

## Statistical Description Of My Lucid Dreams

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I have compiled statistics on the lucid dreams I had through July 25, 1981. The number of lucid dreams I had per year were:

1975	2
1976	11
1977	63
1978	65
1979	47
1980	63
through July 25, 1981	<u>31</u>
	total 282

I normally woke up after a lucid dream. In ten of the 282 dreams I had false awakenings, but woke up soon afterward. I have the recorded time for 207 awakenings. My earliest awakening from a lucid dream was recorded at 12:15 am, and the latest at 8:45 am, after normally going to sleep soon after 10:00 pm. Two were recorded after afternoon naps. The times for waking up after lucid dreams were:

Did not wake up or probably did not wake up	22 dreams
Dreams for which time was not recorded	53
Woke within the hr after 12 am	1
“ “ “ “ “ 1	7
“ “ “ “ “ 2	19
“ “ “ “ “ 3	25
“ “ “ “ “ 4	33
“ “ “ “ “ 5	40
“ “ “ “ “ 6	49
“ “ “ “ “ 7	25
“ “ “ “ “ 8	6
After afternoon naps	<u>2</u>
	Total 282

The median time for waking up after a lucid dream was in the hour after 5:00 am. Forty-seven of my lucid dreams occurred on nights in which I had more than one. On 22 nights I had two lucid dreams, and on one night three. This leave 235 nights with single lucid dreams. The time between awakenings from multiple lucid dreams was as little as 55 minutes to as great as six hours. The first multiple dream occurred as early as 12:15 am or as late as 7:05 am. The ten false awakenings happened at such diverse times as just before 1:50 am and just before 8:00 am.

### Initiation of Lucid Dreams

It was not clear to me, upon later reflection, how I came to know I was dreaming in some of the dreams. For 174 dreams I can give some account of how the realization came. Sometimes it dawned upon me slowly. Sometimes it came suddenly. The statistics for how I discovered I was dreaming are:

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No obvious reason or I forget the reason	108 dreams	(38%)
I noticed a dream element was not possible, or was inconsistent or false	76	(27%)
I recognized my activity as common to dreaming	70	(25%)
Realization came apparently upon an act	15	(5%)
I fell asleep knowingly into a dream	5	(2%)
I knew by testing	4	(1%)
I decided by false reasoning	4	(1%)
	Total 282	

( $\chi^2[6] = 279.54$ ,  $p < .01$ ; percentages are rounded off)

That a dream element was not possible I reasoned 55 times. As when I was looking at a picture of a tree and I saw the tree slide down a hill. That a dream had an inconsistency was the reason 13 times. For instance, a pile of photographs didn't appear to be the same size the second time I saw it. That something in the dream area was false I realized eight times. As when I saw my uncle alive, but knew he had died. These three categories overlap, so I put them together.

At times, without thinking through the possibility or reasonableness of my dream activity, I would suddenly realize that what I was doing I do in dreams. Thus, while flying (21 times), while looking and not being able to find something (5), while roaming from room to room (4) and upon finding myself running away (2), I realized that I was repeating certain dream themes and realized I was dreaming. Other dreams I saw to be dreamlike when I found people unresponsive, or I was not able to read some writing, or I was not able to figure out where I was.

At times, without any reason clear to me, I suddenly knew I was dreaming the moment I redirected my look. Such happened upon looking up, looking down, seeing an object, looking out of a window, looking across fields, seeing trees, looking through an arch and turning left.

The five occasions when I fell asleep knowingly were all on one night when I was investigating falling asleep. Another time I thought I had fallen asleep knowingly, but upon later reflection decided that I had dreamed doing so.

When I needed to test whether I was dreaming, I would try to fly or pull someone in half. My judgment being poor in dreams, occasionally testing didn't work, as when I stomped

on the ground to see whether it felt real, and since it did, I decided I was not dreaming.

Four times I realized I was dreaming by false reasoning. When I felt the book store didn't have as many books in it as it had the last time I had been there, I thought that was an inconsistency and realized I was dreaming. However, upon waking reflection I realized that I had not been in the book store earlier in the dream.

### Experiments While Lucid

From the time that I started having lucid dreams I planned experiments to carry through when I knew I was dreaming. I planned them while awake when I had my normal rationality and judgment. For example, two experiments that I planned while awake and carried through a number of times each while dreaming were to put five objects I saw in the dream in alphabetical order, and to make dream objects alternately solid and non-solid. Recalling the experiment normally meant my being able to bring to mind some key word or a phrase, such as "alphabetize" or "test solidity" which I often repeated while falling asleep.

Upon bringing such a word or words to mind I remembered usually quite well what I was to do, and there was no problem with proceeding with the experiment.

At times, when I could not recall the planned experiment, I thought of an alternate experiment spontaneously. Of fifty-five alternate experiments planned while dreaming, seventeen actually made no sense and had no value, as when I saw my mother leave the house in a car and I decided to examine the oar so that when I woke up I could compare it to the car she "really" left in. Even the experiments that I thought of spontaneously that did make sense were rarely clever. They were normally simple tests such as trying to make someone appear, or tests that I had done before.

Among the 277 dreams for which I had planned experiments ahead, in 122 of them (44%) I remembered the correct experiment at least partially. If I add to this number those in which, lacking the proper experiment, I thought of a reasonable alternate experiment, the figure goes to 150 (54%; successful dreams in Table 1). These accomplishments of remembering one fact or thinking of a sensible experiment do not at all indicate full lucid thinking, but do offer a contrast with my ability in the rest of the dreams (46%; non-successful dreams in Table 1) in which it never occurred to me to make an experiment of any, or I knew I should but I couldn't think of any, or all the ones I thought of made no sense. If in a dream I could not think of the right experiment, then I tried to carry out one after another that made no sense, and then finally thought of the right experiment partially, that dream would be considered successful.

As can be seen in Table 1, dreams in which I remember the correct experiment do not tend toward either end of the night. Likewise dreams in which I do not remember the

correct experiment do not tend toward either end of the night. Of the 93 dreams in which I remembered the correct experiment for which I have a recorded waking up time, the median time is within the hour after 5:00 am, as is the median time for all lucid dreams.

There were 22 lucid dreams from which I either did not wake up immediately (16 cases) or probably did not wake up (six cases). When I did not wake up or probably did not wake up immediately, I remembered the correct experiment or thought of a reasonable alternative only in nine cases or 41% of the time, and did not in 13 cases. This difference is not significant.

Table 1. Successful versus Nonsuccessful Lucid Experiments

Types of Dream	Total Dreams	Successful Dreams <sup>1</sup>	Nonsuccessful Dreams	Significance <sup>2</sup>
All lucid dreams	277	150(54%)	127	ns
Dreams from 12:00-5:29 am	104	58(56%)	46	ns
Dreams from 5:30-9:00am	100	58(58%)	42	ns
Dreams from which I didn't wake up immediately pr probably didn't	22	9(41%)	13	ns
Upstairs dreams	27	22(81%)	5	X <sup>2</sup> (1)=10.7, p<.01
Hill Dreams	20	12(60%)	8	ns
Total up-high dreams	47	34(72%)	13	X <sup>2</sup> (1)=9.38, p<.01
Non-up-high dreams	230	116(50%)	114	ns
Flying dreams	28	14(50%)	14	ns
First of multiple lucid dreams	23	11(48%)	12	ns
Last of multiple lucid dreams	23	17(74%)	6	X <sup>2</sup> (1)=5.26, p<.05
Confused dreams	17	5(29%)	12	ns
Before false awakenings	10	8(80%)	2	X <sup>2</sup> (1)=3.6, p<.1
First hundred dreams	100	63(63%)	37	X <sup>2</sup> (1)=6.76, p<.06
Last hundred dreams	100	46(46%)	54	ns

<sup>1</sup>A successful dream is one in which I remembered the correct experiment or spontaneously thought of a reasonable alternative. An unsuccessful dream is one in which it never occurred to me to make an experiment, or I knew I should but I couldn't think of any, or all the ones I thought of made no sense.

<sup>2</sup>All analyses compare the incidence of successful to nonsuccessful lucid experiments via chi-square.

### Up-High Dreams

As I was frequently in a high position in a dream upon discovering I was dreaming, such as upstairs or on a hill, I studied such dreams separately. I call them up—high dreams. I found a tendency to improvement in mental ability, which I had not suspected, if I were upstairs or uphill in a dream. Of 27 dreams in which I was upstairs or was going upstairs when I discovered I was dreaming, in 22 I thought of the experiment or a reasonable alternative. This was significantly more than non-successful attempts (see Table 1). In 12 of the hill dreams (60%) I thought of the correct experiment or a reasonable alternative. Up-high dreams did not tend toward early or late night. Their median time was in the hour after 5:00 am. Their high percentage rate of success (72% compared with 54% for all dreams;  $\chi^2(1) = 44.03$ ,  $p < .01$ ) indicates that in dreams taking place upstairs or on hills, my mind worked better (see Table 1).

### Flying Lucid Dreams

When I was first gathering these statistics, I grouped dreams in which I was flying with the up-high dreams. They together accounted for 27% of all lucid dreams. I considered that flying dreams, by their very nature, were in the same category as upstairs or hill dreams. However, in 28 flying dreams I was successful only 14 times or 50% of the time, just below the average for all lucid dreams (54%) and compared with 72% for up-high dreams and 81% for upstairs dreams alone. Thus I saw flying dreams as a separate phenomenon from up—high dreams. The median time of flying dreams was in the hour after 5:00 am.

### Multiple and Unclear Dreams

In the 23 cases of multiple dreams, my mental ability tended to be better in the last dream (see Table 1). As better mental ability is not particularly associated with the time of night, once one is lucid, it appears to be related to the fact of being the latest of my multiple dreams.

There were 17 dreams that I considered especially unclear. They were less realistic, more confused, and difficult to remember. They did not belong to any particular time of night. Among them, in only five (29%) did I remember the experiment or think of a reasonable alternate experiment. Confused ordinary dreams are common any night. The fact that I noted only 17 of the 282 lucid dreams (6%) as unclear or confused would indicate that it is the more clear dreams that tend to become lucid.

### Lucidity Followed by False Awakening

Among the ten dreams followed by a false awakening, I was successful eight times (80%), whereas I was successful in only 41% of dreams after which I did not wake up immediately. In either case I did not really awaken from the lucid dream. After dreams in

which the mind functions better, I may revert to ordinary dreaming by means of a false awakening. After dreams in which the mind is more limited, I do not have a false awakening, but I forget I am dreaming and continue to sleep. A false awakening never followed a dream I considered confused, but neither did one follow an up-high dream. A false awakening followed one flying dream.

### Practice Effect

In terms of a practice effect, in the first hundred dreams for which I planned experiments, I recalled the experiment or thought of a reasonable alternative 63 times (63%). In the last hundred dreams I was successful 46 times (46%). Despite the difference in percentage, chi-square analysis indicates no significant difference in success rate from the first to the last 100 lucid dreams. The first and last hundred do have differences in type of dreams. There were 20 up-high dreams in the first hundred and 11 in the last hundred. There were four flying dreams in the first hundred and 15 in the last. On the other hand, 11 of the first hundred were dreams from which I did not wake up or probably did not wake up immediately, as were only four in the last hundred. If there has been a practice effect, it could as soon be that I have become more practiced in coming to know I am dreaming, while being in fact less lucid.

Although the statistics are instructive, in some cases the samples are quite few. These figures reflect only one person's lucid dreams.

\*Adapted from Dreamer's Progress: A Record of Experiments Made While Dreaming. Unpublished.

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