Here we are, all of us: in a dream-caravan.
A caravan, but a dream—a dream, but a caravan.
And we know which are the dreams.
Therein lies the hope. —*Bahaudin*

May I awaken within this dream,
And grasp the fact that I am dreaming
So that all dreamlike beings may likewise awaken
From the nightmare of illusory suffering and confusion.
—*Surya Das*

Stephen LaBerge

Lucid Dreaming and the Yoga of the Dream State: A Psychophysiological Perspective

Until very recently Western science regarded "lucid dreaming"—dreaming while knowing that one is dreaming—as no more than a curiosity: at best a metaphorical unicorn, rare to the point of being mythical, at worst, an oxymoron (i.e., "How can one be *conscious* while *asleep*?"). Indeed, before eye-movement signaling (LaBerge et al. 1981; see LaBerge 1990 for more references) provided objective proof of its existence, few sleep and dream researchers were willing to credit subjective reports of lucid dreaming. Probably the main reason was a widespread theoretical assumption that being asleep meant being unconscious; thus, claiming to be conscious of anything at all during sleep, including the fact that one is dreaming, seemed a contradiction in terms (LaBerge 1985, 1990). At least one philosopher went so far as to contend that to say one is dreaming is "unintelligible; nonsense— . . . an inherently absurd form of words" (Malcolm 1959:50).

In contrast, for more than a thousand years Tibetan Buddhists have believed that it is possible to maintain the functional equivalence of full waking consciousness during sleep. This belief is not based on anything as tenuous as theoretical grounds but upon firsthand experience with a sophisticated set of lucid dreaming techniques collectively known as the *Doctrine of Dreams* or *dream yoga* (Evans-Wentz 1958; Norbu 1992). I will present in what follows a commentary on the currently available literature

on dream yoga. Thus the scope of this article is narrower than a review of lucid dreaming (for which see LaBerge 1985, 1990; LaBerge and Rheingold 1990).

On one hand, the twenty-five years or so of recent Western experimental and experiential research has yielded much more extensive knowledge about the lucid dreaming state, including its psychophysiological characteristics (LaBerge 1998), methods of induction (LaBerge and Rheingold 1990), and theoretical basis (LaBerge 1998). On the other hand, the more than twelve centuries of history accumulated in the Tibetan dream yoga tradition of intensive experiential observation has correspondingly greater depth of meaning. As a result, it will be seen in this commentary that while Western knowledge of the topic may surpass the Eastern teachings in a number of technical details the most important aspect of dream yoga, namely, its transcendental purpose—"enlightenment"—is difficult to even frame in the terms of Western science.

Given that *Buddha* means "the awakened one," it is not surprising that lucid dreaming arises very naturally in Buddhism, providing both a metaphor for enlightenment and a method for attaining the goal of awakening:

> The whole purpose of the Doctrine of Dreams is to stimulate the *yogin* to arise from the Sleep of Delusion, from the Nightmare of Existence, to break the shackles in which *maya* thus has held him prisoner throughout the eons, and so attain spiritual peace and joy of Freedom, even as did the Fully Awakened One, Gautama the Buddha. (Evans-Wentz 1958:167)

The Tibetan Buddhist point of view reverses the order of valuation of the waking and dreaming states: while most Westerners consider the waking state the only reality and dreams to be unreal and unimportant, in the East the dream state is considered to have greater potential for understanding and spiritual progress than the so-called waking state, and both states are considered to be equally real or unreal. From this point of view a relativistic metaphysics seems compelling:

> If the feeling of reality in dreams is perfectly credible and if this feeling disappears on waking, then there is no reason for not imagining life as a dream from which one could also wake up. Already, one can dream that one is dreaming and awake from one's dream within the dream: thus a metaphysics

> of degrees of the real becomes necessary, an approach which it seems it will be hard to avoid in the future. (De Becker 1965:402–403)

The original sources of the methods and doctrines on dream yoga are lost in antiquity; according to some scholars, the teachings can be traced back twenty-five hundred years to the Buddha himself (Mullin 1997). It is likewise claimed that a shamanistic pre-Buddhist lucid dream tradition existed in Tibet (Norbu 1992; Tarab Tulku 1991). Be that as it may, the oldest certain source of detailed teachings on Tibetan dream yoga is the work known as the *Six Doctrines* or *Yogas of Naropa* (Mullin 1997). The six yogas include 1. the doctrine of psychic heat, 2. the doctrine of the illusory body, 3. the doctrine of the dream state, 4. the doctrine of the clear light, 5. the doctrine of the after-death state, and 6. the doctrine of consciousness transference (Evans-Wentz 1958).

Naropa's teacher, Tilopa (988–1069), is regarded as the compiler of the six yogas (Mullin 1997). Most of Tilopa's teachings were orally transmitted; in the only extant text of certain authenticity Tilopa specifically attributes the teachings on dream yoga to Lawapa of Oddiyana:

> Know dreams as dreams, and constantly
> Meditate on their profound significance.
> Visualize the seed syllables of the five natures
> With the drop, the *nada* and so forth.
> One perceives buddhas and Buddha fields.
> The time of sleep is the time for the method
> That brings realization of great bliss.
> This is the instruction of Lawapa. (Tilopa 1997:28)

Lawapa is said to have been born a prince in the eighth century in Oddiyana but renounced his kingdom to travel the path of spirituality as a wandering monk (Mullin 1997). According to tradition, he acquired his name, which means "the blanket master," by sleeping wrapped in his blanket in front of the local king's palace for twelve years without rising. It is said that all who touched his sleeping form were miraculously cured of any of their illnesses. In any case, we know that Lawapa passed on his teachings to Jalandhara, who was the guru of Krishnacharya, a teacher of Naropa.

The earliest written formulations of the dream yoga are extremely concise and even aphoristic; mostly they seem to be reminders of the much

more extensive teachings transmitted orally from guru to disciple. The account from Tilopa (1997) just quoted is typical. However, over the many centuries more and more details of the dream yoga appear in print. The main source is "The Doctrine of the Dream-State," a part of the volume edited by Evans-Wentz (1958) deriving from a compilation by Padma Karpo in the seventeenth century.

"The Doctrine of the Dream-State" consists of four parts or stages (Evans-Wentz 1958:215):

1. "Comprehending the nature of the dream-state" (i.e., that it is a dream, and thus, a construction of the mind).
2. "Transmuting the dream-content" (practicing the transformation of dream content until one experientially understands that all the contents of dreaming consciousness can be changed by will and that dreams are essentially unstable.)
3. "Realizing the dream-state, or dream-content to be *Maya*" (i.e., that everything that appears in the dream is a mental construction.)
4. "Meditating on the thatness of the dream-state" (Realizing that the sensory experiences of waking consciousness are just as illusory as dreams and that, in a sense, "it's all a dream," resulting in union with the Clear Light.)

Normally the dream yoga is preceded by a number of preparatory exercises. These include the basic exercises practiced by those undergoing Buddhist training as well as a specific preparation designed to "purify the mind": essentially a series of meditations designed to set one's intention to a pure aspiration for enlightenment (Gyatrul 1993). The essential frame of mind with which to approach dream yoga is described as follows:

> Then when you go to bed in the evening, cultivate the spirit of enlightenment, thinking, "For the sake of all sentient beings throughout space, I shall practice the illusion-like *samādhi*, and I shall achieve perfect Buddhahood. For that purpose, I shall train in dreaming." (Padmasambhava 1998:151).

The inner heat yoga is regarded as a prerequisite by some (e.g., Gyatso 1997; Tsongkhapa 1997) but not all (e.g., Gyatrul 1993; Norbu 1992) commentators. This is an important issue that needs to be addressed by anyone seeking to adapt the dream yoga teachings to a Western context: what are the recommended and minimal necessary prerequisites for these practices? It is notable that the Dalai Lama recently stated that dream yoga can be practiced

> without a great deal of preparation. Dream yoga could be practiced by non-Buddhists as well as Buddhists. If a Buddhist practices dream yoga, he or she brings a special motivation and purpose to it. In the Buddhist context the practice is aimed at the realization of emptiness. But the same practice could be done by non-Buddhists. (Varela 1997:45).

COMPREHENDING THE NATURE OF THE DREAM STATE

The doctrine of the dream state describes three types of practice aimed at "comprehending the dream-state" (i.e., producing lucid dreams): the power of resolution, the power of breath, and the power of visualization (Evans-Wentz 1958).

THE POWER OF RESOLUTION

The power of resolution refers to resolving to maintain unbroken continuity of consciousness throughout both the waking state and the dream state:

> Under all conditions during the day hold to the concept that all things are of the substance of dreams and that thou must realize their true nature. Then, at night, when about to sleep, pray to the *guru* that thou mayest be enabled to comprehend the dream-state; and firmly resolve that thou wilt comprehend it. By meditating thus, one is certain to comprehend it. (Evans-Wentz 1958:216)

The daytime training, "sustaining mindfulness without distraction during the daytime experience" is the opposite of the Western lucid dreaming induction technique of reality testing in which one repeatedly questions whether or not one is dreaming, with the aim of creating a habit that will recur during the dream state (LaBerge and Rheingold 1990). Here is Gyatrul Rinpoche's description of the Tibetan technique:

> During the daytime, one must sustain mindfulness without distraction. This mindfulness is to constantly remind oneself that all daytime appearances are nothing other than a dream. Throughout the different experiences during the daytime reality, you just keep on mindfully sustaining the awareness, "This is a dream, this is a dream, I'm asleep and I'm dreaming," and this will create a habit. (1993:104)

An experiment comparing the effectiveness of these two opposed yet related techniques should certainly be done: is it better to focus on the differences between waking and dreaming, as in the Western approach, or on the similarities, as in the Tibetan approach?

THE POWER OF BREATH

In the second practice, the power of breath, the procedure is as follows:

> Sleep on the right side, as a lion doth. With the thumb and ring-finger of the right hand press the pulsation of the throat-arteries; stop the nostrils with the fingers [of the left hand]; and let the saliva collect in the throat. (Evans-Wentz 1958:216)

Falling asleep while engaged in this rather elaborate practice is likely to present a challenge for most people; accordingly, Norbu (1992) recommends that it be used only by those who fall asleep easily. However, a major part of the desired effect is to maintain a certain degree of consciousness as one falls asleep, making it necessarily more difficult (but not impossible) to fall asleep, so in practice the requisite balance may be delicate.

The Evans-Wentz account of the procedure departs from the typical practice: one is usually advised to close only the right nostril (Norbu 1992) instead of both, as described above. Most commentators agree that sleeping on the right side is optimal for lucid dreaming, although several claim this is only true for men (e.g., Norbu 1992; Surya Das 2000; Wangyal 1998). For example, Norbu asserts that "a woman should lie on her left side and try to block her left nostril. . . . The reason that the positions are reversed for men and women has to do with the solar and lunar channels" (1992:52–53). Wangyal (1998:44) provides more explicit detail, explaining that according to the Tibetan tradition there are three main channels through which "pranic energy" flows: the "blue central channel . . . the channel of nonduality" in which moves "the energy of primordial awareness" (Tib. *rigpa*), the "white channel (the right in men and the left in women) is the channel through which energies of negative emotions move," while the "red channel (the left in men and the right in women) is the conduit for positive or wisdom energies." "Therefore," Wangyal writes,

> in dream practice, men sleep on their right side and women on their left in order to put pressure on the white channel and thus close it slightly while open-

> ing the red wisdom channel. This contributes to better experiences of dream, involving a more positive emotional experience and greater clarity. (44)

Considering the reasoning given, one suspects that the technique has not actually been empirically tested in women, although it would not be the first time that men and women have been shown to have typically opposite organization of neuropsychological systems.

This practice might seem somewhat bizarre to Western scientists, and the explanations even more so. However, it may be that most or all components of the procedure have specific effects on the nervous system. For example, pressing the throat arteries stimulates the baroceptors, lowering the heart rate and perhaps facilitating rapid onset of REM sleep (Puizillout and Foutz 1976) and hence "Wake-Initiated Lucid Dreams" (WILDs; LaBerge 1980). Mouth breathing may also favor WILD initiation by requiring a higher level of the central nervous system control and perhaps a greater degree of consciousness than nose breathing, given the fact that newborn human infants cannot breath through the mouth. Sleeping on the right side is likely to stimulate a neural reflex evoked by pressure between the fifth and sixth intercostal spaces that causes the dilation of the contralateral (left) blood vessels and possibly also changes in cerebral laterality (Werntz et al. 1983). If this is the mechanism by which sleeping on the right side facilitates lucid dreaming, one would expect that lucid dreams will be correlated with the relative dilation of the left nostril.

Indeed, in a pilot study of nasal dilation laterality, sleeping posture, and lucid dreaming, with seven men and eight women, all right handed, LaBerge and Levitan (1991) found that, for women, lucid dreams were three times as likely to be accompanied by left nasal dilation than right nasal dilation. For both men and women, lucid dreams were three times more frequent when sleeping on the right side than on the left. These results confirm the basic Tibetan claim that sleeping on the right side is more favorable for lucid dreaming than sleeping on the left side, for men and women alike. Although this study found several gender differences (for example, women reported relatively clearer thinking in dreams with the left nostril open, while men reported relatively greater emotional intensity with the right nostril open), it did not confirm the claim that women should sleep on the left side. We are currently engaged in a replication study with a larger number of right- and left-handed men and women.

I believe the relationship between the results of empirical study and Ti-

betan method and theory illustrate a pattern that will be found in other studies: namely, that the methods are more likely to be confirmed than the theoretical explanations. The reason for that seems clear. The traditional methods were probably derived mainly from actual experiences—in some cases, by serendipitous observations—of what procedures produced the desired effect. In other words, the methods were empirically based. Moreover, ineffective methods are relatively easily recognized: if a sufficient number of practitioners follow a procedure without the expected results, the suspicion must arise that there is something wrong with the technique. In contrast, the validity of the theoretical explanation of how the method is thought to work is not likely to come into question as the result of observations of the effectiveness of the method, especially not if the technique is effective. Tests of the theory itself take place in a context outside the accepted paradigm (Kuhn 1970).

The effectiveness of a psychophysiological technique can be tested by careful observers of the contents of consciousness without the need of any technology other than a well-trained mind and disciplined body. In contrast, testing the validity of an explanation of that technique may require the extremely sophisticated technology needed for the visualization and measurement of neural activity. As a result, the Tibetan Buddhist tradition almost completely lacks any notion of the role the brain plays in the activities of local mind, including perception, emotion, cognition, and dreaming (Houshmand, Livingston, and Wallace 1999). In consequence, Tibetan theorizing about, for example, the types of dreams and how they arise (e.g., Norbu 1992; Wangyal 1998) sometimes exhibit a distinctly prescientific flavor and naiveté in striking contrast to the usual high degree of sophistication of Buddhist thinking. The absence of a role for the brain or nervous system casts doubt on the status of the entire system of *cakras* and "psychic energy channels." Is the *cakra* system in the body or in the brain? Claims that the channels are nonphysical (e.g., according to Wangyal 1998, "The channels that carry this very subtle energy cannot be located in the physical dimension but we can become aware of them"; 44) are contradicted by claims (e.g., Wangyal's paragraph quoted above) that particular physical postures compress them. A possible alternative explanation is that they represent structures in the central and peripheral nervous system, which may explain why "we can become aware of them."

THE POWER OF VISUALIZATION

The third practice, the power of visualization, consists of the following:

> Thinking that thou art the deity Vajra-Yogini [the feminine aspect of primordial wisdom], visualize in the throat psychic-center the syllable AH, red of color and vividly radiant, as being the real embodiment of Divine Speech.
>
> By mentally concentrating upon the radiance of the AH, and recognizing every phenomenal thing to be in essence like forms reflected in a mirror, which, though apparent, have no real existence of themselves, one comprehendeth the dream.
>
> . . . At nightfall, [strive to] comprehend the nature of the dream-state by means of the visualization just described. At dawn, practice "pot-shaped" breathing seven times. Resolve [or try] eleven times to comprehend the nature of the dream-state. Then concentrate the mind upon a dot, like unto a bony substance, white of color, situated between the eyebrows. (Evans-Wentz 1958:217–218)

The text recommends that the dot should be visualized as red if one is too sleepy or as blue if one is too vigilant. If these means are insufficient to induce lucidity, one is advised to increase one's morning practice to twenty-one pot-shaped breathings and twenty-one resolutions to comprehend the nature of the dream state. "Then, by concentrating the mind on a black dot, the size of an ordinary pill, as being situated at the base of the generative organ, one will be enabled to comprehend the nature of the dream-state." (Evans-Wentz 1958:218)

There are many variations on what is visualized and where it is visualized. Another text recommends,

> Lie down to sleep with the resolve to apprehend your dreams. Let your behavior be unhurried and calm. As for the mind, in your heart imagine a white, stainless AH sending forth varicolored rays of light which melt samsara and nirvana into light and dissolve them into the AH. Fall asleep with the sense of a clear vision, like the moon rising in a stainless sky. (Gyatrul 1993:105)

Another source recommends

> Visualize at your throat a four-petaled lotus with Oṃ in its center, Aḥ in front, Nu on the right, Ta in back, and Ra on the left. . . . First direct your

> interest to the Oṃ in the center, then when you become sleepily dazed, focus your awareness on the Aḥ in front. As you are falling asleep, attend to the Nu on the right. When you are more soundly asleep, focus on the Ta in back. When you have fallen fast asleep, focus on the Ra on the left. . . . While sleeping, focus your interest on Oṃ, and with the anticipation of dreaming, without being interrupted by other thoughts, apprehend the dream-state with your sleeping awareness. . . . If the seed syllables are unclear and you still do not apprehend the dream-state in that way, focus your attention clearly and vividly on a *bindu* of light at your throat; and with the anticipation of dreaming, fall asleep and thereby apprehend the dream-state. (Padmasambhava 1998:153)

Head, heart, throat, or lower? Four-petaled lotus with one to six letters, a flame, a deity, or point of light (white, red, blue, or rainbow colored)? Clearly there are more variations here than in the *Kāmasūtra*. One wonders whether the particular imagery assigned to specific areas of the body has any objective reality. The same issue arises when one compares the Hindu and Buddhist descriptions of the *cakra* system. The two systems generally agree on placing psychic energy centers or *cakras* in the region of the head, throat, heart, navel, and genitals, but they disagree on almost all the details, including the number of *cakras* and the colors, syllables, number of petals, elements, and functions associated with each (Mann and Short 1990).

OVERCOMING OBSTACLES TO THE PRACTICE

The Evans-Wentz text next presents guidance in preventing "the spreading-out of dream content" (i.e., loss of the dream-state or awareness due to premature awakening, poor recall, etc.). The clearest instructions are in Padmasambhava (1998).

DISPERSAL THROUGH WAKING

"Dispersal through waking" refers to waking up immediately after becoming lucid, a typical problem for beginning lucid dreamers (LaBerge 1985).

> To dispel that, maintain your attention at the level of the heart and below, and focus your mind on a black *bindu*, the size of a pea, called the "syllable of

> darkness," on the soles of both feet. That will dispel it. (Padmasambhava 1998:157)

The basis of this technique is apparently derived from the meditative practice of raising the gaze when too sleepy and lowering the gaze when too vigilant (Lamrimpa 1995:83). Other sources recommend eating nutritious food and performing bodily work or exercise until fatigued, resulting in deeper sleep (Evans-Wentz 1958). As for the visualization described above, it should be experimentally compared to the Western techniques for preventing premature awakening from lucid dreams already proven effective (i.e., "dream spinning"; LaBerge 1980, 1985, 1993).

LaBerge (1980) serendipitously discovered that spinning one's dream body when the dream begins to fade causes a return of stability to the dream state. Presumably, this sensory engagement with the dream discourages the brain from changing state from dreaming to waking. Research (LaBerge 1993) has proven the effectiveness of spinning: the odds in favor of continuing the lucid dream were about 22 to 1 after spinning, 13 to 1 after hand rubbing (another technique designed to prevent awakening), and 1 to 2 after "going with the flow" (a control task). That makes the relative odds favoring spinning over going with the flow 48 to 1, and for rubbing over going with the flow 27 to 1.

DISPERSAL THROUGH FORGETFULNESS

"Dispersal through forgetfulness" refers to initially becoming lucid but then forgetting that one is dreaming and letting the dream go on as usual.

> To dispel that, train in the illusory body during the day, and accustom yourself to envisioning the dream-state. Then as you are about to go to sleep, do so with the yearning, "May I know the dream-state as the dream-state, and not become confused." Also cultivate mindfulness, thinking, "Also, when I am apprehending the dream-state, may I not become confused." That will dispel it. (Padmasambhava 1998:157)

The tendency to lose lucidity by forgetfulness or false awakenings is common with beginning lucid dreamers. In contrast to the practice above, LaBerge (1985) recommends reminding oneself *in the dream* that one is dreaming: repeating phrases like "This is a dream" or "I'm dreaming" until

one has had sufficient experience so that lucidity is no longer likely to be lost (LaBerge and DeGracia 2000).

DISPERSAL THROUGH CONFUSION

"Dispersal through confusion" means never becoming lucid at all because of a confused state of mind and resultant diffused awareness. In this case,

> during the daytime powerfully envision dreaming, and strongly emphasize the illusory body. Apply yourself to purifying obscurations, practicing fulfillment and confession, and performing the *gaṇacakra* offering. By forcefully practicing *prāṇāyāma* with the vital energies, and continuing in all this, the problem will be dispelled. (Padmasambhava 1998:158)

DISPERSAL THROUGH INSOMNIA

"Dispersal through insomnia" means failing to become lucid as a result of failing to sleep (an obvious prerequisite!).

> If sleep is dispersed due to powerful anticipation, and you become diffused as your consciousness simply does not go to sleep, counteract this by imagining a black *bindu* in the center of your heart. Bring forth the anticipation not forcefully and just for an instant, and by releasing your awareness, without meditating on sleep, you will fall asleep and apprehend the dream-state. (Padmasambhava 1998:158)

TRANSMUTING THE DREAM CONTENT

After developing the ability to induce and remember frequent and stable lucid dreams, the next stage is to practice "transmuting the dream-content" in a wide variety of ways:

> Practice moving gross and subtle appearances of sentient beings and the environment back and forth; increase one to many; gradually reduce many to one; transform pillars and pots and so on into living beings, both human and animal; within the environment and its inhabitants change living beings into pillars, pots and so forth just as you please; transform the peaceful into the wrathful and the wrathful into the peaceful and so on. Increase and transform

> in various ways whatever you like in whatever way you like. At night, recognize the dream as a dream, and with your previous imagination and objects, increase things as much as you wish, and change them in any way you like. (Gyatrul 1993:82–83)

After gaining proficiency in control of dream figures and objects, the dream yogi practices "visionary travel," visiting any dream scene desired, typically a Buddha field:

> When about to sleep, visualize a red dot as being within the throat psychic-center, and firmly believe that thereby thou shalt see whichever of the Realms thou desirest to see, with all of its characteristics, most vividly. (Evans-Wentz 1958:220)

It is sometimes claimed that under certain circumstances one actually does visit the place dreamed about. This is in spite of the general principle that everything experienced in the dream is illusory.

> By engaging in the technique of illusory dream deeds one projects oneself in the dream state to a buddhafield and meditates there. But is this a reliable experience? Can one really project oneself to a buddhafield? [Perhaps.] . . . For example, Lama Wonton Kyergangwa projected himself into the presence of Guru Padmasambhava and received direct teachings on the Hayagriva Tantra. Nonetheless such instances are rare and their validity is difficult to ascertain.
>
> With dream experiences that arise as a result of the technique being applied through energy control, it seems that sometimes they are . . . valid and sometimes not. When the method is conscious resolution, they usually are not valid. (Gyatso 1997:65)

H. H. the Dalai Lama himself appears to believe in the reality of actual out-of-body travel:

> But it's also said that there is such a thing as a "special dream state." In that state, the "special dream body" is created from the mind and from vital energy (known in Sanskrit as *prana*) within the body. This special dream body is able to disassociate from the gross physical body and travel elsewhere. (Varela 1997:38–39)

Here as elsewhere, it is not always clear which body is being referred to. How, by direct experience, does one distinguish between the body one experiences, i.e., the phenomenal body or "body image" from that theoretical

entity, "the gross physical body"? Does "travel elsewhere" really mean travel in physical space or travel in mental space? How does Gyatso distinguish valid and invalid projections, as mentioned above? These kinds of questions are ordinarily answered by the aid of the convergent corroboration of independent instruments or observers. How can introspection alone ever distinguish external reality from internal, phenomenal reality when the latter is all that by definition can be observed?

In any case, with my colleagues (Levitan et al. 1999) I argue that the concept of "out-of-body experience" is best understood, without the unproven and unnecessary hypothesis of a dream body disassociated from the physical body, as a purely mental experience:

> The worlds we create in dreams and OBEs are as real as *this* one, and, further, they are unfettered by the constraints of the physical universe. In dreams, we have the potential to explore the true powers of the mind without the limitations imposed in the "real world" by the need to survive in a hostile environment. How much more exhilarating it must be to be "out-of-body" in a world where the only limit is the imagination, than to be loose in the physical world in a powerless body of ether! Freed of the constraints imposed by the physical, expanded by the knowledge that we can transcend all previously known limitations, who knows what we could be, or become? (p. 194)

REALIZING THE DREAM STATE TO BE ILLUSION

The next level of practice in dream control is to become fearless in the dream, realizing that everything that happens in the dream is illusory:

> Whenever anything of a threatening or traumatic nature occurs in a dream, such as drowning in water or being burned by fire, recognize the dream as a dream and ask yourself, "How can dream water or dream fire possibly harm me?" Make yourself jump or fall into the water or fire in the dream. Examine the water, stones or fire, and remind yourself of how even though that phenomenon appears to the mind, it does not exist in the nature of its appearance. Similarly, all dream phenomena appear to the mind but are empty of an inherently existent self-nature. Meditate on all dream objects in this way. (Tsongkhapa 1997:127)

Very similar practices are described in the Western literature on lucid dreaming (LaBerge 1985; Tholey 1988) with special emphasis on trusting

one's lucidity by being willing to put the dream body "at risk," since if one is indeed dreaming what harm can come? The suggestion in LaBerge (1985) that if there is nothing threatening in the dream, as one finds it, one can (and should) go looking for trouble is also found in the Tibetan tradition:

> Apprehend the dream-state and go to the bank of a great river. Consider, "Since I am a mental-body of a dream, there is nothing for the river to carry away." By jumping into the river, you will be carried away by a current of bliss and emptiness. (Padmasambhava 1998:156)

After becoming "thoroughly proficient" in the art of transforming dream content, the yogi turns his attention to his own dream body: this he now sees as just as illusory as any other element of his lucid dream. He now visualizes his own dream body in the form of a deity, and likewise all other bodies in the dream are seen in their divine form (Evans-Wentz 1958:221).

> While apprehending the dream-state, consider, "Since this is now a dream-body, it can be transformed in any way." Whatever arises in the dream, be it demonic apparitions, monkeys, people, dogs, and so on, meditatively transform them into your chosen deity. Practice multiplying them by emanation and changing them into anything you like. (Padmasambhava 1998:155)

This transmutation of base metal to dream gold prepares the ground for the final stage of dream yoga: transcending form altogether in mystical union with the formless.

MEDITATING ON THE THATNESS OF THE DREAM-STATE

The fourth and final stage of dream yoga training is meditating upon the "thatness" (voidness, primordial awareness, transcendent source of being) of the dream state. The text tells us that by means of this meditation "the dream propensities, whence arise whatever is seen in dreams as appearances of deities, are purified" (Evans-Wentz 1958:222). The yogi is instructed to concentrate in the lucid dream state, focusing on the previously visualized divine forms, and to keep his mind free of thoughts. In the undisturbed quiet of this mental state, the divine forms are said to be "attuned to the non-thought condition of mind; and thereby dawneth the Clear Light, of which the essence is of the voidness."

The last stages of the process of realization are summarized by Evans-Wentz in a footnote as follows:

> [Thus, one realizes that the appearance of form] . . . is entirely subject to one's will when the mental powers have been efficiently developed by . . . [the dream yogic practices]. In other words, the *yogin* learns by actual experience, resulting from psychic experimentation, that the character of any dream can be changed or transformed by willing that it shall be. A step further and he learns that form, in the dream-state, and all the multitudinous content of dreams, are merely playthings of mind, and, therefore, as unstable as mirage. A further step leads him to the knowledge that the essential nature of form and of all things perceived by the senses in the waking state are equally as unreal as their reflexes in the dream-state, both states alike being *sangsaric*. The final step leads to the Great Realization, that nothing within the *Sangsara* is or can be other than unreal like dreams. The Universal Creation . . . and every phenomenal thing therein . . . are but the content of the Supreme Dream. With the dawning of this Divine Wisdom, the microcosmic aspect of the Macrocosm becomes fully awakened; the dew-drop slips back into the Shining Sea, in *Nirvanic* Blissfulness and At-one-ment, possessed of All Possessions, Knower of the All-Knowledge, Creator of All Creations—the One Mind, Reality Itself. (Evans-Wentz 1958:221–222)

The Eastern "Great Realization" that all phenomena are dreamlike has a clear parallel in recent Western psychological and neuroscientific conceptualizing of consciousness as a world model. According to this conception, the intrinsic nature of consciousness does not vary from one state of consciousness to another. Whether awake or asleep, our consciousness functions as a model of the world constructed by the brain from the best available sources of information. During waking conditions this model is derived primarily from sensory input, which provides the most current information about present circumstances, and secondarily from contextual and motivational information. While we sleep very little sensory input is available, so the world model we experience is constructed from what remains, contextual information from our lives, that is, expectations derived from past experience and motivations (e.g., wishes, as Freud observed, but also fears). As a result, the content of our dreams is largely determined by what we fear, hope for, and expect (LaBerge 1985, 1994, 1998; LaBerge and Rheingold 1990).

From this perspective, dreaming can be viewed as the special case of perception without the constraints of external sensory input. Conversely, perception can be viewed as the special case of dreaming constrained by

sensory input (Llinas and Pare 1991). According to this model, dreaming should be phenomenologically more similar to than different from waking perception, as the results of a series of studies directly comparing the contents of consciousness in dreaming and waking (Kahan and LaBerge 1994, 1996; Kahan et al. 1997; LaBerge, Kahan, and Levitan 1995).

APPLICATIONS OF LUCID DREAMING FROM THE PERSPECTIVE OF DREAM YOGA

It should be clear by now that the principal application of dream yoga is nothing more nor less than enlightenment. This ought to be reason enough to pursue lucid dreaming. Still, from the perspective of dream yoga there are additional benefits of lucid dreaming described in the Tibetan tradition.

Tarthang Tulku explains one of the beneficial effects of lucid dreaming on personal outlook as follows:

> Experiences we gain from practices we do during our dream time can then be brought into our daytime experience. For example, we can learn to change the frightening images we see in our dreams into peaceful forms. Using the same process, we can transmute the negative emotions we feel during the daytime into increased awareness. Thus we can use our dream experiences to develop a more flexible life. (Tarthang 1978:77)

"With continuing practice," Tarthang Tulku explains,

> we see less and less difference between the waking and the dream state. Our experiences in waking life become more vivid and varied, the result of a lighter and more refined awareness. . . . This kind of awareness, based on dream practice, can help create an inner balance. Awareness nourishes the mind in a way that nurtures the whole living organism. Awareness illuminates previously unseen facets of the mind, and lights the way for us to explore ever-new dimensions of reality. (90)

As we have seen above, the practice of dream control techniques is considered by many authorities in the Tibetan tradition to lead to the capacity to dream anything imaginable. "Advanced yogis are able to do just about anything in their dreams. They can become dragons or mythical birds, become larger or smaller or disappear, go back into childhood and relive experiences, or even fly through space" (Tulku 1978:76). Here is mentioned in passing a fascinating possibility that raises several questions: to what extent

is it possible to relive childhood experiences? How does this method compare with hypnotic age regression?

Western studies of lucid dream control have so far established rather more modest claims. For example, a study (Levitan and LaBerge 1993) investigated lucid dreamers' abilities to carry out a variety of simple dream control tasks ranging from looking at one's hand, front and back, turning on and off a light, checking one's reflection in a mirror, entering the mirror ("passing through the looking glass" as in *Alice in Wonderland*). All these tasks could be performed by some of the lucid dreamers some of the time. Perhaps the extensive visualization practice undergone by traditional practitioners of dream yoga leads to much higher ability to manipulate the dream imagery.

The wish-fulfillment possibilities of this degree of dream control may seem compelling, but it may be that the more valuable applications of lucid dreaming are elsewhere: "Dreams are a reservoir of knowledge and experience, yet they are often overlooked as a vehicle for exploring reality" (Tulku 1978:74). The lucid dream represents "a vehicle for exploring reality," an opportunity to experiment with and realize the subjective nature of the dream state and, by extension, *waking* experience as well.

One of the most interesting aspects of reality that can be explored is the phenomenology of embodiment and various forms of subjective relationships between "self" and "other." As discussed by Wallace (2001), when we dream nonlucidly our relationship with dream figures is intersubjective, i.e., as if they exist separately from the self. But in lucid dreams one can enter into an intrasubjective relationship to other dream figures by understanding that self and other are two as-if constructions within a single mind. Tholey (1988, 1991) has described a number of fascinating accounts in which lucid dreamers enter the bodies of other dream characters via a mobile "ego-core." The ego core is defined by Tholey as that location in the phenomenal field from which one seems to experience the world. It is usually localized within the phenomenal body, typically at the experienced origin of the visual field, the "cyclopean eye." It is possible to liberate this ego core from its usual location within the phenomenal body by a variety of means (e.g., destroying the dream body by fire, splitting, etc.) and then to enter into the body of another dream character, apparently "taking control" of that host body.

One might expect that entering deeply into the being of another in such a manner ought to have considerable potential for enhancing empathy, and

Tholey cites at least one case in which a lucid dream of this sort had exactly the expected effect. A teenaged woman was in love with a young man who was both friendly and pleasant, yet reserved with her. Before going to sleep one night she spent some time wondering why he was so reserved towards her. That night she dreamt that she was talking with the young man and suddenly realized she was dreaming. She asked herself again why he didn't return her feelings and wanted to get an answer in the dream. At that moment she became aware of her spirit detaching itself from her body and floating across the room and entering his body. It felt like she had taken over all his bodily functions without him being aware of it. At first it felt very strange and awkward, like driving a new car. But soon she got used to being in his body and saw with his eyes, felt with his hands, talked with his voice, and so on. From his perspective she saw herself standing in front of him and, what is more, how he perceived her, the effect she had on him, and the feelings he had for her. She saw that he was conflicted because, although he was very fond of her and had noticed her feelings toward him, he did not want to become romantically involved. She knew exactly what he was thinking and why he had been so reserved with her. She realized he would never return her feelings and then awoke. With her feelings sorted out by the experience, she was satisfied with being the young man's friend and felt relief because the tension that had previously existed between them vanished completely following the dream (Tholey 1988).

Realizing that our experience of reality is subjective, rather than direct and true, may have practical implications. According to Tarthang Tulku, when we think of all of our experiences as being subjective, and therefore like a dream, "the concepts and self-identities which have boxed us in begin to fall away. As our self-identity becomes less rigid, our problems become lighter. At the same time, a much deeper level of awareness develops" (1978:78). As a result, "even the hardest things become enjoyable and easy. When you realize that everything is like a dream, you attain pure awareness. And the way to attain this awareness is to realize that all experience is like a dream" (86).

Another aspect of reality that the lucid dream may allow us to explore is those unexplained phenomena currently referred to as paranormal. Dreams seem the ideal sphere in which to test how intentionality alters reality. Also, if verified, the claims described above of veridical projections to locations distant in space and time would have profound implications for our understanding of the world.

Finally, according to Tibetan lore, practice of the dream yoga provides essential preparation for the dreamlike after-death state, allowing the yogi to become illuminated at the point of death or to choose a favorable rebirth.

> It is said that by training in this transitional process of dreaming, as the transitional process of reality-itself and of cyclic existence are like the dream-state, those transitional process will be apprehended. Moreover, it is said that if the dream-state is apprehended seven times, the transitional process will be recognized. (Padmasambhava 1998:160)

The transition from waking to sleeping is regarded in the Tibetan tradition as very closely analogous to the experience of death, and the dream-state is considered the closest parallel to the after-death *bardo* state (Norbu 1992). Thus, practice in apprehending the dream-state can make recognition of the *bardo* state possible, something that may one day be of the greatest possible importance to all of us. At the least, it might make possible an experimental phenomenology of the ego-death process.

DISCUSSION: PROSPECTS FOR FUTURE WORK

Some scholars seem pessimistic about the possibility that Westerners can understand anything at all about the practices of dream yoga. For example, Wendy Doniger writes that "LaBerge attempts to apply the Oriental dream-control techniques of yogis and shamans to Western goals of improving one's life, or even, indeed, one's lifestyle. But this cannot be done" (1996:172). Why not? the reader may well ask. Unfortunately Doniger doesn't tell us. Instead, she switches to arguing that medieval yogis would not be interested in pursuing Western goals. This seems a non sequitur, given that no one is suggesting that they should do so! What is at issue is whether we can in the twenty-first century learn from practitioners of, say, the tenth century. I believe that the answer is yes, because even though we may widely differ in cultural heritage, we are all human, with similar enough brains, and possess a Rosetta stone—*experience*. A similar issue is discussed in LaBerge and DeGracia (2000) in which out-of-body experiences and lucid dreams are considered to share a common essential criterion, namely, a "reference to state," while differing in semantic interpretation.

Be that as it may, to take up again Doniger's point about goals, one typically has many goals in life, including getting enough food and air, raising

a family, contributing to society, *and* obtaining whatever degree of enlightenment one can. Only in a limited view of spirituality are the goals of everyday life contradictory to the goal of spiritual development.

Serinity Young (1999) also seems to misunderstand this important point. In an appendix to her otherwise excellent review of the Buddhist tradition of dreams, she attempts to show (in my view, unconvincingly) that dream yoga and lucid dreaming are almost "totally different": "The context, content, method, and aim of these two practices [dream yoga and lucid dreaming] remain totally different, however. And they certainly have very different histories" (167). Young then goes on to present a limited and rather fanciful history of lucid dreaming in the West, starting with Kilton Stewart and ending with Patricia Garfield, apparently using Domhoff's *Mystique of Dreams* (1985) as her nearly exclusive source. The subtext? Western lucid dreaming is the fruit of the claims of a liar (Stewart, according to Young) being accepted by the credulous and self-deceived Human Potential Movement.

> *Context*. Dream Yoga: spiritual advancement takes place in a culturally and religiously supportive environment with at least a thousand-year history of such practice. Lucid dreaming: practitioners work in isolation or in recently formed dream groups, sometimes under the supervision of a trained psychologist, often not. (Young 1999:169)

The claim about lucid dreaming practitioners, if true, sounds like the sort of knowledge that would come from an anthropological study. If such a study exists, Young does not give the reference, and the claim appears to be wholly unsupported. The statement about the context of dream yoga makes one wonder how the context of Tibet one thousand years ago could be identical to the context of Tibetan Buddhists in the West today. Still, it is likely to be true that classical dream yoga is a less variable context than the diverse collection of modern Western practices falling under the rubric of *lucid dream work.*

> *Content*. Dream Yoga: practitioners share Buddhist imagery with very specific meaning. Lucid dreaming: dream content and meaning are often highly individualized. (Young 1999:169)

Certainly, the world of a Buddhist monk of the tenth or twenty-first century is likely to differ in many ways from the world of the archetypical Western lucid dreamer. But so, too, are the worlds of the scientist exploring lucid

dreaming experientially and experimentally and the scholar studying ancient manuscripts (in translation or otherwise) *about* lucid dreaming or dream yoga.

> *Method*: Dream Yoga: practitioners work with a guru and radically alter their lifestyle by taking religious vows, forming an intention to achieve the religious goal of enlightenment, and, often, living apart from others for years. Lucid dreaming: practitioners work with an experienced lucid dreamer or simply read a book on the subject. (Young 1999:169–170)

> Two final methodological differences are that lucid dreaming may begin when awake, and in Buddhism the time of nights [*sic*] one dreams is important. (Young 1999:170)

These alleged "final differences" are in fact similarities. Some "Western" lucid dreaming techniques (see LaBerge and Rheingold 1990:chapter 3) for producing wake-initiated lucid dreams (WILDs) in fact derive from the dream yoga tradition (e.g. Tarthang 1978). Moreover, time of night is a widely established determinant of lucid dreaming frequency (LaBerge 1985; LaBerge et al. 1986). Again one gets the impression that for some reason Young wants to believe, and is grasping at straws in attempting to prove that lucid dreaming and dream yoga are "totally different" (Young 1999:167).

> *Aim*. Dream Yoga: the goal is spiritual advancement, reduction of attachment to earthly pleasures, and, ultimately, dissolution of the notion of an enduring self or world. Lucid dreaming: the goal is realizing earthly pleasures and maintaining attachment to them—for instance, achieving sexual orgasm—or attaining other psychological or practical benefits that enhance the sense of self. Although lucid dreaming can be used for spiritual practice, its broad usage and its existential base set it apart from Dream Yoga. (Young 1999:170)

Young cites no research on the usage and "existential base" of lucid dreams in the West, so it is difficult to take her claim seriously. Moreover, she blithely ignores the fact that in some Western writings (e.g., Bogzaran 1990; Kelzer 1987; LaBerge 1985; LaBerge and Rheingold 1990; Sparrow 1976) the spiritual dimensions of lucid dreaming are treated as the culmination of lucid dreaming practice.

While it should be clear from the preceding that the findings of the Eastern tradition are of great interest and value to Western researchers studying lucid dreaming, it may be less certain that Buddhists have a corresponding interest in and valuation of the results of Western science. That at least one

very influential representative of Tibetan Buddhism, H. H. the Dalai Lama values science is made unmistakably explicit in the following quotation:

> For example, scientific investigation of the existence of a particular subject may reveal a multitude of logical fallacies. If we then persisted in accepting its existence, it would contradict reason. If it can be clearly proved that something that should be findable if it exists cannot be found under investigation, then from a Buddhist point of view we accept that it does not exist. If this somehow contradicts some aspect of Buddhist doctrine as contained in the scriptures, we have no other choice but to accept that that teaching is in need of interpretation. Thus, we cannot accept it literally simply because it has been taught by the Buddha; we have to examine whether it is contradicted by reason or not. If it does not stand up to reason, we cannot accept it literally. We have to analyze such teachings to discover the intention and purpose behind them and regard them as subject to interpretation. Therefore, in Buddhism great emphasis is laid on the importance of investigation. (H. H. the Dalai Lama 1997:169)

And so, too, is it in science. The fact that both traditions highly value careful observation and lucid discrimination (cf. "and we know which are the dreams") provides the middle ground prerequisite to fruitful cooperation. "Therein lies the hope."

Note

I am grateful to Kenny Felder, the Fetzer Institute, and the Institute of Noetic Sciences for financial support, to Alan Wallace for many illuminating discussions and great patience as an editor, and to Mushkil Gusha for the usual reasons.

References

Bogzaran, F. 1990. "Experiencing the Divine in the Lucid Dream State." *Lucidity Letter* 9(1): 169–176.

De Becker, R. 1965. *The Understanding of Dreams*. New York: Bell.

Domhoff, W. 1985. *The Mystique of Dreams: A Search for Utopia Through Senoi Dream Theory.* Berkeley: University of California Press.

Doniger, W. 1996. "Western Dreams About Eastern Dreams." In K. Bulkeley, ed., *Among All These Dreamers: Essays on Dreaming and Modern Society*, pp. 169–176. Albany: SUNY Press.

Evans-Wentz, W. Y. 1958. *Tibetan Yoga and Secret Doctrines.* London: Oxford University Press.

Gillespie, G. 1988. "Lucid Dreams in Tibetan Buddhism." In J. I. Gackenbach and S. LaBerge, eds., *Conscious Mind, Sleeping Brain*, pp. 27–35. Ithaca: Plenum.

Gyatrul Rinpoche. 1993. *Ancient Wisdom: Nyingma Teachings on Dream Yoga, Meditation, and Transformation*. Trans. B. Alan Wallace and Sangye Khandro. Ithaca: Snow Lion.

Gyatso, Jey Sherab. 1997. "Notes on a Book of Three Inspirations." In G. H. Mullin, ed., *Readings on the Six Yogas of Naropa*, pp. 43–70. Ithaca: Snow Lion.

H. H. the Dalai Lama. 1997. *The Joy of Living and Dying in Peace*. San Francisco: HarperCollins.

Houshmand, Z., R. Livingston, and B. A. Wallace, eds. 1999. *Consciousness at the Crossroads: Conversations with the Dalai Lama on Brain Sciences and Buddhism*. Ithaca: Snow Lion.

Kahan, T. L. and S. LaBerge. 1994. "Lucid Dreaming As Metacognition: Implications for Cognitive Science." *Consciousness and Cognition* 3:246–264.

——— 1996. "Cognition and Metacognition in Dreaming and Waking: Comparisons of First- and Third-Person Ratings." *Dreaming* 6:235–249.

Kahan, T. L., S. LaBerge, L. Levitan, and P. Zimbardo. 1997. Similarities and Differences Between Dreaming and Waking: An Exploratory Study. *Consciousness and Cognition* 6:132–147.

Kelzer, K. 1987. *The Sun and the Shadow: My Experiment with Lucid Dreaming*. Virginia Beach: ARE.

Kuhn, T. S. 1970. *The Structure of Scientific Revolutions*. 2d ed. Chicago: University of Chicago Press.

LaBerge, S. 1980. *Lucid Dreaming: A Study of Consciousness During Sleep.* Ph.D. diss., Stanford University, 1980. University Microfilms no. 80–24,691.

——— 1985. *Lucid Dreaming*. Los Angeles: Tarcher.

——— 1990. "Lucid Dreaming: Psychophysiological Studies of Consciousness During REM Sleep." In R. R. Bootsen, J. F. Kihlstrom, and D. L. Schacter, eds., *Sleep and Cognition,* pp. 109–126. Washington, D.C.: APA.

——— 1993. "Prolonging Lucid Dreams." *NightLight* 7(3–4). http://www.lucidity.com/NL734SpinFlowRub.html

——— 1994. "The Stuff of Dreams." *Anthropology of Consciousness*, 5:28–30.

——— 1998. "Dreaming and Consciousness." In S. R. Hameroff, A. W. Kaszniak, and A. C. Scott, eds., *Toward a Science of Consciousness* 2:495–504. Cambridge: MIT Press.

LaBerge, S. and D. J. DeGracia. 2000. "Varieties of Lucid Dreaming Experience. In R. G. Kunzendorf and B. Wallace, eds., *Individual Differences in Conscious Experience*, pp. 269–307. Amsterdam: John Benjamins.

LaBerge, S., T. Kahan, and L. Levitan. 1995. "Cognition in Dreaming and Waking." *Sleep Research* 24A:239.

LaBerge, S. and L. Levitan. 1991. "Sleep on the Right Side, As a Lion Doth . . . "Tibetan Dream Lore Still True After Ten Centuries." *Night Light* 3(3): 4–11.

LaBerge, S., L. Levitan, and W. Dement. 1986. "Lucid Dreaming: Physiological Correlates of Consciousness During REM Sleep." *Journal of Mind and Behavior* 7:251–258.

LaBerge, S., L. Nagel, W. Dement, and V. Zarcone. 1981. "Lucid Dreaming Verified by Volitional Communication During REM Sleep." *Perception and Motor Skills* 52:727–732.

LaBerge, S. and H. Rheingold. 1990. *Exploring the World of Lucid Dreaming*. New York: Ballantine.

Lamrimpa, Gen. 1995. *Calming the Mind: Tibetan Buddhist Teachings on the Cultivation of Meditative Quiescence*, p. 83. Trans. B. Alan Wallace. Ithaca: Snow Lion.

Levitan, L. and S. LaBerge. 1993. "Testing the Limits of Dream Control: The Light and Mirror Experiment." *NightLight* 5(2). http://www.lucidity.com/NL52LightandMirror.html

Levitan, L., S. LaBerge, D. J. DeGracia, and P. G. Zimbardo. 1999. "Out-of-Body Experiences, Dreams, and REM Sleep." *Sleep and Hypnosis* 1(3): 186–196.

Llinas, R. and D. Pare. 1991. "Of Dreaming and Wakefulness." *Neuroscience* 44:521–535.

Malcolm, N. 1959. *Dreaming.* London: Routledge.

Mann, J. and L. Short. 1990. *The Body of Light*. Boston: Tuttle.

Mullin, G. H., ed. 1997. *Readings on the Six Yogas of Naropa*. Ithaca: Snow Lion.

Norbu, N. 1992. *Dream Yoga and the Practice of the Natural Light*. Ithaca: Snow Lion.

Padmasambhava. 1998. *Natural Liberation: Padmasambhava's Teachings on the Six Bardos.* Trans. B. Alan Wallace. Boston: Wisdom.

Puizillout, J. J. and A. S. Foutz. 1976. "Vago-aortic Nerve Stimulation and REM Sleep: Evidence for an REM-triggering and a REM-maintenance Factor. *Brain Research* 111:181–184.

Shah, I. 1968. *Caravan of Dreams*. London: Octagon.

Sparrow, G. S. 1976. *Lucid Dreaming: Dawning of the Clear Light.* Virginia Beach: ARE.

Surya Das, Lama. 2000. *Tibetan Dream Yoga*. Audio cassette. Boulder: Sounds-True.

Tarab Tulku. 1991. "A Buddhist Perspective on Lucid Dreaming." *Lucidity* 10(1/2): 143–152.

Tarthang Tulku. 1978. *Openness Mind*. Berkeley: Dharma.

Tholey, P. 1988. "A Model for Lucidity Training As a Means of Self-Healing and Psychological Growth. In J. I. Gackenbach and S. LaBerge, eds., *Conscious Mind, Sleeping Brain,* pp. 263–287. Ithaca: Plenum.

——— 1991. "Overview of the Development of Lucid Dream Research in Germany. *Lucidity Letter* 10(1, 2): 340–360.

Tilopa. 1997. "The Oral Instruction of the Six Yogas." In G. H. Mullin, ed., *Readings on the Six Yogas of Naropa*, pp. 23–29. Ithaca: Snow Lion.

Tsongkhapa, Lama Jey. 1997. "A Practice Manual on the Six Yogas of Naropa: Tak-

ing the Practice in Hand." In G. H. Mullin, ed., *Readings on the Six Yogas of Naropa,* pp. 93–135. Ithaca: Snow Lion.

Varela, F., ed. 1997. *Sleeping, Dreaming, and Dying: An Exploration of Consciousness with the Dalai Lama.* Boston: Wisdom.

Young, S. 1999. *Dreaming in the Lotus.* Boston: Wisdom.

Wallace, B. A. 1989. *Choosing Reality: A Buddhist View of Physics and the Mind*. Ithaca: Snow Lion.

——— 2001. Intersubjectivity in Indo-Tibetan Buddhism. *Journal of Consciousness Studies* 8:209–230.

Wangyal, T. 1998. *The Tibetan Yogas of Dream and Sleep*. Ithaca: Snow Lion.

Werntz, D., R. G. Bickford, F. E. Bloom, and D. S. Shannahoff-Khalsa. 1983. "Alternating Cerebral Hemisphere Activity and the Lateralization of Autonomic Nervous Function." *Human Neurobiology* 2:39–43.

LaBerge, S. (2003). Lucid dreaming and the yoga of the dream state: A psychophysiological perspective. In B.A. Wallace (Ed.), Buddhism and Science: Breaking New Ground (pp. 233-258). New York: Columbia University Press.

Author email: laberge@lucidity.com