From Lucid Dreaming to Pure Consciousness: A Conceptual Framework for the OBE, UFO Abduction and NDE Experiences

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In order to gain a theoretical understanding of the lucid dream, out-of-body experience (OBE), unidentified flying object abduction experience (UFO), and near-death experience (NDE) it is necessary to place things in their series, as William James, author of the 1902 classic The Varieties of Religious Experience, emphasized. That is, identify the similarities and differences between experiences in order to understand their nature. The goal of such an inquiry is to identify a common state from which they derive and/or common mechanisms or structures. In this paper lucid dreaming will be framed with the apparently different but related phenomena of three of the cases presented in the June, 1989 issue of Lucidity Letter: the OBEs of Father "X," the UFO abduction described by Felicia Payne and the NDE of Mark Block. A fourth case from the same issue, the witnessing experiences of Anja Savolainen, is also relevant later in this discussion.

The most obvious set of experiences which lucid dreaming should be considered alongside of are all other dreams, ranging from the mundane true-to-daily-life to the highly bizarre, archetypal, life-changing sleep experiences. These comparisons are considered at length elsewhere (Gackenbach, 1988; Gackenbach & Bosveld, 1989). Essentially, lucid dreams at the lowest level of consciousness in sleep, are dreams with few content differences from the nonlucid variety. However, I (Gackenbach, 1991; Gackenbach & Bosveld, 1989), as well as others (Alexander, 1987), have argued that entry-level lucidity is only the beginning of the development of consciousness in sleep.

Less obvious but still frequently mentioned in association with the lucid dream is the OBE. During an OBE one has the feeling that one's "self" has left the body and is "viewing" it. People who dream lucidly are also more likely to report having had OBEs (Irwin, 1988). Further, the lucid dream has been frequently presented as a jumping off point for the OBE. Related to OBEs and lucid dreams, are NDEs and UFO-abduction experiences. Experients of the latter two often report OBEs in association with their experiences. Some preliminary work has also shown a relationship to lucidity for NDErs.

Some of these associations are seen in the three cases in the June, 1989 issue as well as in the OBE, NDE, and UFO abduction literatures. To begin with Father "X": over

many years and many experiences this Catholic monk clearly concludes that his apparent OBEs are lucid dreams. Then in the UFO abduction of Bill, as told by Felicia Payne, the contextual material given after the case clearly shows that not only has Bill had OBEs at will since childhood but he also is frequently conscious in sleep. Of course the most obvious link is that throughout his "abduction" experience he himself attributed it to a dream and thus it could be conceptualized as a lucid dream. Finally, the NDE case of college student Mark Block is an example of con-sciousness in the deepest form of sleep, coma.

The thesis I will be presenting is that although these experiences (OBEs, UFO abductions and NDEs) are misattributions of "reality," they are related in some way to lucid dreaming, an experience which by definition is an accurate "reality" attribution. Further, I will show that lucid dreaming is closely related to the practice of meditation and thus to the experience of pure consciousness or contentless aware-ness that is sought by the meditative traditions. It is in tracing this line from three misattributions (OBEs, NDEs and UFO abductions) to an accurate attribution (lucid dreaming) and on to pure consciousness that we can grasp the role each experience plays in the development of higher states of consciousness. I will begin this discus-sion by briefly examining each misattribution and its relation to lucidity. I will then show that lucidity is closely related to meditation and further serves as a bridge to higher states of consciousness such as pure consciousness.

Out-of-Body Experiences (OBEs)

Immediately prior to the current work on lucidity western references to this nocturnal experience were almost exclusively found in the literature discussing the OBE. OBEs have been known to occur in deep meditative states and while under the influence of psychedelics. They are commonly associated with NDEs, and occasionally while engaged in some other activity. The majority of OBEs, however, arise at or near sleep with the next most frequent precipitator being periods of extreme waking stress. Of those associated with sleep, Hunt and Ogilvie (1988) explain, "it is as if a dreaming sequence starts but, atypically, awareness of one’s actual setting in time and space is not dislodged as in most dreams." Rather, the dreamer integrates "the imaginal participations of the dream with a detached self-awareness that knows one’s actual context for what it is."

Another perspective is that of LaBerge (1985) and colleagues (1988) who argue that OBEs are misinterpreted dreams. They point out that the REM sleep hypothesis has been rejected by most OBE theorists based largely on the failure of the few physiological studies of OBEs to identify REM sleep phenomenon associated with the OBE. However, in a recent study LaBerge et al. (1988) content-analyzed 107 signal-

verified lucid dreams (i.e., presence of consciousness in sleep verified by a prearranged eye movement signal executed by the dreamer from REM sleep). Ten of the reports were identified as OBEs based on phrases in the report such as "I . . . felt that I had left my body" or "I was floating out of body. . . ." They concluded through subsequent analyses that the activation of body schema was important in these cases, and that "because of the discrepancy between the remembered state of the physical body and the current experienced state of the body image, the subject constructs a perception of a mobile body leaving an immobile body."

Rogo (1985) counters LaBerge's arguments by pointing to the wide variety of physiological characteristics that have been identified with the OBE. Outside judges, he points out, typically cannot classify them as clear-cut sleeping or waking experiences. Nonetheless, LaBerge's data clearly suggests that the REM state hypothesis needs to be more seriously considered in accounting for at least some OBEs.

To return to the more classic OBE theories, Blackmore (1988) points out that there are two types of theories of the OBE, ones that postulate the "soul, astral body, spirit, or whatever leaves the body temporarily in an OBE and permanently at death," and "psychological theories of the OBE that deny that anything leaves the body and posit that the experience is one of the imagination." Most current theorists favor the latter and note the multiple parallels between lucid dreaming and OBEs, thus postulating a common cognitive mechanism for both (Blackmore, 1988; LaBerge, 1985).

Irwin (1988), however, argues that lucid dreams and OBEs are neither "phenomenologically or neurophysiologically equivalent." Nonetheless because of their strong association, they reliably occur in the same people and he too has searched for common mechanisms. Blackmore, on the other hand, argues that both are due to the same sort of mental model building. Irwin points to the arousal/stress factor in the initiation of both. These may be collapsible by postulating that at two points the system is forced to create a new mental model of its experience thus resulting in the reorientation of the perception of the locus of "self" as "outside" the physical body. The most frequent condition is one where the system is denied sensory input, as when one is near or during sleep. Without sensory input as to the appropriate loca-tion of "self" the system is more able to locate "self" elsewhere. Although in the case of sleep mentation "self" is still most frequently "located" in the dreamed body, dual self, flying selves, etc. are much more common in this state than while awake.

The second condition is one where the system is on sensory overload, as with extreme physical and emotional stress. Due to the negative consequences of such overloads "self" relinquishes its identification with body and "locates" elsewhere. So in the first

case the system lacks a referent (sensory input) to locate self whereas in the second case the referent (sensory/emotional input) is overloaded and thus abandoned. My one and only waking OBE illustrates this relationship. After 32 hours of labor with my first child I was, needless to say extremely fatigued, and in enormous pain. A fantasy kept running through my mind, in between screams of pain, that I wanted to jump off the birthing table and run away from all this. Quite suddenly I found my "self" viewing from above and behind my body on the birthing table with my husband standing at my side. I remember thinking to myself, "This is more like it!" while feeling a great sense of relief—but alas! I quickly found myself back in my body with my daughter eager to exit!

After the extreme physical and emotional overload of 32 hours of labor I reconstructed my mental model of "reality" by placing my self "outside" of a body with which I was singularly displeased. Such a model of sensory detachment due to under or overload has also been proposed by Fisher (1971) with regard to mystical experiences and meditative states and will be discussed in more detail later in this paper.

Near-Death Experiences (NDEs)

Hunt's (1989) description of lucid dreams and OBEs as experiences of "intensified self-reference" (a detached observation maintained with a dreamt or lived participation)—also applies to several other states. NDEs, which occur during periods of the severest biological stress, combine intensified self-reference with image-ry common to the OBE such as the tunnel through which one travels and the white light of the void. Further, the OBE is one of the most common features of the NDE.

One way to view the relationship of the NDE to lucid dreams is nicely illustrated in this lucid dream following an NDE of retired physicist John Wren-Lewis (1985). Concerned that drinking too much wine would disrupt the mystical consciousness he seemed to have attained following an NDE, Wren-Lewis dreamt:

> He seemed to have a special responsibility for instructing me in how to handle this strange post-mortem existence, and when he mentioned wine I suddenly became lucid. I knew this was a dream, in which my ghostly invisibility symbolized my post-NDE state and the dream-characters who could see me were the people who in waking life recognized that I was living in heaven here on earth, dead to "this world." I also knew I was creating this dream to explore my concern about drink and mystical consciousness, and I became aware of lying in bed in our apartment overlooking Sydney Harbor Bridge with my mouth dry from mild alcoholic dehydration.

Wren-Lewis continues with a key realization in the dream:

> With a flash I saw that the real threat to mystical consciousness lay not in drink itself but in getting caught up into an internal dialogue about drink, and to celebrate this "breakthrough" in dream-terms I walked straight through the wall of the dream-room. As I emerged into the street by the harbor my dream was flooded with mystical con-sciousness, and not as something new, but as a simple recognition of what had actually been there all along, the exact same sense I have been having when I click back to the [mystical] consciousness in waking life. I flew over the water, borne by a wind I knew to be the breath of God on creation's first morning, and fainted at the beauty of it all—to wake in bed, my eyes brimming with tears of gratitude.

On more empirical grounds two survey studies have looked directly at the NDE/lucid dream relationship. Kohr (1982) identified three groups of respondents, who differed in whether or not they had had an NDE. The experiencing group indicated they had come close to death; had a deep, moving personal experience, and had one or more of the six types of experiences described in the research on NDEs. A second group indicated that they had come close to death and may or may not have had a moving personal experience. The third group was referred to as the non-experiencing group, composed of persons who had never come close to death. In terms of dream states the experiencing group reported a greater frequency of unusual dream states, including lucidity.

Greyson (1982) also looked at this relationship and writes:

> I have already asked about the occurrence of lucid dreams in one questionnaire (a short-ened version of John Palmer's Survey of Psychic Experiences) administered to self-selected members of the International Association for Near-Death Studies (IANDS). Among the "controls" (i.e., IANDS members who have not had NDEs), 83 out of 155 respondents (54%) reported having had lucid dreams, which is roughly what Palmer found among his sample from the general population. Among near-death experiencers, 13 out of 62 respondents (21%) reported having had lucid dreams prior to their NDEs, and 33 (53%) reported having had lucid dreams since their NDEs. Thus, a fairly low percentage of near-death experiencers had lucid dreams before their NDEs, while after the NDE, this percentage rises to the level among the IANDS controls and the population Palmer sampled.

Of course, this correlational data should not be viewed as causal. Although Greyson's

data suggests that an NDE experience may increase the frequency of lucidity an alternative explanation would be that NDErs had a tendency to perceive and/or report more of any type of extraordinary experience since their NDE. None-theless both studies point to the possibility that there may be a common mechanism or state which relates both experiences.

Unidentified Flying Object (UFO) Abduction Experiences

It may surprise the readers that the UFO abduction experience is another waking experience which can be conceptualized as related to the lucid dream/OBE/NDE range of phenomenon. Of course the problem with these experiences is that many who have had them claim that they do not lie in the mental realm but rather are physical, and thus real experiences. Let's put physical considerations aside for the moment and consider the mental aspects of these experiences as several contemporary psychologists have done, starting with Carl Jung (1964).

Probably one of the most psychologically-based explanations for the UFO abduction experience is offered by Bird (1989). She points to confabulation as "the simplest psychological mechanism fueling UFO accounts." Confabulations are something we all do in storing and retrieving memories. Bird explains that UFO stories "may well be confabulations, tapestries stitched together from actual experience, the stories of others who were there, events that have happened since, and perhaps a dash of wishful thinking." However, those with fantasy-prone personalities, she argues, are especially prone to such memory distortions. With the appropriate cue, such as the current fascination with science fiction, horror and space travel, an experience which 100 years ago might have been attributed to then fashionable creatures is today attributed to an alien abduction.

As with the OBE, many, but not all, of the abductions occur during or near sleep. Again hallucinations from hypnagogic (presleep), hypnopompic (postsleep) and incomplete arousals during sleep can be brought to bear to explain these experiences. As we fall asleep and wake up and for those momentary intrusions of wakefulness into sleep we are all much more prone to hallucinate and are more suggestible. As described by Payne, Bill himself attributed his entire UFO abduction to a dream while it occurred. Furthermore he had a history of extraordinary sleep experiences.

Calls to fantasy-prone personalities and sleep-related hallucinations no doubt account for some of what occurs in these experiences. However, the often-found attitude of those offering purely psychological explanations, i.e. "rational people view the stories with amusement" (Bird, 1989), does a major disservice to both the experience itself and those having it. These sorts of condescending attitudes to extraordinary but not

psychotic experiences are a hindrance when trying to come to an understanding of them. There is an assumption inherent in this attitude, that con-sensus reality is not really a mental model created by us (Yates, 1987). Further some current models of physical reality from quantum physics argue that consciousness, and not matter, is the stuff of the universe (Hageline, 1984).

Let's consider another perspective while remaining in the realm of the mental. Grosso (1985b) notes,

> The UFO mythology is a mythology of science, gussied up in ideas of extraterrestrial civilizations, future worlds and higher technologies. . . . Compared with ancient and prim-itive societies, modern scientific culture offers few inlets to the healing powers of the col-lective unconscious. This archetypal model came originally from Jung (1964) who saw UFO phenomenon [sic] as signs of the end of the era. He writes, "Apparently they are changes in the constellation of psychic dominants, or the archetypes, or 'gods' as they used to be called, which bring about, or accompany, long-lasting transformations of the collec-tive psyche."

Relatedly, the most well-known UFO abductee, Whitley Strieber (1988), hits the nail on the head about the potential of these experiences. He explains that he is:

> |. . . a thinking person who by no means buys the extraterrestrial explanation. How-ever, I don't feel that a simple psychological explanation is in order, either. Something else is going on, something akin to the transcendental, visionary experience that has always been with humanity. I myself try to make use of this experience the same way that a shaman on the steppes of Central Asia two thousand years ago made use of his startling vision of the world of the dead—by telling my story and bringing my dreams back to society. Perhaps we had better try to stop laughing at this state and start trying to describe it, because an awful lot of people believe they are experiencing contact with higher beings and another world. If we don't stop imposing interpretations and narra-tives on the experience, we may find ourselves in the grip of the most powerful religion the world has ever known.

Whether his prediction of these experiences as a potential "powerful religion" comes true, his advise to not ignore them should be taken by those interested in the range of conscious experience.

Let's return to our analysis of the UFO abduction experience in the context of other experiences. Strieber (1988), among others, has pointed to the OBE exper-ience as

associated with the UFO abduction. Further, Ring (in press) found in an informal poll of UFO experients that more than half had also had an NDE. Arguing that the UFO abduction (UFOE) and the NDE are both contemporary shamanic journeys he notes, "At the phenomenological level, NDEs and UFOs are of course quite dissimilar, but it is in their 'deep structure,' as it were, rather than in their surface contextual manifestations that important commonalities can be discerned." By placing these experiences as shamanic initiations Ring puts them squarely in the "world of imagination." His understanding, however, of this world is that "persons and places are fully real; they are as real in that domain as our physical world is to our senses," and as are dreams while we dream them. But why, Ring asks, does one go on a shamanic journey? To educate the Soul is his answer. The soul is imagina-tion (Avens, 1980).

Integration of OBE, NDE and UFO Abductions with Lucidity

These three experiences, OBE, NDE and UFO abduction, are some of the few imaginal realms that are more "real" than dreams but like dreams they carry the same inaccurate attribution. For most of us dreams are the strongest experiences of the mind that appear to occur "outside" of consensual reality. When we dream, while in the dream, it feels real. Even if we know it to be a dream while still in the dream (lucid dream), it still feels real. But in the vast majority of dreams we suffer a peculiar "singlemindedness" (Rechtschaffen, 1978) in that we are sure we are awake. We have no idea that we are dreaming while we dream. So too, in the "waking" dreams of OBEs, NDEs and UFO abductions, we are certain that what is occurring is "real" in the sense of loosing its felt sense of reality or object of permanence. And so, too rarely might an experient of these experiences accurately attribute the true nature of his or her state. Accurate attributions are the exceptions, not the rule.

This experience from Worsley (1988), the first lucid dreamer to signal from sleep that he knew he was dreaming, illustrates my point. In speaking about the lucid dreaming which he directly enters from the waking state by lying for up to two hours on his back and not moving Worsley comments:

> I am not given to superstition or believing in "unnecessary entities" but perhaps the term "dream" is a little too bland to do justice to the ultra-realism of these experiences. For instance, if one "dreams," as I have, in rich tactile and auditory imagery of being examined in the dark by robots or operated upon by small beings whose good will and competence may be in doubt, or abused in various ways by life-forms not known to terrestrial biology, it can be very difficult to keep still. I have found that if I do not keep still this peculiar state of consciousness usually evaporates in a moment. That can be very useful as an

> escape route but it can be annoying to lose it when the success rate is not high and each attempt takes two hours or more. I like to regard myself as at least a moderately intrepid investigator, but I have to admit that in spite of being intellectually of the opinion that what was happening was only internally generated imagery, I have flinched during these episodes on more than one occasion. . . . I suspect that many "UFO abduction" experiences, as well as out-of-body-experiences are examples of the same kind of thing.

Let me reiterate that the felt reality of these experiences, be they OBE, NDE, or UFO abduction, is profound and should not be understated. Because of it a relatively unsophisticated observer, which probably includes most of us, often concludes that such experiences are "real" in the sense of consensual waking reality. Only in the case of the lucid dream does the experience feel real while we experience it even though we are fully aware at the time that it is not "real." Thus I would argue that lucid dreaming represents a breakthrough for these types of experiences, in the sense of "waking up" called for in the meditative traditions. Further, this "waking up" represented by lucidity in sleep is only a transition or beginning point to higher states of consciousness and especially to pure consciousness. This state of "pure" consciousness occasionally occurs spontaneously, that is, without mental preparation, as in the NDE case of Block. However, more commonly the practice of meditation allows a reliable and integrated access.

But why, you might ask, should we want to train ourselves to pure conscious-ness? As Wallace (1986) explains:

> Contemporary physiology over the last three hundred years has come to the basic understanding that life and consciousness evolved from matter and energy. The property of consciousness, in particular, is considered by many to be an epiphenomenon of living systems—that is, property which occurs as a by-product of the functioning of a complex nervous system. . . . In the Vedic perspective of physiology, as brought to light by Maharishi Mahesh Yogi, the understanding and experience are quite the opposite. Consciousness is not an epiphenomenon; rather, consciousness is the primary reality from which matter and life emerge.

In other words, by going to pure consciousness we go to the source of all being, of all experience whether ordinary or extraordinary. I will now track our way to pure consciousness via the lucid dreaming–meditation link.

Lucidity–Meditation Link

Hunt (1989) warns that the lucid dreams are not reducible to only a mental waking up unique to the sleep state. First the "conscious" faculties brought forth are only partial. Second although spontaneously occurring lucid dreams in normal populations are quite realistic relative to nonlucid dreams, in more sophisticated experients, such as long term meditators, bizarreness reasserts in unique ways. According to Hunt, "lucid dreaming is not merely (or even primarily) the intellectual awareness that one is dreaming ('Am I? Oh well, I guess so. Isn't that quaint?')." The "realism" often spoken of as associated with lucidity is not only of the real life type but also "real, clear and somehow present" reminiscent, according to Hunt, of the peak experiences described by Maslow (1962).

The facility for self-reflectiveness, of recognizing self in the midst of a dream says Hunt (1989), is strikingly similar to the development of self-reflective consciousness in "mindfulness" or "insight" meditative traditions such as Zen, Theravada and Tibetan Buddhism. Furthermore, according to Alexander (1987) it is developmentally prior to obtaining the witness set sought in Transcendental Medita-tion. Especially in meditation and lucid dreaming (and it can be argued in the OBE, NDE and UFO abductions), once a detached but receptive attitude has been inte-grated into the waking or dreaming consciousness, strong feelings of exhilaration, freedom and release occur. There is, Hunt explains, "an unusually broad sense of context and perspective, a 'balance' of normally contradictory attitudes, and the felt sense of one's own existence (that especial 'I am' or 'being' experience. . .)."

Without this heightened sense, most of us become consumed by everyday living, untouched by the "awe" of life and the stark inevitability of death. This, explains Hunt, is "the full human context to which on rare occasions we spontaneously 'wake up.'" In the same way we remain unaware that we are dreaming, until the moment we turn lucid. Both moments of awareness "can have quite an impact," Hunt says. But both are also frequently short-lived.

The theoretical and empirical association of lucid dreaming to the practice of meditation was first identified by Hunt (1989) and has been further developed by Gackenbach and Bosveld (summarized in 1989). From virtually every level of analysis, parallels, and in some cases potential causal agents, can be identified sup-porting the association of dream lucidity to the practice of meditation and thus on to the experience of pure consciousness. There are also now several studies of medi-tators and lucid dreamers which reveal important psychological and physiological parallels.

Historically, lucid dreams are specifically spoken of in classic Tibetan Buddhist texts (for a review see Gillespie, 1988a) where lucidity is presented as a form of meditation

available during dreaming. For a critical phenomenological discussion of this, see the papers of Gillespie (1988b; 1987a,b; 1986; 1985a,b,c,d,e,f,g) as well as books by Sparrow (1976a), Kelzer (1987), Garfield, (1976) and LaBerge (1985).

Psychological Parallels

Before I consider the specific phenomenological characteristics of dream lucid-ity relative to waking meditation, two points should be noted. First, the "eye of the beholder" phenomenon is apparent when analyzing these phenomena. That is, over-all, dreamers reliably evaluate their lucid dreams as quite distinct from nonlucid ones whereas independent judges do not (Gackenbach, 1988). Secondly, the charac-teristics typically follow a developmental relationship with high impact occurring in both novice and sophisticated lucid dreamers and moderate to no impact in the mid-ranges. With bizarreness, Hunt and McLeod (1984) have argued that the nature of bizarreness in the lucid dreams of long term meditators is qualitatively distinct from bizarreness apparent in prelucid episodes of nonmeditators. This qualitative distinc-tion is true with some but not all content categories (Gackenbach & Bosveld, 1989).

Regarding the visual nature of lucidity, more advanced practitioners as well as those who have had an initial exposure to lucidity report a rich visual quality that seems to stand out and sparkle (Green, 1968; Hunt, 1989). As with bizarreness, and consistent with the meditation model being proposed, this visual richness habituates with some exposure to lucidity, thus the lack of a difference in visual quality re-ported by Gackenbach (1988). Yet with long term exposure this same quality may reemerge particularly when associated with dream experiences of a transpersonal nature.

This is illustrated by Gillespie (1987a) who examines the range of experiences of light while lucid in dreams. He points out that light moves from ordinary dream light, which has the same visual quality as ordinary dreams, through unique exper-iences of light—like disks, or patterns of light such as "versions of lattices, lines, dots and colors constantly changing"—to the "fullness of light." The latter he notes is overwhelming in its brilliance and transpersonal in his felt interpretation. "The fullness of light is accompanied by intense spontaneous feelings of joy and devotion."

Many of the individual difference variables associated with the practice of medi-tation have also been found to be true of individuals who frequently dream lucidly while controlling for dream recall frequency. These include field independence (lucidity: Gackenbach, Heilman, Boyt & LaBerge, 1985; meditation: Pelletier, 1974; Jedrczak, 1984), creativity (lucidity: Gackenbach, Curren, LaBerge, Davidson, & Maxwell, 1983; meditation: Orme-Johnson & Haynes, 1981); lower anxiety (lucid-ity: Gackenbach et al., 1983; meditation: Alexander, 1982); absorption (lucidity:

Gackenbach, Cranson & Alexander, 1986; meditation: Alexander, 1978; 1982); and private self-consciousness (lucidity: Gackenbach, et al., 1983; meditation, West, 1982). The meditation findings are reviewed in Alexander, Boyer and Alexander, 1987 while lucid dream findings are reviewed in Snyder and Gackenbach, 1988. A strong finding in both the lucidity (for review see Snyder & Gackenbach, 1988) and meditation (Reed, 1978; Faber, Saayman & Touyz, 1978) literatures is that both are associated with enhanced dream recall despite decreases in REM time as the result of meditation (Banquet & Sailhan, 1976; Becker & Herter, 1973; Meirsman, 1989).

Finally, and particularly noteworthy, is that the waking practice of meditation increases the frequency of experiencing lucidity in dreams (Sparrow, 1976b; Reed, 1978; Hunt & McLeod, 1984) even when dream recall differences are controlled (Gackenbach et al., 1986; 1989). Further, reports of consciousness during deep sleep are related to clear experiences of transcending during meditation (reported in Alexander, Boyer & Alexander, 1987) as well as to breath suspension during meditation. The latter is thought to be a key physiological indicate of the experience of "pure" consciousness (Kesterson, 1985).

Physiological Parallels

Physiological parallels between lucidity and meditation also exist. Except for the fact that the individual is awake, the depth of somatic arousal during meditation is equivalent to that of light sleep (Kesterson, 1985) but is not the same as light sleep (West, 1980). However, REM sleep shows increases in oxygen consumption and heart rate over Stages 1 and 2 NREM and lucid REM is significantly higher on these dimensions than nonlucid REM (LaBerge, Levitan, & Dement, 1986; LaBerge, 1985; 1988). This lucid somatic arousal would seem to argue against the lucid dreaming–meditation parallel. LaBerge (personal communication, June, 1987) has pointed out that the continued somatic arousal which he has found after the required eye movement signal could be an artifact of demand characteristics. That is, his subjects are typically told to signal when they know they are dreaming and then to do a predesigned task; active engagement in a dream task with consciousness could keep the system somatically aroused.

A study by Gackenbach, Moorecroft, Alexander and LaBerge (1987) sheds some light on this apparent discrepancy. They had a long term meditator who during meditation showed physiological signs of transcending that correlated with his self reports. This individual claimed that he was conscious of his true state throughout his sleep cycle. That is, he knew he was sleeping and sometimes dreaming during the entire night. The stabilization of this ability, called witnessing sleep, is thought to be a result of the regular practice of meditation (Alexander, Boyer & Orme-Johnson, 1985). In the sleep

laboratory this meditator was able to signal with pre-arranged eye movements that he knew he was dreaming/sleeping during REM, Stage 1 and Stage 2 sleep. Interestingly, and in line with the present hypothesis, he showed physiological arousal around the eye movement signal but contrary to the data of LaBerge et al. (1986) he rapidly returned to quiet somatic levels shortly thereafter. With at least this one subject, signaling was somatically arousing but his self-reported continued consciousness in sleep was not. This study tentatively con-firms that as lucid dreaming unfolds into witnessing dreaming, somatic arousal de-creases and the equation of consciousness in sleep with states desired by the practice of meditation becomes firmer.

Further supporting the meditation-lucidity link is a finding with the "Hoffman" or "H"-reflex, an electrically evoked monosynaptic spinal reflex which has been viewed as an indicator of the flexibility of central nervous system response. Brylowski (1986) found greater H-reflex suppression associated with lucid REM sleep than with nonlucid REM sleep. H-reflex suppression is thought to be a key indicator of the presence of the REM state of sleep, as one is paralyzed from the neck down. This type of body paralysis does not occur during any other time of the sleep cycle, nor while awake. This finding is conceptually in line with studies by Dillbeck, Orme-Johnson, and Wallace (1981) and Haynes, Hebert, Reber & Orme-Johnson (1976). Dillbeck et al. found greater H-reflex recovery indirectly associated with an advanced form of meditation practice while Haynes et al. note positive cor-relations between H-reflex recovery and clarity of experience of the transcendental state while meditating. Enhanced H-reflex suppression in REM and recovery in waking both indicate a nervous system which is functioning maximally in accord with the needs of the state of organism.

A physiological individual difference variable further supports the lucidity–meditation link. Based on our work with lucid dreamer type differences in vestibular sensitivity we (Snyder & Gackenbach, 1991) hypothesized that REM sleep, espe-cially lucid REM sleep, might be best characterized as internalizing of attention. Meditation has most often been conceptualized as a technique for internalizing attention.

The EEG work with dream lucidity is unfortunately fairly limited at this point in time [Editor’s Note: June, 1989] with the bulk having been done by Ogilvie, Hunt and associates (Ogilvie, Hunt, Sawicki & McGowan, 1978; Ogilvie, Hunt, Tyson, Lucescu & Jeakins, 1982; Tyson, Ogilvie & Hunt, 1984; Ogilvie, Vieira & Small, 1988; Hunt & Ogilvie, 1988). In this series of studies they sought to demonstrate the lucidity–meditation connection by examining alpha waves in lucid and nonlucid REM. Reviews of the EEG and meditation literature have fairly consistently pointed to the association of alpha with meditation (West, 1980; Taneli & Krahne, 1987; Wallace,

1986). The Ogilvie and Hunt group found, consistent with the meditation literature, variations in alpha as a function of stage of lucidity. Specifically, they found increased alpha in prelucid REM periods and early in lucidity and have likened this to the access phases of waking mediation. Similarly, West (1980) and Taneli and Krahne (1987) have summarized the EEG and meditation literature for power mea-sures and note changes as a function of stage of meditation. Both reviewers agree that at the beginning and at the end of meditation, increases in alpha are observed. Later theta occurs, often intermixed with alpha, and at the "transcending" or "samadhi" phase, bursts of beta occur.

West (1980) has pointed out that a more sophisticated examination of EEG changes in meditation should include the investigation of EEG coherence (COH). The relationship of this variable to meditation has been investigated in the Transcendental Meditation research literature (for a review see Orme-Johnson, Wallace, Dillbeck, Alexander & Ball, in press; Wallace, 1986) and offers a unique potential for identifying EEG associations to types of consciousness during sleep—as ex-tended alpha or beta bursts would mitigate against sleep.

REM has been identified as interhemispherically coherent in the theta range relative to NREM, thus making it the state in which meditation-like experiences (including lucidity) would be most likely to occur. Several investigators have shown that lucidity primarily emerges out of REM (see LaBerge, 1988, for a review). For a theoretical review of the coherence literature in meditation and sleep and its relationship to REM sleep consciousness see Gackenbach, in press.

Armitage, Hoffman and Moffitt (in press) report that high dream recallers show a greater continuity of rhythmic EEG (in a measure conceptually similar to EEG coherence) in transition from sleep to waking. Thus individuals who frequently remember their dreams are accessing information from a coherent state of brain functioning by remaining in some sense in that state. One of the most robust findings in both the individual difference (Snyder & Gackenbach, 1988) and content analysis (Gackenbach, 1988) literature on dream lucidity is the association of high dream recall to lucidity. Lucid dreamers in general are high dream recallers so they should show more COH at the state transition to waking.

But will lucid dreams themselves be higher in COH? In Gackenbach's (1988) work with self evaluations of the recallability of lucid versus nonlucid dreams, the former are continually perceived as significantly easier to remember. Although one might argue that the phasic nature of lucid dreams might be responsible for their increased recallability, Pivik (1978) points out that dreams recalled from phasic versus tonic REM do not differ in recall. Indeed the "tonic" consciousness of the dreams reported

by Gackenbach et al. were rated as highly recallable by the subject, if phenomenologically quiet (Gackenbach & Moorecroft, 1987).

Most directly, in pilot data LaBerge looked at EEG coherence twice. In his dissertation (LaBerge, 1980) he had only central EEG leads and found no COH differences as a function of lucidity. More recently (LaBerge, personal communication, June, 1988), he compared a five-minute lucid dream during REM to the 15 minutes of REM prior to the onset of dream consciousness in one subject. Looking at the interhemispheric EEG coherence measured at the parietal lobes, he found an increase in COH in the parietal lobes. This is interesting as the central role of visual-spatial functioning, associated with this area of the brain, has been strongly implicated in the work of Gackenbach's group for both lucid dreamers (Snyder & Gackenbach, 1988) and lucid dreams (Gackenbach, 1988). Further, this was the location of interhemispheric alpha COH reported by O'Connor and Shaw for field independent individuals, a perceptual style characteristic of high dream recallers, lucid dreamers, and meditators.

Clearly on several levels of analyses, dream lucidity parallels waking medita-tion. Although lucidity can and does emerge spontaneously in nonmeditating popu-lations, the average frequency of such experiences is considerably less than in medi-tating adults (Gackenbach, Cranson & Alexander, 1986; 1989).

What is Meditation? A Technique to Access Pure Consciousness

If lucid dreaming is a form of meditation and/or the result of meditation, the question is, "What is meditation?" For the past two decades, as western scientists have been addressing the question of meditation, several models have been emerging. Most frequently cited is meditation as a stress reducing mechanism. Often pointed to are meditation as a form of psychotherapy, as enhanced self awareness, as a finely held hypnagogic state or as a form of self hypnosis. More recent models focus on meditation as an attention-enhancing procedure. (For a recent review of the meditation literature see Murphy & Donovan, 1988.)

But these models do not answer the "what is meditation" question. They only describe what it does; that is what the potential products of its practice are. All of these "takes" on meditation really miss the essential point. Meditation is a procedure, a technology, a method and as such it is not causal; rather it facilitates out-comes, such as stress reduction and consciousness during sleep. These outcomes are a natural part of the biological and psychological systems but the application of the "technology" of meditation increases the likelihood of attaining them.

These perspectives on meditation are reductionistic. Such reducing to the com-mon denominator is the meat of the scientific method, but it can also strike a death toll for complex, holistic procedures designed to work with the entire self system. Reductionism, when investigating a complex phenomenon such as meditation, strips it of its full meaning and potential. As Deikman (1982) recently noted:

> Ironically, although the power of meditation to affect physiological and psychological functions has been substantiated in many different laboratories, we have paid little attention to what the originators of meditation have said about its intended purpose and the requirements for its appropriated use. . . . Focusing primarily on the experiences and bodily effects of meditation is like collecting oyster shells and discarding the pearls. Such 'spiritual materialism' inevitably interferes with the real potential of meditation.

If meditation is somehow more than its component parts or products, what is it? Virtually all systems of meditation contextualize the procedure in some way, making it part of a spiritual path—a seeking—for union with the higher self-God-nature. Here I will focus on one of these systems because it is not only comprehensive but is the most empirically supported theoretical position. It comes from the founder of the largest meditation group in the West, the Maharishi Mahesh Yogi.

The Maharishi conceptualizes meditation as a tool for the development of consciousness. In other words meditation, in this case Transcendental Meditation, is a technique which serves to enliven an individual's experience of the common denominator of being, pure consciousness. Pure consciousness, according to Alexander, Chandler, and Boyer (1989), is "described as a silent state of inner wakefulness with no object of thought or perception." Furthermore, they note that "pure conscious-ness is conditioned not by cultural or intellectual conditions, but by fundamental psychophysiological conditions which are universally available across cultures."

Alexander et al. offer several descriptions of pure consciousness. For instance:

> After about two years, my experience of the transcendent started to become clearer. At that time, I would settle down, it would be very quiet . . . and then I would transcend, and there would just be a sort of complete silence, void of content. The whole awareness would turn in, and there would be no thought, no activity, and no perception, yet it was somehow comforting. It was just there and I could know when I was in it. There wasn't a great "Oh, I am experiencing this," it was very natural and innocent. But I did not yet identify myself with this silent content-free inner-space. It was a self-contained entity that I

> transcended to and experienced.

Alexander et al. reviewed the empirical correlates of the experience of pure consciousness. Physiological correlates of this "subjective" experience during meditation include: attainment of a deep state of physiologic rest during this experience is indicated by significant reductions, relative to simply relaxing with eyes closed, in minute ventilation, forearm muscle O2 consumption and CO2 elimination, red blood cell metabolism, plasma lactate, plasma cortisol, and thyroid stimulating hormone; and significant comparative increases in basal skin resistance, plasma prolactin, and serotonergic turnover. On the other hand, simultaneous enhancement of alertness associated with experience of pure consciousness during TM practice is suggested by a more efficient auditory evoked potential response, faster H-reflex recovery, increased blood flow to the brain, and higher levels of plasma arginine vasopressin (associated with enhanced learning and memory) in comparison to control subjects simply sitting and relaxing with eyes closed.

Two physiological variables are markers of experiencing pure consciousness: breath suspension and enhanced EEG coherence. These two, these scientists explain, "were the immediate correlates of specific subperiods of reported experience of pure consciousness, indicated by button press, and were greater than those occurring during the remainder of TM practice."

As for behavioral effects they note that "exhaustive meta-analyses of over 100 separate studies indicate that repeated experience of pure consciousness during TM produces significantly greater reductions in trait anxiety, depression, hostility and other symptoms of mental stress than simple or stylized forms of relaxation." Fur-ther "regular experience of consciousness during TM is associated with develop-ment of personal identity as operationalized by improvement on such measures as self-actualization, self-concept, self-esteem and field independence" including ego development. They summarize,

> Whereas deep sleep is characterized by physiologic rest (e.g., a decrease in several metabolic functions) and ordinary wakefulness by alertness (e.g., faster H-reflex recov-ery response), pure consciousness is characterized by both co-existing in a simple uni-fied state.

By way of methodological refinement Alexander et al. point out that:

> Although experience of pure consciousness occurs with far less frequency in the general population, our research (and that of other researchers) indicates that its behav-ioural correlates are similar even among subjects who have

> received no exposure to meditation or the concept of pure consciousness.

They conclude,

> This enables us to go beyond the prevailing understanding of pure consciousness as an inaccessible, ineffable or "mystical" experience. Rather, we come to realize that the experience of pure consciousness is a natural consequence of unfolding the latent poten-tial of human consciousness to fully know itself, that has profound utility for improving the quality of human life.

Access to pure consciousness due to the purification of the nervous system in response to the regular practice of meditation is exemplified in the development of a "passive witness," a silently observing part of the self that witnesses all other states of consciousness (waking, sleeping, and dreaming) without trying to change them. A male long term TM meditator describes witnessing dreamless sleep:

> It is a feeling of infinite expansion and bliss and nothing else. Then I become aware that I exist but there is no individual personality then I become aware that I am individ-ual but no details of who, where, what, when, etc. Eventually these details fill in and I might come awake.

or

> How do you describe an unmanifest experience? It has only happened a half dozen times in 15 years, but when it occurs, its crystal clear. [It is] like an amplifier turned on, but no sound. The experience fades as boundaries of dreams or waking state gather, gain definition and overshadow.

While witnessing dreaming sleep is described, "I watch it as it is going on separate from me. . . . There are parts, me and the dream, two different realities."

Lucidity–Witnessing Relationship

With the formal operational dreams of adults, differing degrees of self-awareness are evident prior to its full emergence in lucidity. Moffitt et al. (1986), based on the work of Rossi (1972), designed a nine-point scale culminating in lucidity. At the lowest level on their Self-Reflectiveness Scale the dreamer is not in the dream. This moves to Level 3 where the dreamer is completely involved in the dream then at Level 5 the dreamer thinks over an idea. At Level 7 the dreamer has multiple levels of awareness simultaneously participating and observing. Finally, at Level 9 the dreamer consciously reflects on the fact that he is dreaming.

But I have argued (Gackenbach, 1991) that lucidity is only the beginning and that

consciousness in sleep, when it arises as part of the natural growth cycle, is both psychologically and biologically a developmentally advanced form of dreaming. This is in line with current cognitive perspectives of sleep mentation. Foulkes (1982) argues that the development of mentation in sleep parallels that during waking so that dreams of young children are preoperational whereas those of adults range from concrete to formal operations. Furthermore, cognitive models of sleep mentation stress the continuity of waking-type mentation into sleep (Foulkes, 1985). Recent theorists in developmental (Alexander & Langer, 1989) as well as transpersonal psychology (Wilber, 1987) have postulated stages of developmental beyond the traditional Piagetian endpoint of formal operations. Alexander, Davies, Dixon, Dillbeck, Oetzel, Muehlman, and Orme-Johnson (1989), in characterizing one such stage, maintain that "the Self becomes de-embedded from and hierarchically integrates (‘witnesses’) all previous, representational levels of mind" (p. 33), including dreaming. In other words, consciousness in sleep, or the lucid dream, is an early manifestation of postformal operational functioning in sleep.

Physiological Analysis of the Lucidity–Witnessing Relationship

I shall first consider the relationship of meditation to REM sleep on a physio-logical level of analysis. Meirsman (1989) studied six advanced TM meditators (TM-Sidhi techniques) who reported witnessing sleep on the average of half the night. He argued that the practice of the TM-Sidhis results in the "maintenance of . . . alertness even during the inertia of deep night sleep" and that further "‘witnessing’ of one’s own sleep during the night seems to be the subjective experience of a physiologically more efficient (REM) sleep." Meirsman examined the incidence of an eye movement ratio (high frequency REMs/low frequency REMs [HF/LF]) from uninterrupted REM sleep (no prearranged eye movement signals were required). HF/LF had been shown to be "associated with cerebral maturation (age, second half of ovulatory cycle, second half of pregnancy)." Meirsman points out that this measure can be "defined as the capacity of the brain to structure ‘order’ from the ‘noisy stream’ of information." This researcher found that the REM sleep of the meditators who were conscious during it was more order-creating (higher HF/LF ratios) than that of the "unconscious" nonmeditators. He describes this as "a reflection of the higher inten-sity of the assimilation of information in the brain during REM sleep." This finding was further supported by the shorter REM sleep time among the meditators in his study when compared to his controls.

Unfortunately, meditation practice in this study is confounded with reports of witnessing. According to the teachings of this meditation practice, a result of the practice will be sleep consciousness. Although spontaneous occurrences at this frequency (half the night or more) may occur, they are so rare as to be virtually non-

existent, whereas Gackenbach, Cranson and Alexander (1987; 1989) have shown that such high rates are not infrequent in groups of TM meditators. Thus it may be nearly impossible to separate sleep consciousness at this rate from the practice of meditation.

I will now fold the Meirsman study back onto the physiological analysis of lucid dreaming reviewed earlier. The most reliable physiological finding in the lucid dreaming literature is the association of high REM density to the lucid state in REM. Likewise, Meirsman reported that the total REM density regardless of frequency, was also significantly higher for the TM-Sidhi group when compared to controls. LaBerge (personal communication, March, 1989) compared the REM density of twelve lucid dreamers to that of Meirsman's six meditators. Although the means were the same, variability among the lucid dreamers was quite high whereas it was virtually nonexistent among the meditators. In other words, both lucidity and witnessing (as a product of meditation) evidence the same increase in REM density, but the meditators were more stable, on the physiological level of analysis, in their experience.

Further in terms of the work of the Ogilvie and Hunt group who reported alpha in prelucid and early lucid episodes, so too Meirsman reports a large amplitude and lower frequency of alpha activity as associated with a higher HF/LF ratio and thus witnessing sleep. LaBerge (1985) to find this alpha presence as did Ogilvie et al. (1988). However, in both cases the failure was associated with the disruption of REM sleep by the eye movement signal. When no signal was demanded or before a signal it seems that alpha is associated with consciousness in sleep of both the lucid and witnessing varieties.

I cannot say if Meirsman's subjects also evidenced more somatic arousal (respi-ration and heart rate) as has been shown with LaBerge's lucid dreaming subjects. The single witnessing and signalling subject of Gackenbach et al. provides mixed data. On the one hand he was somatically less aroused but on the other hand his eye move-ment density was significantly less than two lucid dreamers who did not signal in the lab. Furthermore, when his heart rate, respiration and eye movement density were compared for pre- and post-eye movement signal differences, we found no signif-icant pre-post signal differences. Eye movement density went up after the signal while respiration went down which would be indicates of the classic restful alertness claimed to occur as a result of the practice of TM.

Work on physiological associations of these states of consciousness in sleep is just beginning but early data show some physiological similarities. Thus delineating the association of lucidity to witnessing consciousness in sleep becomes important. Some understanding of this relationship can be found on a psychological or phe-nomenological level of analysis.

Psychological Analysis of the Lucidity–Witnessing Relationship

Gackenbach, Cranson and Alexander (1987; 1989) have conducted several studies examining the relationship of dream lucidity to pure consciousness. The latter as expressed in the witness set during dreaming or dreamless sleep. They found, as predicted by the Alexander (1987) model, that although meditators reported experiencing more of all three types of sleep consciousness experiences (i.e., lucid dreaming, witnessing dreaming and witnessing dreamless sleep), across samples, lucid dreams were experienced more frequently than either witnessing dreaming or witnessing deep sleep. This finding favoring the higher incidence of lucidity relative to witnessing also held across level of dream recall. It supports the notion that lucid dreams are easier to access no matter what one's training or personal skills and that therefore they may represent a developmentally prior state of sleep consciousness leading eventually to the experience of pure consciousness.

As reported by Alexander (1988), in order to examine differences between these three forms of sleep consciousness, this group of researchers did content analyses on sleep experience reports collected from 66 males who were very advanced in their TM meditation. In fact, they could be characterized as TM monks, as they have devoted their lives to their meditation practice. These were selected because it was believed that their training better equipped them as a group to be able to distinguish these subtle states of mind in sleep. This assumption was somewhat validated when it was determined that only 17% of the 66 subjects' lucid dreaming reports could not be used because they were either blank or questionable. This is compared to the Rusual loss of about 50% of nonmeditating subjects for the same reasons reported in Gackenbach's work (for a review see Snyder and Gackenbach, 1988).1

Nine content categories were then developed based on a reading of the reports with the first seven scored for presence or absence of the quality in the description:

1. Sleep/wake/dream state transition;
2. References to real physical body;
3. Dream body flying;
4. Dream body running;
5. "Lightness" of experience;
6. Control of the experience;
7. Sense of a feeling of separateness;
8. Emotions (extreme positive, positive, negative, no reference) and
9. Trigger for consciousness (none mentioned, just knew, oddity, and anxiety).

The 55 lucid dreaming descriptions, 41 witnessing dreaming descriptions, and 47 witnessing deep sleep descriptions were characterized in the main by different components although a continuity between states could also be seen. Most revealing of these categories was the one on feelings of separateness. In only 7 percent of the lucid dream cases did people report feeling separateness, whereas 73 percent of the witnessing dream cases spontaneously reported that the dream went on, but they were separate from it. These reports are consistent with Alexander and colleagues conceptual descriptions of witnessing as involving the complete differentiation of pure consciousness from the dream state. In other words the silent witness functions as completely distinct from or outside of the dreaming state.

Another interesting category is that of emotion. There were positive emotions associated with all three states, but extremely positive emotions, described most often as "bliss," were reported more frequently for witnessing dreaming and wit-nessing deep sleep. This was also true for feelings of lightness.

On the other hand, dream control was much more frequent during lucid dream-ing experiences (47%) than during witnessing dreams (5%). This finding is consis-tent with the claims that dream lucidity typically involves active information pro-cesses and manipulation of dream content. The "will" or volitional capacity of the individual ego can act on its thoughts and desires. This is in contrast to the experience of pure consciousness, which is said to be one of complete inner fulfillment or con-tentment. The Self does not act, but silently observes the changes occurring within waking, dreaming, and sleep.

Also, over half the lucid dreams were triggered by mental events in the dreams that appeared to stimulate or awaken intellectual or discriminative processes typical of the waking state. On the other hand, witnessing dreaming and sleep were virtually never triggered by such mental events. The most unambiguous criterion of witness-ing is maintenance of pure consciousness even during deep sleep. Because lucidity involves active thinking and deep sleep is generally, although not always, without mentation, it is not surprising that lucidity (as typically experienced) drops out dur-ing deep sleep. However, after long-term practice, TM practitioners gradually begin to report experiences of "witnessing," or maintenance of pure consciousness, even during dreamless sleep.

Although each form of sleep consciousness was, in general, differentially char-acterized, there were some characteristics which weren’t so individual. For instance, as previously mentioned, all were emotionally positive. Also, in both lucid dream-ing (11%) and witnessing dreaming (12%), experiences of flying were reported. Likewise state transitions were mentioned in both lucidity (20%) and witnessing deep sleep

(55%) but rarely in witnessing dreaming (2%). Finally, although it was rare (7%), feelings of separation were on occasion mentioned in the lucid dreaming reports of this group of elite TM meditators.

The work of Gackenbach, Cranson and Alexander supports the notion that these three states of consciousness in sleep are qualitatively distinct but nonetheless prob-ably exist along a developmental continuum, with lucid dreaming emerging prior to witnessing dreaming. This view is endorsed by practitioners who make comments likening witnessing dreaming to "a clearer experience of . . . [lucid dreaming]. The sense of self is more full and transcends the dream completely. It is large Self." Alexander (1988) explains that:

> The significance of the experience of pure consciousness is that it provides the foun-dation for the development of stable higher stages of consciousness or "enlightenment." Witnessing of deep sleep indicates that the inner wakefulness of pure consciousness is now beginning to be maintained even during the most extreme conditions of mental iner-tia—dreamless sleep. Indeed . . . the first stable higher stage of consciousness termed "cosmic consciousness"—is defined as the maintenance of pure consciousness through-out the 24-hour cycle of waking, dreaming, and deep sleep.

A Potential Stage Model for the Lucidity–Witnessing Relationship

A descriptive level of analysis comes from interviews Gackenbach (Gackenbach, 1991; Gackenbach & Bosveld, 1989) has conducted with several long term TM meditators. From an especially clear individual, five basic stages were delineated in the movement from lucidity to witnessing. These stages were further illuminated by comments from a meditating petroleum engineer and a Sanskrit scholar who is not a TM meditator. In order to understand these stages one must think of the progression, at least in part, as the dreamer shifts from being an "actor" in the dream to the "ob-server" of it.

Stage One: Initially in lucid dreaming, the actor is dominant. The only role the ob-server plays is to recognize, however briefly, that the self is dreaming. Despite this recognition, the feeling is still that the dream is "out there" and that the self is "in here." As the dreamer becomes more familiar with lucidity, it may occur to him/her that he/she can manipulate the dream. In this form of lucid dreaming, the meditator comments, one has

> this clear degree of wakefulness inside, but still one is tied into the figures of the dream. It’s a matter of accent . . . it’s more that you’re an object in the

> dream and less so that you are a witness to that dream.

Stage Two: At some point it may occur to the dreamer that what is "out there" is actually "inside." At this point two paths seem open to the dreamer: The dreamer may either become actively engaged in the dream events all the while recognizing that it is the self as well as the dream ego that is involved; or, shift his/her attention to the "inside I," allowing the "outside I"—the dream scene—to fade. The meditator comments, "the predominance is on the observer; the action, the observation I don't really much care about; in fact I don't really remember many of those with content. . . ." The petroleum engineer from Canada remarks that during these prelim-inary stages one flips easily back and forth between witnessing the dream with a quiet detachment to being lucid in the dream, in the latter case aware of the dream but also caught up in its activity. A graduate student in Sanskrit writes,

> There is little in lucidity itself that will disrupt the production of dream images and sense effects. But because I know I am dreaming, I can proceed to do things that I would not do in ordinary dreams, and it is these actions or non-actions that disrupt the dreaming process. My interaction with the dream keeps it going normally. If I become passive, by stopping to watch what happens, or just to try to think of something, the activity in the dream environment diminishes or stops altogether.

Stage Three: Lucid dreams in this stage tend to be short. The meditator describes it as a thought that arises which you take note of and then let go. He says,

> The action of the dream is not dominant. It does not grip you so that you are identi-fied with it as opposed to the first step in which the focus was more on the active [parti-cipation]. In this case it's just a state of inner awareness that's really dominant. Aware-ness is there very strongly. The dream is a little dust flying about so to speak.

This is, he says, analogous to when "I'm just sitting while awake and doing nothing and thoughts pop up, like an involuntary knee jerk. I'm not caught up [in the dream] there isn't much intensity to them." The scholar explains that the meditator in sleep, "knows that he is not to interact with or be tempted by anything that may happen phenomenally. He is not to desire or anticipate anything."

Stage Four: In this stage an "inner wakefulness" dominates. "You don't have dreams or in any case you don't remember having dreams," says the meditator. You are absorbed not in dreams, but in the witness. This sort of sleep awareness can be so continuous that one may go for months without recalling a dream; one loses aware-

ness even of the passage of time. This might be said to be dreamless sleep with awareness, or, as the scholar notes:

> When all waking and dream imagery and all mental content are eliminated, there is dreamless sleep. Each night, I, the dreamer, move into dreamless sleep. Here I desire not desire and see no dream. There is only an ocean of objectless consciousness. The inner Self still sees, because the Self is imperishable, but there is nothing distinct from it to see. Likewise there is not second thing from the Self for the Self to smell, taste, speak, hear, think, touch, or discern. The Self is conscious of nothing within or without. This is the home base from which the Self moves out into dream and waking image and thought, the home to which the self, like a tired bird, returns from waking and dream experience to rest.

At this point it is very difficult to distinguish further stages but the clear medi-tator seems to go further.

Stage Five: Once the dreamer has moved into this transcendental state or pure consciousness, she/he moves into the experience. Now the "dream" will characteristically take symbolic forms not generally found in nonlucid or lucid dreams of an earlier stage: They will be much more abstract and have no sensory aspects to them, no mental images, nor emotional feelings, no sense of body or space. There is a quality of unboundedness to them. "One experiences oneself to be a part of a tre-mendous composite of relationships," the professor explains. These are not social or conceptual or intellectual relationships, only "a web of relationships. I am aware of the relationship between entities without the entities being there." He says there is "a sense of motion yet there are no relative things to gauge motion by, it's just expansiveness. There are no objects to measure it. The expansiveness is one of light—like the light of awareness."1

The case in the June, 1989 issue of Lucidity Letter of Anja Savolainen points out that the smooth sequence taking one from lucidity to witnessing may not be true for everyone. In her experience she had to let go of lucidity, move through nonlucidity before she developed the witness set in sleep. This points out that although there is a relationship between these states of consciousness in sleep, the exact nature of it may vary considerably from individual to individual.

The development of these capacities of consciousness lies at the root of many meditative traditions. Not surprisingly, some traditions view lucid dreaming as a form of sleeping meditation, a necessary precursor to the development of the wit-ness. Hunt points out that in Tibetan Buddhism once a disciple has "attained a rela-tively stable

dream lucidity, he [or she] may practice confronting fearsome deities or use the opportunity to deepen his [or her] meditative absorption in preparation for ‘lucidity’ during Bardo."

Could the contemporary form of "fearsome deities" be aliens?

Back to the OBE, NDE, and UFO Abductions

In this paper I started with descriptions of three experiences, OBEs, NDEs, and UFO abductions, and argued that these are generally inaccurate (although strong) in felt reality-attributions of the state of the organism. Interestingly most, but not all, cases of these three types of experiences occur under circumstances of sensory de-privation (i.e. near or during sleep or near great physical trauma which is associated with unconsciousness) or during extreme sensory overload of either a physical or emotional type. These two extremes allow for a reorganization of the mental model of reality.

Although all of these experiences are associated with dream lucidity, they lack in the main the "waking up" inherent in lucidity. Not that it is not possible. One could have any of these experiences and attribute the state while it is ongoing to a restruc-turing of one’s mental model of reality. But more commonly the face value presenta-tion of "reality" is accepted during the experience (i.e. "I am outside of my body" or "I have been abducted by aliens" or "I am dead"). It is the extremely sophisticated observer who, while in the throes of these experiences, can further de-embed from the experience and conclude that "although I appear in all sensory modalities to be on a space ship I am actually living fully while awake in an ‘imagined realm.’" Yet in sleep while we dream, such accurate attributions seem to be easier to arrive at.

After showing that these experiences of mind are related to lucidity to greater or lesser degrees, I then undertook to contextualize lucidity in terms of the meditative traditions and especially pure consciousness. With the concept of pure conscious-ness as the ground of reality, matter and energy emerging from it was also proposed. Thus phenomena as diverse as the physical reality of UFO experients to the other but real worldliness of the demonic in Father "X"’s lucid dreams to the transcen-dence of beings of light when near death can all emerge from and yet collapse into the void of being.

The emphasis on a psychospiritual interpretation of these experiences is not new. The UFO abduction experience Jung (1964) originally saw as a sign of the end of an era. Grosso (1985b) and Ring (in press) both argue for a close association be-tween the UFO abduction and the NDE experiences beyond the obvious link vis-à-vis the OBE

(both experients report OBEs associated with their experiences). Where-as Ring views both in the context of the shamanic journey, Grosso emphasizes them as characterizing a "collective psychospiritual process." Furthermore, Grosso (1985a points out about the NDE that, "deeper layers of this remarkable experience seem to be phenomenologically similar to the mystical experience." Likewise, Ring (in press) points out that the aftereffects of the UFO abduction, despite their grueling nature, are "often striking resemblances to those characteristic of NDEs." Based on the extensive NDE literature Ring concludes that NDErs

> . . . return with apparently enhanced psychic sensitivities; quite a few claim to have ac-quired healing gifts as a result of their NDE and most of them report an increased con-cern with the welfare of others and indeed with the welfare of all life on this planet.

By way of specific illustrations of the mystical, transcendent or pure conscious-ness potentials of these types of experiences, let's turn to the three cases in the De-cember, 1989 issue of Lucidity Letter. The Block case of consciousness in coma was, in its final "shelter," a classic illustration of pure consciousness. Recently, Mindell (1989) has shown that many patients with metabolic coma, when revived, report experiences of ecstasy, prophetic insight and self-knowledge. As for the UFO abductee, Bill, Payne points out the many experiences of psychic or transcendent nature he has had, including OBEs, ESP, conversation with a loving being and con-sciousness in sleep. Finally, the demonic experiences of Father "X" certainly point to the realm of the transcendent if apparently, paradoxically so. Relatedly, Ring (in press) points out when comparing UFO abduction and NDE:

> It is clear from the literature of abduction cases that the appearance and behavior of the cosmic shaman in UFOEs tend to be disturbing and indeed frightening to most of those who encounter him. This is in marked contrast, of course, to the loving and benign qualities of the cosmic shaman in NDEs. Once more, it seems, we have an antipodal relationship between these two categories of experience at the phenomenological level but one that again obscures an important functional similarity. The point here is this: it doesn't matter what the cosmic shaman looks like or how he behaves. His function is simply to educate the soul. Whether he does this by acting out the role of the trickster, the masked demon or the sage is irrelevant. His ways are protean, but his objective is the same through a thousand disguises.

The OBE is important according to Grosso (1985b), "because it sheds light on the shamanic roots of religion." He then goes on to argue that the separatist view of OBEs should not be taken literally because all perceptions of reality are out-of-body. In

other words, we are always working from a mental model the difference is simply where "I" is placed, behind our eyeballs, in our elbow, or on the ceiling of the room. Grosso notes that "going out of the body is just 'going' more deeply into the mind." Like Hunt, Grosso points to the OBE as another model of

> creating psychical distance, becoming a spectator, becoming a witness—all these meta-phors for spiritual discipline speak of methods of deflecting attention from the tasks of bodily survival. In place of these tasks, we are invited to raise anchor and sail forth into Mind at Large.

Ecstasy (Active) Versus Void (Passive) Perspectives

The active (sensory overload of OBE, NDE, or UFO abduction and ecstasy experiences of some lucid dreams)/passive (sensory deprivation of OBE, NDE, or UFO abduction and the witnessing/void experiences of sleep) distinction made earlier as potential determinants of each of the three types of experiences can also be applied within the lucid dream as well as to mystical states. In terms of lucid dreams Kelzer (1987) points to the devotional intensity available to the religious seeker in lucid dreams. In "The Gift of the Magi," the "most powerful and astounding lucid dream" he has ever had, Kelzer dreamt a long detailed sequence of being one of the three wise men in search of the baby Jesus. At numerous points in this dream Kelzer had various mystical/religious experiences. For instance, when he reaches the Christ child in the dream he says that:

> Suddenly I feel a tremendous rush of emotion within me, welling up from my stom-ach and chest so strongly that I burst into uncontrollable sobbing. I sob and sob and sob, heaving my chest for a long time as all of the feelings of the journey pour through me: extreme joy, relief, sadness over Herod, courage, determination and many other feelings.

Experiences of spiritual ecstasy as well as movement toward the void are both possible from the lucid dream state. The ecstasy experiences are like those of Kelzer in his "The Gift of the Magi" dream and an experience of the Void is manifest as an experience of pure consciousness in sleep. Gillespie (1988) has struggled with at-tempts to reach the state of "dreamless sleep," consciousness with no content during sleep (pure consciousness), as spoken of in the classic Indian texts, the Upanishads. He notes that:

> Dreamless sleep, according to the Upanishads, is the state in which the delusion of both waking and dreaming is eliminated. In dreamless sleep the experiencer desires no desire and sees no dream. He knows nothing from within or without,

> for there is no sec-ond thing for him to experience. Dreamless sleep is the state of nonduality, the exper-ience of brahman, ultimate reality.

He has attempted to attain this state by systematically removing the content of his dreams while lucid. Of his first attempt he writes:

> I closed my [dream] eyes. It became dark. I remained very much aware of sitting on a chair with my feet on the floor and leaning on the table. I wanted to remove these per-ceptions also. I pushed the table away, then raised my feet off the floor. I was hesitant to push the chair from under me. I willed the chair away. I remained with my legs raised and became unaware of the chair. I was first floating, then spinning, very much aware of my body. Charlotte came along and thought we should leave. So I got out of the chair.

Eventually, he was able to eliminate his awareness of all objects including his dream body. He notes:

> I reached the point where nothing was left except my own consciousness in dark-ness, though I have no memory of maintaining that state. I was satisfied that I had reached the point of dreamless sleep, but I saw the state as literally only that—sleeping with no dreaming. I did not see the religious or philosophical meaning inherent in the experience.

This ecstasy/void distinction is also noted by Fisher (1971) for waking exper-iences. He conceptualized these as waking ergotropic versus trophotropic trans-personal states. Hyperaroused ergotropic states such as the peak ecstatic rapture experiences of the mystics fall at the top of a continuum of arousal states. The void of yoga samadhi is the peak hypoaroused (low arousal) type of trophotropic states. He points out that at these peaks, "the ‘Self’ of ecstasy and the ‘Self’ of samadhi are one and the same ‘Self.’" Specifically:

> In spite of the mutually exclusive relation between the ergotropic and trophotropic systems, however, there is a phenomenon called "rebound to superactivity," or tropho-tropic rebound, which occurs in response to intense sympathetic excitation, that is, at ecstasy, the peak of ergotropic arousal. A rebound into samadhi at this point can be conceived of as a physiological protective mechanism; Gellhorn was among the first to notice that the rebound of the trophotropic system is not confined to the autonomic branches, but also causes significant changes in behavior. Thus, repetitive stimulation of the reticular formation in the midbrain increases the arousal level in awake cats, but this phase is followed by one in which the animal yawns, lies down, and

> finally falls asleep. This rebound phase is associated with the appearance of theta potentials in the hippo-campus, just as the corresponding human trophotropic rebound—samadhi—is charac-terized by theta potentials.

This "rebound" from ecstasy to void is illustrated in this sleep experience of Hewitt's (1988):

> In 1985 I began experimenting with meditation in lucid dreams in an effort to dis-cover this depth. These experiments brought profound results. On a half dozen occasions I succeeded in remembering my intention to sit down in the dynamic atmosphere of the lucid dream, and managed to be undistracted by dream imagery long enough to practice deep, rhythmic breathing. In each case awareness seemed to expand into an egg-shaped sphere which encompassed my dream body, with a corresponding dramatic intensifica-tion of consciousness. As this happened, colors flowed like pools of neon light in my inner vision, as they sometimes do in meditation and before falling asleep. The state in-tensified until the dream imagery, through half-shut eyes, took on a diaphanous charac-ter and finally disappeared. I became a point of consciousness contentedly floating in an intense yellow-orange field of light.

Other behavioral scientists have also considered the nature of ecstasy versus the void. For instance, Goleman (1972) spoke of a "threefold typology of meditative techniques." Based on the work of Claudio Naranjo, Goleman spoke of the first two as representing the two major forms of meditation, concentration and insight, which lead to meditation-specific states of consciousness and eventually the "void" or "pure consciousness." The third technique, "The Expressive Way," "includes vi-sionary and prophetic experiences; possession states; artistic, shamanistic, and psy-chotherapeutic surrender; and openness to impulse and intuition. This category in-cludes experiences from the domain of discursive thought and represents, according to Goleman, "a maximal expansion of normal consciousness into altered states, but do not overleap its bounds into the realm of jhana or nirvana, where discursive thought stops." In contrast to Fisher's concept of a "rebound" from ecstasy to void, Goleman argues that:

> It may be, in fact, that the Expressive Way is inimical to the attainment of medita-tive specific states, since by acting out every impulse one may reinforce patterns of thought and desire, strengthening these habits of mind so as to enhance their power to hinder transcending the sphere of thought.

A third perspective is that of Hunt (personal communication, January, 1989) who explains that this "rebound" from ecstasy to the void as the "actual processes becoming invisible." It's similar, he says, to learning to talk. Initially the child is

caught up in the sounds of words and how to make them but eventually such concerns habituate and the child's focus is on the meaning of the words. Likewise, when a child initially learns to ride a bike she is caught up with the feel of the cycle and sensations associated with balancing. Eventually, she "gets it" and enjoys the thrill of a fast ride down a steep hill. Hunt points out that there are limits to sensate mysti-cism which sort of habituate out when we "get it"—experience pure consciousness. In other words, we focus on the content of the experience rather than its meaning. Although, as was pointed out earlier in this paper, once we pass the point of con-sciousness the experience "opens up" again but it is of such a profoundly different quality that equating it to experiences with sensory, emotional or intellectual content would be too reductionistic.

I have considered a range of experiences or states of consciousness which point to the very fragility of our hold on "reality" and tried to relate them to pure con-sciousness as a source point in not only mind but all matter and energy. As Chopra (1989) notes of the converging points of view of physics and mysticism:

> The known world of our senses, of atoms and molecules, does not just break off abruptly; it shades imperceptibly into a different reality. At some point, however, one reality flips into another. Time and space acquire a different meaning; the neat divisions between inner and outer reality disappear.

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