

SLEEPING, DREAMING, AND DYING



An Exploration of Consciousness with
The Dalai Lama

Edited and narrated by Francisco J. Varela, Ph.D

ulates could be proven they analysis is an anthropological proven. It is a coherent set of vation, and therefore contin-

for it was already noon. The ly, and departed. After that all

4

Lucid Dreaming

JAYNE GACKENBACH IS A PSYCHOLOGIST who does social science research, part of a small group of scientists worldwide who have been interested in sleep and states of consciousness for the last fifteen years.¹⁰ She took the hot seat as the session started in the morning of an amazingly crisp and sunny day.

"My task here is to address studies of lucid dreaming, although later I will also introduce what I call 'witnessing dreaming.' A *lucid dream* is a dream in which one is actively aware of the fact that one is dreaming. In such a dream, where this awareness is separate from the content of the dream, one can even begin to manipulate the story and the characters to create a desired situation. For example, in an unpleasant dream situation, the dreamer might reflect, 'I don't have to put up with this,' and then change the dream or at least back out of the involvement. *Witnessing dreaming* is a dream in which you experience a quiet, peaceful inner awareness or wakefulness, completely separate from the dream.

"My colleagues who do this research have mostly concentrated on lucid dreaming as a function of self-reflection. In normal dreams, particularly those of young children, the dreamer does not usually appear in the dream. It is very important to note that lucid dreams can emerge out of any dream, and that emergence is self-reflection."

Evidence for lucidity

"Reports of lucid dreaming exist in many cultures, and in Europe date back to the earliest periods of recorded history.¹¹ But instead of a long historical analysis, I want to address the status of lucidity in science today.

"A consensual scientific validation of lucidity did not in fact happen until the mid-1970s, when Keith Hearn and Allen Worcester in England, and Stephen LaBerge at Stanford simultaneously discovered a way to prove lucidity using electroencephalography.¹² Independently, they each came up with the same experiment: to ask the subjects to signal by moving their eyes when they enter lucid dreaming. Presumably, they postulated, moving the dream eyes would be reflected in movements of their bodily eyes, which can be, as you know, externally monitored. The beauty of the idea of course is that during dreaming all other muscle movements are blocked.

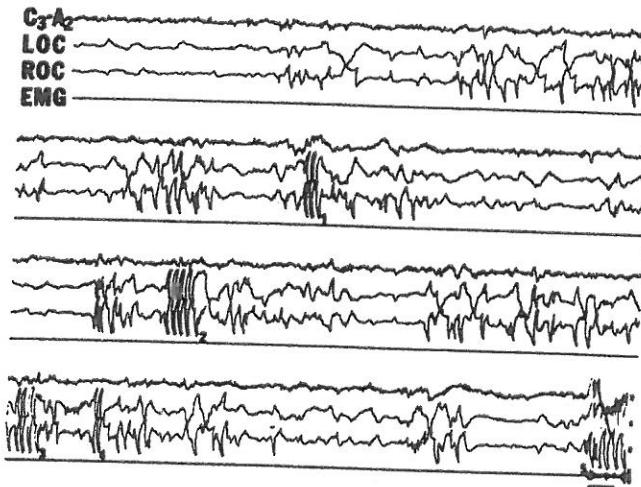
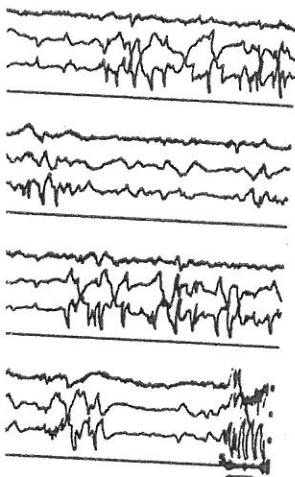


Figure 4.1

A typical dream-initiated lucid dream. Four channels of physiological data (central EEG [C3-A2], left and right eye movements [LOC and ROC], and chin muscle tone [EMG]) from the last eight minutes of a thirty-minute REM period are shown. (With permission from Gackenbach and LaBerge, eds., Conscious Mind, Sleeping Brain, New York: Plenum Publications, 1988, pp. 135-152.)

"The experiment was set up so that the subject agreed to give a very specific or improbable sequence of eye movements such as left, right, left, right. Figure 4.1 shows a record of one such subject from the last eight minutes of a thirty-minute REM period. The top line is the EEG, the second line is left eye movement, the third line is right eye movement, and the bottom line is muscle tone. The muscle tone line is flat because we are in a REM period. Upon awakening into lucidity the subject made five previously agreed-upon eye movement sig-

ation of lucidity did not in fact
 1 Keith Hearn and Allen Worcester
 2 at Stanford simultaneously dis-
 using electroencephalography.¹²
 with the same experiment: to ask
 their eyes when they enter lucid-
 ulated, moving the dream eyes
 f their bodily eyes, which can be,
 The beauty of the idea of course
 muscle movements are blocked.



1

of physiological data (central EEG [C3-A2],
 in muscle tone [EMG]) from the last eight
 b permission from Gackenbach and LaBerge,
 um Publications, 1988, pp. 135-152.)

subject agreed to give a very
 movements such as left, right,
 one such subject from the last
 period. The top line is the
 ent, the third line is right eye
 e tone. The muscle tone line
 Upon awakening into lucid-
 ed-upon eye movement sig-

nals. The first set signal 'left, right, left, right,' is circled (1). This was agreed upon to indicate the onset of lucidity. After some 90 seconds, the subject realized he was still dreaming and signaled again with three pairs of eye movements. He then remembered that the signal was only supposed to be a sequence of two, so he correctly signaled with two pairs (4). Finally, on awakening 100 seconds later, he signaled appropriately four times 'left, right' in sequence (5). The muscle tone increases when he's awake."

His Holiness was obviously delighted with the experiment, and proceeded to question it in detail. "Was the person who gave these signals able to control his dream and how old is this person?" Jayne replied that the dreamer could control his dreams; his name was Daryl and he was in his mid-to-late twenties at the time of the experiment. "When Daryl was giving the signal, and recognizing the dream as a dream, if you were to speak to him, would he be able to hear you?" Jayne explained that in REM it was very difficult to achieve such incorporations, but there was a case on record in which it had been done. His Holiness added, "In Tibetan dream yoga practice, one method used is to instruct the sleeping person softly, 'You are now dreaming,' once you have an indication that they are dreaming."

He moved on to other details: "During the REM state, the muscles are paralyzed. In that case, how do you explain the phenomenon of emission while dreaming; that is, in dreams in which someone has sexual intercourse and actually has orgasm?" Pete clarified that this was a reflex. The penis muscles involved are not skeletal muscles, and only skeletal muscles are paralyzed during REM.

"Although there is a lot more to be said about these experiments and others that have been done,¹³ I prefer to move on to other psychological and social studies, since these electrical studies are not my domain of expertise," said Jayne, changing her transparency. "However, they do seem to put lucidity into the realm of valid phenomena for sleep research, and that is very important."

How Common Is Lucidity?

"In the United States," Jayne continued, "only about fifty-eight

percent of people have had a lucid dream once in their lifetime. Maybe twenty-one percent have a lucid dream once or more in a month. In other words, lucidity is still rather rare. However, in another sample of people who had done either Buddhist or transcendental meditation, the average goes up to once or more a week. Here we are not talking about meditators who are specifically practicing dream yoga, but meditators in general."

His Holiness added a reflection: "Maybe this can be seen as an indication that these people have a higher degree of mindfulness. During the dream state there clearly is a form of consciousness in which one may engage in certain types of spiritual practice. For example, one might engage in deity yoga, a Vajrayāna practice, or one might cultivate compassion or insight. But during the dream, if one feels compassion, it is genuine compassion that arises. Experientially, tears can flow from the eyes out of compassion; it really seems to be genuine compassion. There's a doubt though, as to whether this compassion is really significantly different from compassion during the waking state. If you looked at the EEGs for the experience of compassion in the dream state and the waking state, would there be any difference in the patterns?"

"I don't think the experiment has been done, Your Holiness," I ventured to answer. "Remember that these EEG measures are very general. If you look at a person's EEG, you cannot tell if he or she is full of compassion, or completely oblivious. Perhaps if the experiment were done we would not see a great difference between REM sleep and waking in patterns of activity relating to emotional tone."

Traits of Lucid Dreamers

"We were interested in what happens in a regular dream compared to what happens in a lucid dream," Jayne went on. "Are they the same except that you know you're dreaming, or are they different? It depends on who you ask. If you ask the dreamer whether a lucid dream is the same as a nonlucid dream, they claim that lucid dreams are very different: more exciting and vivid. In contrast, if you ask judges to read transcripts of lucid dreams and nonlucid dreams,

lucid dream once in their lifetime, or have a lucid dream once or more in a lifetime is still rather rare. However, in a study we did, 15% of the people who had done either Buddhist or transpersonal spiritual practice had experienced a lucid dream at least once. The percentage goes up to once or more a week for people who are specifically practicing meditators who are specifically practicing in general."

His Holiness: "Maybe this can be seen as an indicator of a higher degree of mindfulness. Mindfulness, I think, is a form of consciousness in itself, and it is found in many types of spiritual practice. For example, in Vajrayana, a form of Buddhist practice, there is a lot of insight. But during the dream, if you are a meditator, you will notice that genuine compassion that arises in the dream is different from compassion in the waking state. There's a doubt though, as to whether this is significantly different from the waking state. If you looked at the EEGs for the dream state and the waking state, would you see any difference in the patterns?"

"I have been asked, 'Your Holiness, how can we tell if someone is having a lucid dream? If you looked at the EEG measures are very similar to the waking state, you cannot tell if he or she is lucid or not.' Perhaps if the questioner is not a meditator, there is a great difference between REM sleep and the dream state relating to emotional tone."

Dreamers

"In a regular dream compared to a lucid dream, the dreamer is more likely to be lost in a dream, or are they different? I have asked the dreamer whether a lucid dreamer is more likely to dream vividly. In contrast, if you ask a person about lucid dreams and nonlucid dreams,

they feel that there is almost no difference between the two. In statistical analyses, we found that there is more body movement in lucid dreams, and more sound. Together these two facts led us to look at the idea of balance. Body balance seems to be very important for lucid dreaming, not only in the dream state but also while awake. Physical balance is important, as in flying in a dream, but also emotional balance: I want to do something in the dream, but I have to remember that I'm dreaming, so I'm juggling two thoughts. We speculated that it might be linked to the vestibular system of body balance which is tied to the production of eye movements in sleep. Interestingly, we found that there were fewer dream characters in lucid dreams than in nonlucid dreams. All this leads us to ask whether there are psychological, cognitive predispositions to lucid dreaming. It turns out that there are, notably in the realm of spatial skills such as body balance."

His Holiness pointed out that meditators, who have a higher than average degree of mindfulness, also seem to be more susceptible to lucid dreaming experiences: "Perhaps meditators have special spatial skills, since they reflect a lot on their bodily energies and on their bodily and mental states. Perhaps this makes them more in tune with their bodily states. Would you also expect that people's ability to learn to dream lucidly is related to their degree of intelligence?"

"There's a little bit of evidence for that, but in general it is less important than a sense of body orientation in space. Some people get totally lost in the woods, or in the streets of an unknown town. Other people know where they are very quickly, not because of what they see, but because they have a sense of bodily direction. People who have that skill naturally are more likely to have lucid dreams. Body orientation seems also to increase with meditation, by the way. Another factor is complex spatial skills, such as the ability to solve mazes. Lucid dreamers can do those things well. Finally, they have more waking imagery on the verge of sleep, and they also tend to daydream more."

"Personality traits are a third dimension, much less influential than spatial skills. Lucid dreamers are often people who lean

towards an androgynous temperament, and those who are willing to take internal risks, such as trying a new drug or shamanic drumming. They're very oriented to an awareness of themselves."

Inducing Lucid Dreaming

"How can one increase lucidity? One can do things before going to sleep, such as cultivating the intention for lucidity. Meditation is another possibility; some people will wake up about three-quarters of the way through their sleep cycle, at about four o'clock in the morning, meditate, and go back to sleep. That seems to help."

"There are a lot of people who mix up their sleep with meditation, but not quite intentionally," His Holiness quipped, and we all laughed with him.

Jayne continued, "Incidentally, women report more lucid dreams than men, but that's because women remember more dreams than men. If you remember your dreams, then you're more likely to remember a lucid dream. About a third of lucid dreams begin as nightmares. Another third begin by recognizing bizarre inconsistencies, such as, 'That's weird—my mother doesn't have a purple face. This must be a dream.' It turns out that naps are really good times to have lucid dreams, too."

"That seems quite likely," said His Holiness, "because that type of sleep state is rather subtle. The person is asleep, but not in deep sleep—mindfulness is stronger. It's much easier to apprehend dreams, too, if you sit up, rather than lie down while sleeping. You should sleep, if you can, with the spine erect."

At this point, as we had agreed, Bob Livingstone, an observer at this conference, took the floor to present a gift to His Holiness from Stephen LaBerge, the researcher who had conducted the famous signaling experiments in lucid dreaming. It was a compact device to help people develop lucid dreaming and remember their dreams better. Bob explained it as a training instrument: a mask worn on the face while sleeping, with a small signaling light so the machine can communicate with the sleeper. The mask is attached to a small computer. Sensors distinguish when the user is in REM sleep, and

ment, and those who are willing to
g a new drug or shamanic drum-
1 awareness of themselves."

Lucid Dreaming

One can do things before going to
ention for lucidity. Meditation is
will wake up about three-quarters
cle, at about four o'clock in the
o sleep. That seems to help."

mix up their sleep with medita-
His Holiness quipped, and we all

ly, women report more lucid
cause women remember more
r your dreams, then you're more

About a third of lucid dreams
d begin by recognizing bizarre
ird—my mother doesn't have a
It turns out that naps are really
o."

His Holiness, "because that type
erson is asleep, but not in deep
's much easier to apprehend
n lie down while sleeping. You
ne erect."

Bob Livingstone, an observer at
ent a gift to His Holiness from
had conducted the famous sig-
g. It was a compact device to
and remember their dreams
instrument: a mask worn on
ignaling light so the machine
ie mask is attached to a small
he user is in REM sleep, and

the computer then gives a gentle signal. After a bit of practice, a user can recognize that the machine has just signaled the beginning of REM sleep, and a lucid dream is likely. The user can then make a conscious effort to be aware of the dream and remember it. The device also keeps track of the number of times one has REM sleep during each night, and the totals for a week or a month. "Dr. LaBerge also wants you to know that the instrument is in a process of evolution," Bob added. "There is an opportunity now for people in the Buddhist tradition to give advice on further development."

His Holiness was obviously interested. "This would be very good for practice while sleeping and dreaming. Sometimes, if you have a strong dream at night, when you wake up it affects your emotional state in the morning. With this we could cultivate wholesome states of mind while dreaming, and that would be of benefit."

Lucidity and Witnessing

After some handling of LaBerge's device, the session moved back to Jayne. "I would like to move now into a less common ground, but one I think interesting for our dialogue here: witnessing dreaming. In contrast to lucid dreaming, *witnessing dreaming* is an experience of quiet, peaceful inner awareness or wakefulness, completely separate from the dream. In witnessing dreaming it's said that the person can manipulate the dream, but simply has no wish to do so. Whatever the content of the dream is, one feels an inner tranquillity of awareness that's removed from the dream. Sometimes one may even get caught up in the dream, but the inner awareness of peace remains."

"Finally, I want to introduce a third state called *witnessing deep sleep*. This is described as dreamless sleep, very likely a non-REM condition, in which you experience a quiet, peaceful inner state of awareness or wakefulness—a feeling of infinite expansion and bliss, and nothing else. Then, one becomes aware of one's own existence as an individual, which may lead to awakening."

"Let me illustrate these states first with the case of a mathematics professor who had practiced transcendental meditation for twenty

years." At the prompting of one of the translators, Jayne gave a brief picture of this kind of practice. "Transcendental Meditation is quite different from basic Buddhist meditation: it is absorptive, done with eyes closed and repeating a mantra. It comes from a Hindu lineage and was introduced in the West recently." His Holiness consulted with his Geshe colleagues before returning his attention to Jayne. "This is what happened to this one subject over years of steady practice. In the beginning, this person talked about lucid dreams he had in which the actor was dominant. Here the role of the observer is to recognize that the self is dreaming, but despite this recognition, the feeling still exists that the dream is out there and the self is in here. When you're in the dream, the dream still feels real.

"As you become more familiar with lucidity it may occur to you that you can manipulate, change, or control the dream. In a second stage it occurred to this dreamer that what is 'out there' is actually in some sense 'in here.' The dreamer may actively engage the dream events or control and manipulate them.

"In a third stage his dreams became short. He described them as being like thoughts that arose, which he took note of and then let go. The action of the dream did not grip him or cause him to identify with it as it did in the first stage, where the focus was more on active participation.

"In a fourth stage he discovered that an inner wakefulness dominated. He was not absorbed in the dreams but in witnessing. The dreams were more abstract and had no sensory aspects to them: no mental images, no emotional feelings, no sense of body or space. There was a quality of unboundedness. I quote him: 'One experiences oneself to be a part of a tremendous composite of relationships. 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. There is a sense of motion, yet there are no relative things to gauge the motion by; it's just expansiveness. There are no objects to measure it. The expansiveness is one of light, like the light of awareness, visual but not visual, more like light in an ocean, an intimate experience of the light.'

the translators, Jayne gave a brief account of Transcendental Meditation: it is absorptive, done with

It comes from a Hindu lineage recently." His Holiness consulted returning his attention to Jayne. Subject over years of steady practice about lucid dreams he had. Here the role of the observer is to. But despite this recognition, the. Out there and the self is in here. I still feels real.

th lucidity it may occur to you control the dream. In a second : what is 'out there' is actually may actively engage the dream m.

me short. He described them which he took note of and then not grip him or cause him to go, where the focus was more

t an inner wakefulness dominates but in witnessing. The sensory aspects to them: no no sense of body or space. quote him: 'One experiences posite of relationships. These relationships, only a web of link between entities without of motion, yet there are no t's just expansiveness. There eness is one of light, like the more like light in an ocean,

"Other subjects report needing to let go of lucidity, and move through nonlucidity and nonawareness before developing the witness in sleep. This different sequence may occur if one becomes too attached to lucidity, especially to the active controlling aspect of the self-awareness in sleep. Such an attachment would require letting go of that self-representation in sleep in order to shift to the next state, witnessing. I conducted a study with sixty-six elite Transcendental Meditators. We used these people because these states are so subtle. You couldn't just ask a college student to do this; they wouldn't know what you're talking about. We felt these people would know and remember these states. We received fifty-five lucid dream descriptions, forty-one witnessing dreaming descriptions, and forty-seven witnessing sleep descriptions from the group of sixty-six people, who had been meditating on average for about twenty years. I read through all of the reports and let their own experiences lead my analysis, which is phenomenological and qualitative."

To make sure of the ground we were standing on, I asked for clarification: "We can verify that a lucid dreamer is in the REM state by the signaling in the experiment. How do we know that these people are in witnessing?"

"From their self-report only. This is truly a phenomenological analysis," replied Jayne. "To conclude, let me summarize these tentative observations with a diagram by Fred Travis (fig. 4.2). He suggests that waking, sleeping, and REM dreaming emerge out of a pure consciousness, a silent void. Where each state meets the next there's a little gap, in which Travis postulates that everybody very briefly experiences transcendental consciousness. When we go from sleeping to dreaming, or from dreaming to waking, these little gaps or junction points occur, and so he calls this the *junction point model of mind*."

"This is quite similar to a Buddhist explanation of these little interludes of the clear light of sleep," said His Holiness. "This is precisely the continuity of the very subtle mind. The major occasions are the times of dying, the *bardo*, and then conception. These are junctures, if you like. The subtlest clear light manifests at the time of death, which is one of these junctures. These three occasions of

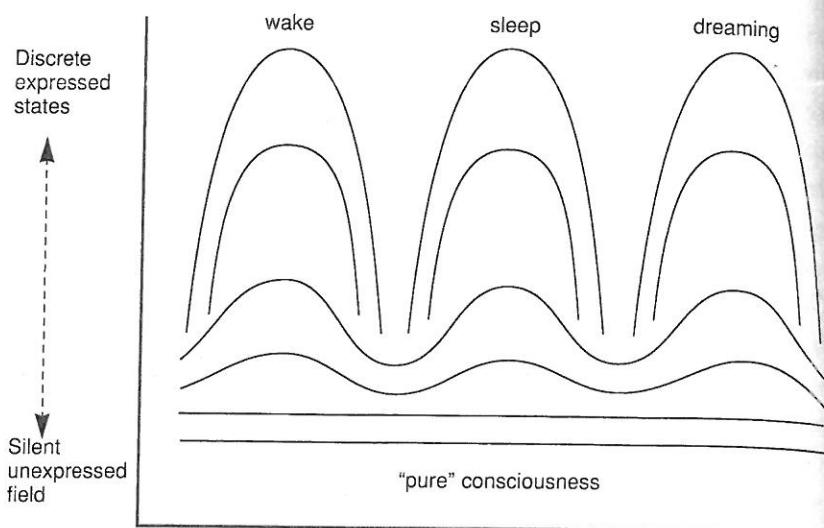


Figure 4.2

F. Travis's "junction point" model for state transitions between three basic forms of consciousness
(Adapted with permission from Travis, "The Junction Point Model," *Dreaming* 4 (1994): 72-81.)

death, *bardo*, and conception are analogous to the states of falling asleep, the dream state, and then waking. There's also a facsimile of the clear light of death in the clear light of sleep. It's not the same as the clear light of death, but it is analogous to it, though less subtle."

Jayne's presentation had concluded and the time for lunch had arrived. It was very apparent that a deepening of the teaching on dream yoga was necessary. It had been scheduled tentatively for the evening, but now the occasion seemed perfect, and His Holiness agreed to open the afternoon gathering with that teaching. It would prove to be a rare treat.