightly less than a third, based on nearly 3,000 cases from my own research base (Atwater, 2000). The only researchers I know of who found claims of a tunnel to be significantly higher (more than 70 percent) were those who conducted their work with support groups for near-death experiencers sponsored by the International Association for Near-Death Studies. It is obvious to me that the popularity of "tunnels" has increased in tandem with the popularity of the near-death phenomenon, perhaps because experiencers now have a word they did not have before to describe what they encountered, or perhaps they have inadvertently molded what they encountered to fit the imagery suggested by the word.

Second, cultural differences and language constraints have had and continue to have a marked effect on the "color" of imagery encountered during the near-death scenario and how that is described. For example, regarding a religious figure, someone from Thailand might say it was a Yamatoot, a servant of the Lord Yama; someone from Wyoming might say it was an angel; someone from Florida might say it was Jesus; someone from France might say it was a priest; and so forth. The way I dealt with this was to have the individual draw the "greeter." When I compared the various drawings, I could not tell them apart. They all looked like the same bright being of light. They may have had different names and descriptions, but they were basically the same figure. Variations had more to do with who was doing the talking and where he or she lived.

Third, at the beginning of near-death research there were very few cases of unpleasant and/or hell-like experiences reported. Whether or not this was because people were too embarrassed to speak of them, the fact is the "Moody model" seemed to determine what researchers were looking for and how they went about their search. As more cases were discovered, more people came forward, changing how researchers conducted their work. Thus, types of scenarios evolved as the field evolved.

Fourth, this same peculiar evolution occurred with the aftereffects. In the early days of near-death research, few experiencers reported the radical changes we now know can follow near-death states. Thinking followed the descriptions of aftereffects in Moody's book: people were unafraid of death afterward, became easier going, more loving and generous, and more spiritual. Today, a larger pattern of both physiological and psychological aftereffects has been identified; my finding that it takes a full seven years to integrate the experience

has been verified by a recent Dutch study (van Lommel, van Wees, Meyers, and Elfferich, 2001).

The point I am trying to make here is that, although the basic patterning of near-death states has remained consistent over time and throughout the world, both before 1975 and after, we cannot say that all aspects of NDE reports have remained as consistent. The field of study has evolved, and with that evolution have come changes in word use, descriptions, and scenario types and in how these are viewed.

From my own experience as an investigator, it was much easier in the late 1970s and throughout the 1980s to trust the information I was given by the experiencers I encountered. I double-checked anyway, including interviews with significant others whenever possible. In the 1990s, however, the research climate changed, especially after the publication of popular books by near-death experiencers Betty Eadie (Eadie and Taylor, 1992) and Dannion Brinkley (Brinkley and Perry, 1994). Experiencers were not nearly as cooperative with me after that; a number of them demanded payment for their story or refused to share much, lest they put their copyright at risk. I could not duplicate today the work I previously did, as a result of this change in the climate of research.

The Internet may indeed be the next frontier in the scope of research that can now be conducted, perhaps not as thorough as face-to-face interviews such as I once did, but nonetheless valuable, and Long and Long are leading the way. They have done a splendid job and I look forward to more reports from them.

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Credit for Coining Terms

To the Editor:

It is pleasant to be given credit for one's work, but it is contrary to my personal and professional values to get credit for what I have not done.

Ken Vincent's review of Michael Perry's *Psychical and spiritual: Parapsychology in Christian faith and life* (Vincent, 2003), credited me with coining the term "scientism." I wish I had, since this kind of arrogant ossification of scientific theories is an important pathology of thought and perversion of real science, a pathology that harms a lot of people by apparently invalidating many of their spiritual experiences. But sociologists had noticed this phenomenon and coined the term long before I was born (see, for example, Hobb, 1910).

Similarly, I am often credited with coining the term "altered states of consciousness" because of the popularity of my book of that title (Tart, 1969), but I took the book title from a review article of that title by Arnold Ludwig (1969) that I reprinted in the book. The success of the book helped popularize the phrase, but I did not coin it.

Readers of this journal will also be interested in the fact that I have coined the slowly spreading technical terms "consensus consciousness" to emphasize the cultural determinants and relativity of so-called normal consciousness, and "consensus trance" when emphasizing the narrowness and limitations of consensus consciousness. I also coined the phrase "out-of-the-body experience" and its abbreviation "OBE." Originally I used the abbreviation "OOBE," but a grammatically rigorous editor reminded me that we do not capitalize "of" in an acronym, so it has been "OBE" ever since—which was a good thing, as I had already experienced much "semantic karma" as a result of OOBE, as people came up to me after lectures and told me about their OOBEs (rhymes with boobies), pronouncing it as if it were a word!

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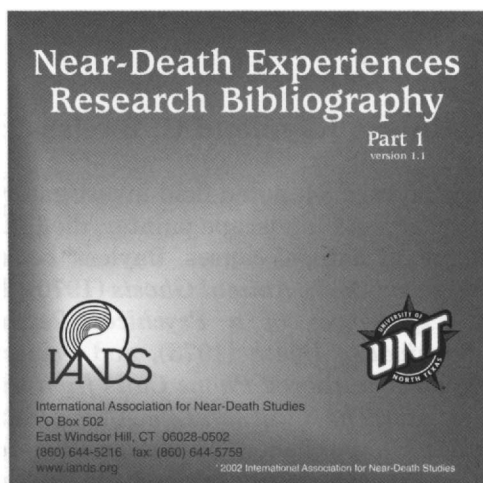
Obituary: Raymond G. Bayless

Raymond Gordon Bayless, 84, noted field investigator in the area of survival of death, writer, and landscape painter, died May 25, 2004 at his Los Angeles home, of natural causes. Bayless' books include *The Enigma of the Poltergeist* (1967), *Animal Ghosts* (1970), *The Other Side of Death* (1972), *Experiences of a Psychic Researcher* (1972), *Apparitions and Survival of Death* (1973), and *Voices from Beyond* (1976). In addition, he co-authored *Phone Calls from the Dead* (1979) with D. Scott Rogo, and *The Case for Life After Death* (1981) with Elizabeth McAdams. He published papers in the *Journal of the American Society for Psychic Research* and the *Journal of Religion and Psychic Research*. For some years he was a member of the Parapsychological Association.

It is not widely known that Bayless was the first to report the reception of whispers, voices, and raps received in silence on tape. He reported his first long series of experiments with Attila von Szalay in Los Angeles, in the *Journal of the American Society for Psychic Research* in January of 1959, with Friedrich Jurgenson of Sweden independently discovering and reporting the same phenomena three months later.

In addition to his work related to parapsychology, Bayless had a distinguished career as a landscape artist. His works hang in the National Air and Space Museum, in the Departments of the Air Force and Navy, in the State Department, and in the Pentagon, as well in many collections throughout the world.

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