

LUCID DREAMING AS A LEARNABLE SKILL: A CASE STUDY¹

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Summary.—The author was the subject in an investigation of the feasibility of learning to dream lucidly, i.e., while knowing that one is dreaming. During the 3-yr. study, the subject recorded a total of 389 lucid dreams and developed a mnemonic technique for the voluntary induction of lucid dreams (MILD). Without using any induction procedure, the subject reported less than 1 lucid dream per month. Using auto-suggestion resulted in a range of 1 to 13 lucid dreams per month ($M = 5.4$), with at most 2 per night. MILD yielded 18 to 26 lucid dreams per month ($M = 21.5$), with up to 4 per night.

We do not usually question the reality of our dreams until after we have awakened. Nonetheless, exceptions to this generalization sometimes occur when we realize while dreaming that we are dreaming. During such "lucid" dreams, the dreamer's consciousness seems remarkably wakeful. The lucid dreamer can reason clearly, remember freely, and act volitionally upon reflection, all while continuing to dream vividly (VanEeden, 1913; Brown, 1936; Green, 1968; Tart, 1979; LaBerge, 1979, 1980).

These characteristics of the lucid dream state make possible a new paradigm for dream research: lucid dreamers can carry out diverse dream experiments, signaling the exact time of particular dream events (by means of dream actions having observable physiological correlates).³ Such an approach may lead, in Tart's view, to ". . . an era of deliberate and controlled phenomenological and scientific exploration of dreaming . . . which promises great excitement as well as great significance" (1979, p. 264). However, since spontaneous occurrences of lucid dreaming are sufficiently rare, in most subjects, as to make laboratory observation of the phenomenon highly improbable, a prerequisite for the research is a method for the voluntary induction of lucid dreams.

Lucid dreaming has been more often treated as a mysterious "talent" than as a learnable skill. Most of the available literature gives little more than hints on how the ability to have lucid dreams might be cultivated. Garfield (1974) provides the most explicit account, claiming that "using a method of self-suggestion, she obtained a classical learning curve, increasing the frequency of prolonged lucid dreams from a baseline of zero to a high of three per week" (Garfield, 1975). Evidently, simply having the mental set to recognize that one is dreaming is somewhat effective in inducing lucid dreams. Garfield reports using auto-suggestion for five or six years, producing an average of four or five lucid dreams per month (1979, p. 120). These results indicated that

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auto-suggestion could provide a starting point, at least, for a technique to deliberately induce lucid dreams.

METHOD AND RESULTS

The author was the subject in a 3-yr. investigation of the feasibility of learning to have lucid dreams volitionally. The subject reports a history of lucid dreaming beginning at age 5 with a series of lucid dreams that he would intentionally redream on successive nights. After this, the next lucid dream that he recalls was 20 yr. later. For several years prior to the present study, the subject had experienced occasional lucid dreams (less than one per month) that were sufficiently intriguing to persuade him to undertake a careful study of the phenomenon. In the course of the 3 yr. the subject recorded a total of 389 lucid dream reports, plotted monthly in Fig. 1.

During the first 16 mo. (Fig. 1, Phase I), auto-suggestion was used for induction of lucid dreams, with results equivalent to those obtained by Garfield (an average of 5.4 lucid dreams per month).

By the end of Phase I, the subject had observed two pre-sleep psychological factors which were associated with the occurrence of lucid dreams in subsequent sleep. The first, and most obvious, was motivation. During Phase I, there were 2 mo. (Fig. 1, A, B) during which the subject reported, respectively, two and three times more lucid dreams than the average for the rest of this period. During the first month (A), the subject was preparing a dissertation proposal

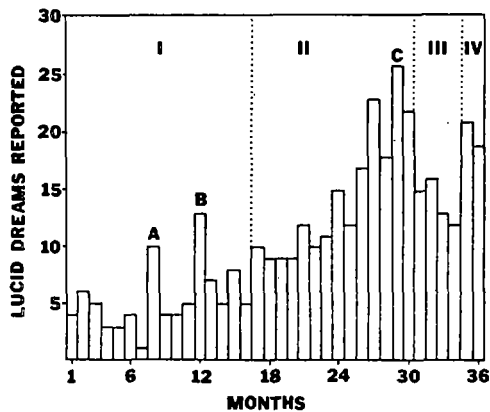


FIG. 1. Monthly rate of lucid dreaming reported by the subject during the 3-yr. experimental period. During the first 16 mo. (I), lucid dreams were induced by auto-suggestion (Garfield, 1974). The increased frequency of lucid dreams in the months labelled A and B was associated with enhanced motivation, as discussed in the text. During the next period (II), the subject developed the mnemonic method for induction of lucid dreams (MILD) as described in the text. By the last 2 mo. of this phase (C), he was able to induce lucid dreams at will. For the next 4 mo. (III), he discontinued regular practice of MILD; the resulting extinction is clearly evident. During the last 2 mo. (IV), the subject used MILD to produce lucid dreams for polysomnographic recordings.

in connection with the present study, and during the second month (B), he was attempting to have lucid dreams in the sleep laboratory. During both of these months, the subject was highly motivated since he felt challenged to demonstrate the feasibility of the scientific study of lucid dreaming. Recall of lucid dreams was therefore especially rewarding at these times. However, the subject found it impossible to maintain this high level of motivation, as is seen by the decline in lucid dreaming frequency following both of these months.

Gradually, more self-observation led to the realization of a second psychological factor: the pre-sleep intention to *remember* to be lucid during the next dream. This clarification of intention was accompanied by an immediate increase in the monthly frequency of lucid dreams (Fig. 1, Phase II). Further practice and methodological refinements led within a year (Fig. 1, C) to a method by means of which the subject could reliably induce lucid dreams.

The method is based on our ability to remember to perform future actions. One does this by forming mental associations between what one wants to remember to do and the future circumstances in which one intends to act. The associations are most readily formed by the mnemonic device of visualizing oneself doing what one intends to remember. It is also helpful to verbalize the intention: "when such and such, do thus and so."

The mnemonic induction of lucid dreams (MILD) procedure is as follows: (1) during the early morning (see below), the subject awakens spontaneously from a dream. (2) After rehearsing the dream, the subject engages in 10 to 15 min. of reading or other activity demanding full wakefulness (see below). (3) Then, while lying in bed and returning to sleep, the subject says to himself, "Next time I'm dreaming I want to remember I'm dreaming." (4) The subject visualizes his body lying asleep in bed, with rapid eye movements indicating that he is dreaming. At the same time, he sees himself being in the dream just rehearsed (or in any other, in case none was recalled upon awakening) and realizing that he is dreaming. (5) The subject repeats Steps 3 and 4 until he feels his intention is clearly fixed.

Using the MILD technique (during Phase IV and the last 4 mo. of Phase II), the subject reported an average of 21.5 (range: 18 to 26) lucid dreams per month, with as many as four in one night. This compares very favorably to the frequencies of lucid dreams reported when using auto-suggestion (Phase I): an average of 5.4 (range: 1 to 13) per month and a maximum of two in one night. The subject discontinued regular practice for a 4-mo. withdrawal period (Fig. 1, Phase III) which resulted in a decline that was reversed during the last 2 mo. (Fig. 1, Phase IV) when the subject used MILD to produce lucid dreams for polysomnographic recordings (see LaBerge, 1980).³

Two features of the MILD protocol may need explanation. The reason for the time specified in Step 1 is that lucid dreams have been reported to occur "almost ex-

³S. P. LaBerge, L. E. Nagel, W. C. Dement, & V. P. Zarcone, Lucid dreaming verified by voluntary signaling during REM sleep. (Manuscript submitted for publication, 1980)

clusively" during the early morning hours (VanEeden, 1913; Garfield, 1974). Since lucid dreaming appears to be largely a phenomenon of rapid-eye-movement (REM) sleep,³ a probable explanation for this is the fact that most REM sleep takes place in the later part of a night's sleep (Williams, *et al.*, 1964).

The rationale for the period of wakefulness specified in Step 2 is derived from the following considerations. Certain activities "in the middle of the night" have been observed to promote lucid dreaming, if the subject subsequently returned to sleep. Garfield (1975), for example, found that, in her case, "sexual intercourse during the middle of the night was often followed by a lucid dream." Sparrow (1976), on the other hand, reported that early morning meditation favored lucid dreaming. Additional anecdotes indicated early morning reading or writing to be favorable. The diversity of the proposed activities suggests that it is not the particular activity, but the alert wakefulness that facilitates lucid dreaming during subsequent sleep.

Since motivation has been identified as an important correlate of frequency of lucid dreaming, how can we be sure that motivational variations do not account for the increases attributed to MILD? During all of the nights in which the subject attempted to induce lucid dreams while having his sleep physiologically monitored, his motivation was similarly high. While using auto-suggestion, he had only one lucid dream in seven nights of recordings; while practicing the MILD procedure, he had 15 lucid dreams in 13 nights of recording.

The fact that the MILD method has not yet been formally tested in other subjects leaves to future research the question of its general usefulness. However, the method has been used successfully by at least three other lucid dreamers (LaBerge, 1980). Two evident requirements for subjects are high motivation and excellent dream recall. Because a universal cognitive skill, i.e., the ability to remember to perform intended actions, forms the basis, it seems reasonable to expect that the MILD technique may be of general utility.

The most important conclusion of the study is, however, that it is possible to learn to have lucid dreams at will. What one dreamer can do, others can, as well.

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