Distinguishing Between Transcendental Consciousness and Lucidity

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Only within the last 10-15 years has Western psychology actively investigated the phenomenon of lucidity during dreaming. The recent growth of interest in lucidity, reflected in descriptive and experimental research, has led to a consideration of the theoretical and practical significance this type of dream experience might have. Whereas some researchers have suggested that lucidity offers an important phenomenological tool for the investigation of dreaming processes (LaBerge, 1985), others have emphasized the similarities between lucidity and certain types of meditative states and have suggested that they may promote psychological development in related ways (e.g., Hunt, 1985; Hunt and Ogilvie in press).

The purpose of this report is to compare lucidity during dreaming with experiences of transcendental consciousness and witnessing mental activity reported by practitioners of the Maharishi Technology of the Unified Field, which includes the Transcendental Meditation (TM) and TM-Sidhi program. Vedic Science from which the Maharishi Technology of the Unified Field is derived offers a comprehensive psychological theory of human development we hope in this brief report to explore some of the principles of Vedic Vedic psychology that may help place the phenomenon of lucidity into a much-need conceptual and developmental framework and also may help generate ideas for further empirical research. We will suggest that it may be useful to conceive of this phenomenon in terms of a developmental continuum of degrees of lucidity culminating in the realization of higher stages of human consciousness.

Lucidity During Dreaming

Lucidity is generally defined as dreaming while knowing one is dreaming (Gackenbach & LaBerge, in press). It is reported to combine the self-reflective awareness (Moffitt, et al., 1985) volitional discriminative and memory processes of the waking state with the illusory imagery associated with the dream state, but to be different from either of those states. Interrupted sleep studies indicate spontaneous lucid dreaming occurs most often in the final hours of night sleep and are associated with patterns of electrophysiological arousal. For example, increased respiration rate, heart rate, eye movement density, and skin potential. Lucidity is described as a state in which the dreamer has immediate awareness of observing dream content, pleasant feelings of balance sometimes along with reduced bizarreness of dream content or reduced identification with dream egos, increased control of dream events and ability to execute motor responses while dreaming.

Hunt and Ogilvie (in press) emphasize that there are strong similarities between

experiential states during lucid dreaming and during insight meditations such as types of Zen, Tibetan meditation, and concentrative meditation. They suggest that lucid dreaming may constitute a spontaneously occurring meditative state within dreaming. Hunt's (1985) view of lucidity as observational reflexivity has some similarities to the Vedic psychological descriptions of witnessing mental activity that will be considered later in this report. Similarities between the de-identification process LaBerge (1985) describes as an aspect of lucid dreaming and our speculations on de-embedding levels of mental processes will also be discussed. Before these similarities and differences are considered, however, the Transcendental Meditation technique as a facilitator of transcendental consciousness and the Vedic psychological theory of human development will be summarized to provide a framework for comparison of these two states.

The Transcendental Meditation Technique as a Facilitator of Transcendental Consciousness

Ancient classical references in Eastern literature offer a tremendous reservoir of information on subjective experience and states of consciousness that can be helpful in understanding phenomena related to meditation. Gillespie (in press) has attempted to identify descriptions in classical Eastern literature that might indicate the contribution of lucidity during dreaming in meditative practices. He reports that the Tibetan literature held lucid dreaming to be useful in concentrative meditation because of the difficulty frequently experienced of trying to withdraw or remove the senses from the objects of experience in order to turn the mind inward and arrive at a state of concentration. The senses considered already to be withdrawn from external objects of perception in the lucid dreaming state would thus make it easier to concentrate. However, Gillespie (in press) reports finding little or no treatment of lucidity during dreaming in the classical Indian literature. Such differences may reflect fundamentally different techniques of meditation and resultant experiences.

According to Maharishi Mahesh Yogi (1969), the popular notion that meditation requires concentration (mental effort) or contemplation (thinking on the level of meaning) may have been originally a misunderstanding of the meditative technique described in the ancient science of the Veda, the oldest continuous tradition of knowledge and the original Indian source on the practice of meditation. Veda is a Sanskrit term meaning knowledge.

Maharishi has revived the knowledge of Vedic science through a simple mental technology, the Maharishi Technology of the Unified Field (Dillbeck & Orme- Johnson, 1986). This standardized subjective methodology for development of mental potential has been taught to more than three million people worldwide and has encouraged extensive physiological, psychological, and sociological research (Chalmers, et al. 1986; Orme-Johnson & Farrow, 1977). Working with psychologists at Maharishi International University, Maharishi founded Vedic psychology to develop a comprehensive theoretical and applied science of psychology integrating current theories and understanding in

psychology with Vedic science.

Maharishi states that the TM technique is a effortless, natural procedure that automatically produces lesser and lesser states of mental excitation and results in the least excited, simplest state of awareness referred to as Transcendental Consciousness because in this state all mental activity is said to be transcended and the experiencer directly experiences content-free or pure consciousness without thoughts or any localized boundaries to awareness. In transcendental consciousness the observer, the objects of observation and the process of observation become unified into one wholeness of pure self-awareness. In vedic psychology transcendental consciousness is described as an unbounded, unified field of consciousness or Cosmic Psyche, the source of both the individual psyche and the objective laws of nature (Dillbeck & Orme-Johnson, 1986). Transcendental consciousness is not the thought, idea, or concept of this underlying field, but rather is held to be the direct experience of it, occurring when individual awareness settles down to its least-excited, ground state.

Consistent with descriptions in the Vedic literature such as in the Mundaka Upanishad, the state of transcendental consciousness has been proposed as a fourth major state of consciousness as distinct from the ordinary states of waking, dreaming, and sleep as these states are from each other (Maharishi Mahesh Yogi, 1969; Wallace, 1970). The distinctive physiological and psychological correlates of this state of consciousness attained during TM have been described in numerous published articles (e.g., Chalmers, et al., 1986). Recent studies show that periods in which subjects indicated experiencing transcendental consciousness by pressing a button during practice of the TM technique are highly correlated with enhanced alpha, and theta and beta EEG coherence across topographically distinct cortical areas, a measure of long-range spatial orderliness in the brain suggestive of high alertness; and with periods of respiratory suspension, decreased heart rate, stable phasic GSR, and heightened basal GSR indicative of physiologic quiescence (e.g., Farrow & Hebert, 1982). Although the uniqueness of physiological effects of meditation in general compared to simple rest has been questioned (Holmes, 1984), a quantitative meta-analysis clearly distinguished the physiological effects of TM practice from simple relaxation (Orme-Johnson & Dillbeck, 1984). Moreover, a meta-analysis of effect sizes comparing over 100 studies on various meditative and relaxation practices indicated that the TM technique was significantly more effective in reducing trait anxiety (Eppley, et al., 1984).

The TM technique also differs from procedures reported to induce the experience of lucidity during dreaming. Lucidity is described by some researchers as a cognitive skill that can be learned using induction methods such as autosuggestion and intentional recognition of the elements of the dream (Gackenbach & LaBerge, in press). The TM technique does not involve suggestion or intentions to be awake, to remember, or to be mindful of one's experiences. It simply allows attention to settle down to the source of thought, the ground state of mental activity. Trying to maintain alertness, remember, or to

achieve any particular experience can interfere with the practice. Though experiences during TM are reported to be enjoyable, the value of the technique is primarily assessed in terms of its spontaneous effects on psychological growth and physical health after TM practice (Chalmers et al., 1986).

The Vedic Psychological Theory of Human Development

According to the Vedic psychological theory of human development, the state of transcendental consciousness is of fundamental importance in the development of higher states of consciousness (Alexander et al., 1986; Dillbeck & Orme-Johnson, 1986). These higher states of consciousness can be viewed as a continuation of normal human growth beyond the currently postulated endpoints in Western psychology, beyond the adult conceptual level of formal operations in Piaget's theory and the peak and plateau experiences described by Maslow. Seven states of human consciousness are identified in Vedic psychology, including four developmental states higher than the three physiologically defined states of sleep, dreaming, and waking. Each state of consciousness in the theory is characterized by a relatively distinct range of experiential reality from a state of no subjective experience in deep sleep, to illusory experience in dreaming, to the typical range of empirical reality in waking, to pure unbounded self-awareness in transcendental consciousness.

According to the theory, repeated experience of transcendental consciousness alternating with waking, dreaming, and sleep promotes neutralization of accumulated stress in the nervous system and refines mental and physiological functioning, giving rise to a new style of functioning that is capable of sustaining transcendental consciousness along with mental activity. In this experience, called witnessing, transcendental consciousness becomes a silent, self- sufficient, uninvolved witness to mental processes. Development of a permanent style of physiological functioning that spontaneously maintains witnessing at all times during waking, dreaming, and deep sleep defines the fifth state of consciousness, termed cosmic consciousness, a state of inner peace and self- realization in which individual awareness remains permanently identified with the unbounded silence of the Cosmic Psyche.

Further refinement of the nervous system, facilitated by continued practice of the Maharishi Technology of the Unified Field, is said to develop the state of refined cosmic consciousness characterized by highly developed perceptual and affective processes, in which the individual is able to appreciate what is described as the finest level of subjective and objective creation. Vedic psychology proposes that human development culminates in the seventh state of consciousness, unity consciousness, described as the highest state of enlightened development in which the entire range of objective and subjective creation is spontaneously experienced in terms of the infinite, eternal oneness of the Self, the Cosmic Psyche (Maharishi Mabesh Yogi, 1969; Alexander, et al., 1986).

With respect to the development of Cosmic Consciousness, survey responses were recently obtained on witnessing deep sleep from 235 volunteer students and staff at Maharishi International University who practice Maharishi Technology of the Unified Field: 7.6% of the sample had regular experiences of clear transcendental consciousness throughout a night's sleep, 7.4% frequent experiences, 40.4% occasional experiences, 27.2% experiences once or twice, and 17.4% either vague or no experiences of witnessing deep sleep (Dillbeck & Orme-Johnson, 1986). Similar reports have been obtained for witnessing during waking as well as during dreaming.

Distinguishing Transcendental Consciousness from Lucidity

This brief summary of lucidity and of transcendental consciousness suggests that there are distinctive differences as well as possible similarities between these two states. Whereas lucidity is typically, though not always, associated with dreaming, transcendental consciousness is described as a self- sufficient state of pure awareness that can be experienced either in isolation or along with any mental state. It is not linked specifically to dreaming, and is not involved in nor mediated by any form of imagery or symbolic thought. Transcendental consciousness can be maintained along with waking, dreaming, or sleep but in these experiences there is a separation or gap between the peaceful, non-changing awareness of transcendental consciousness and the changing mental activity of these other states.

In contrast to explanations of lucidity as involving the active intellect and discriminative processes similar to the waking state, the essential feature of transcendental consciousness and witnessing is awareness in its pure, non-changing state, the Self or Cosmic Psyche, regardless of whether the experiencer is engaged in self-reflective thinking. No self- reflective thinking or logical discrimination is involved in deep sleep, but witnessing of deep sleep spontaneously occurs as the fifth state of consciousness, cosmic consciousness, develops. In transcendental consciousness and all higher states of consciousness described by Vedic psychology, the Self, the witness, is totally de-embedded from the mental faculties of intellect, memory, and perception. Transcendental consciousness is not a process of waking up the executive cognitive functions, and does not involve gaining perspective on the dream experience by reflecting upon the dream content or the dream state.

In some ways Hunt's (1985, p. 1) view of lucidity as an "observational attitude" or as "observational reflexivity" is similar to the Vedic psychological descriptions of transcendental consciousness and witnessing. Vedic psychology identifies transcendental consciousness as well as the higher states of consciousness as having the property of self-referral. Self-referral is not the same, however, as the self-reflextive thinking characteristic of the waking state. In the ordinary adult waking state , the localized self is identified and reflected upon in terms of the cognitive structures related to body image, personal abilities, beliefs and values, past experiences, social position and other

components that define the individual in the social world in which he or she is embedded. In contrast, self-referral means that the inner self is fully awake to itself and is identified only in terms of the unlocalized, transcendental Self, the Cosmic Psyche. It is the state of pure consciousness, as opposed to being conscious of something other than itself. In the self-referral state, awareness curves back onto itself and knows itself directly as the unified field of pure consciousness. Regardless of how recursive and complex self-reflective thought becomes, the self-referral state remains completely simple, the silent witness, uninvolved with the active social self.

While Hunt's observational reflexivity bears similarity to self-referral, on the other hand, his conclusion (Hunt, 1985) that lucidity is in the same class of phenomena as out-of-body experiences would appear to clearly distinguish the form of lucidity he is describing from the self referral states of Vedic psychology. The self-referral states do not involve out-of-body experiences. Maharishi (1969) predicts that these higher states of consciousness will maximize coordination of mind and body. This is corroborated by subjective experiences of practitioners of the TM and TM-sidhi program, as well as by performance-based research on mind-body coordination (e.g., Bolt, et al, 1978; Orme-Johnson & Haynes, 1981).

In addition to these conceptual and phenomenological differences, the psychophysiological and behavioral correlates of transcendental consciousness appear to differ from the findings on lucidity. The findings of respiratory suspension, EEG coherence, biochemical changes and other correlates consistently identify transcendental consciousness as a distinctive fourth state of consciousness characterized by a calm state of silent inner awareness (Maharishi, 1969; Wallace, 1970). In contrast, lucidity during dreaming is associated with an increase in some somatic arousal indices suggesting an increase in cognitive processing rather than induction of a quiescent state. A summary of the distinguishing features between transcendental consciousness and lucidity is given in Table 1.

Although the experimental and descriptive evidence suggests that these are distinct types of experience, it is possible that future research will support the conception of a continuum of degrees of lucidity, with the most advanced form the state of transcendental consciousness, and that some lucid dreaming experiences may also be identified as witnessing experiences. In the final section of this report, we would like to speculate on how lucidity might fit into a developmental framework based on the conception of a continuum of levels of psychological maturation.

Speculations on Lucidity and the De-embedding Process

We suggest that lucidity as typically experienced may be considered an indicator on the continuum of psychological maturation related to the unfoldment of higher order, self-reflective thought (c.f., LaBerge, 1985). Human development unfolds in stages from

more concrete to increasingly abstract, subtle and integrative cognitive states. Piaget has identified a sequence of four basic stages of cognitive development from birth through early adulthood: the sensorimotor stage, preoperational thought, concrete operational thought, and a level of abstract reflective thought termed formal operations. Developmentally, dreaming generally appears to involve relatively primitive mental operations and, according to Piaget (1962), has much in common with preoperational thought, which is characterized by prelogical mentation and impulsivity. Young children may be unable to distinguish clearly between waking and dreaming because the necessary waking discriminative functions are not yet developed. Even in the adult the dream state may at times be irrational and reflect a lack of discrimination. On the one hand the adult dreamer may be performing a complex logical task such as calculus in the dream, but on the other hand also may be engaged in fanciful mental imagery that the logical adult waking state would clearly identify as irrational. Adult dreaming may thus share features with preoperational thought such as inability to distinguish fanciful and realistic experience, no clear definition of ego or self, and extended symbolic play (Piaget, 1962).

The developmental process through preoperational thought, concrete operations, formal operations, and post-conceptual though can be viewed in terms of the degree to which executive cognitive functions are de-embedded from and begin to monitor immediate perceptions and mental representations. After the onset of concrete operations, the waking state self is able to recall distinctly prior periods of the illusory reality of dreaming. Perhaps at a later stage when the nervous system is capable of supporting higher order adult reflective thought, the ability to have knowledge of dreaming during dreaming may become accessible to some individuals. These experiences may reflect a developed adult cognitive system, with relatively mature functions for differentiation and integration of experiences.

From the Vedic psychological perspective, the human mind has a hierarchical structure with levels of depth from gross to subtle, to transcendental. The theory of levels of mind in Vedic psychology identifies the following components of the individual psyche: the most expressed level, called senses the deeper level of cognitive operations such as representation and working memory referred to as mind the deep decision processes termed intellect and the most subtle, integrative aspect of individuality, the ego. Underlying these levels of individual mind is the source of thought, the level of transcendental consciousness, the Cosmic Psyche. We have proposed (Alexander, et al., 1986) that the increasing functional integration of the nervous system in ontogenesis may permit the utilization of these increasingly subtle levels of mind. The progressive enlivenment of each subtler level may provide the deep structure for the expression of correspondingly higher levels of cognitive operations. Enlivenment of a deeper level of mind may allow that level to observe and monitor the more expressed levels. As the level of intellect is enlivened, it may be able to monitor and add its discriminative functions to mental and sensory operations; and as the ego is enlivened, the individual may be able to integrate more fully the operations of intellect, mind, and senses. If dreaming in its

typical form shares attributes with preoperational thought, the senses and desires of the mind would tend to dominate during this experience, and the intellect and ego would not be in normal operation. In the case of lucid dreaming, some of the monitoring functions of intellect and ego may be operative. When the transcendental level of pure consciousness becomes enlivened, witnessing of ego, intellect and all levels of mind would spontaneously occur.

Such a de-embedding process is also suggested by LaBerge (1985, p. 242-243) as a potential aspect of lucid dreaming, which he calls "de-identification." He points out that lucid dreamers "know that the persons they appeared to be in the dream are not who they really are. No longer identifying with their egos, they are free to change them, correcting their delusions. . . the fully lucid dreamer does not need to struggle to overcome his or her ego. He or she has become objective enough to no longer identify with it. This knowledge puts the ego's importance in modest proportion to the true, and perhaps as yet undiscovered, Self." LaBerge's description seems also to point to the possibility of extending the de-embedding process, such that the localized, bounded ego of the dreamer as well as the stable waking ego is transcended and awareness identifies with the true Self in its own self-referral state.

We have recently proposed an unfreezing human development hypothesis that suggests how the de-embedding process can be extended beyond the limits ordinary imposed by conceptual thought (Alexander et al., 1986). Fundamental cognitive, moral and self development typically come to plateau during late adolescence or early adulthood with stabilization of formal operations and adult reflective thought. It is believed that psychological development freezes at this level because the central nervous system generally stops developing during this period of life. The high degree of functional interrelationship of mind and body, however, suggests that not only can changes in the nervous system act to change the level of awareness, but also changes in level of awareness can in principle act back upon the nervous system to influence the style of physiological functioning. Development at any stage is stimulated by cognitive and behavioral experiences. Development may typically be frozen at the level of ordinary adult thought because the experience of transcendental consciousness is not ordinarily available. As this experience is gained regularly, facilitated by the TM technique, higher stages of development may naturally emerge. Practice of TM does appear to catalyze further physiological refinement and integration (e.g. Orme- Johnson & Haynes, 1981) that may unfreeze the developmental process.

Our findings suggest that the higher states of consciousness described in Vedic psychology represent the logical continuation and extension of normal human development. The Maharishi Technology of the Unified Field is viewed as a post-conceptual or post-language developmental technology that may be as fundamental for promoting development of consciousness beyond symbolic thought as language learning was in facilitating development to the ordinary conceptual lead attained in adulthood.

Conclusion

Extensive empirical research will be required to identify precisely the physiological, psychological, and behavioral profile of higher stages of consciousness and the specific role phenomenal experiences such as dream lucidity play in that development. Future evidence may support the conception of a continuum of degrees of lucidity, especially in the sense that the most advanced state of lucidity implies clarity of awareness of the true Self (LaBerge, 1985). We speculate that lucidity as typically experienced may reflect the further developmental de-embedding and generalization of higher order self-reflective thought such that it can function in some form during the dream state. It is our impression that many if not most lucid dreams may result from activation of such functions of the intellect and ego. Nevertheless, some lucid experiences which have been reported may be of the purely self-referral witnessing type described by Vedic psychology. We are presently collaborating on research with Dr. Jayne Gackenbach to identify phenomenological differences between lucidity and witnessing and determine their cognitive and behavioral correlates, which may lead to further clarification of these issues.

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