The Multiplicity of Dreams

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What I'd like to do today is to try to place lucid dreaming within the context of overall dream studies and dream research—and within the multiplicity of dreams. I want to show how a cross-comparison of the different forms or types of dreaming might give clues to the cognitive processes that may be involved in all dream formation. And in that context I want to look especially at the place of lucid dreaming, namely the special relation of lucid dreams to nightmares and so-called archetypal-mythological dreams. I will try to show, both descriptively and in terms of a small research study, that these three kinds of dreams seem to be the points where the process of dreaming is maximally intensified. Such maximal intensifications may help to show fundamental dimensions of all dreaming that get crystallized in these relatively infrequent special forms.

Now the idea that dreaming is a kind of conjoined multiplicity is not new. If you look back at the nineteenth century dream phenomenologies or at dreaming as understood in the ancient Greek and Roman world, or the dreaming of tribal peoples, you find this idea that dreaming isn't one thing. It is a kind of multiple collection of forms and sub-forms. And if you put all of what I'd loosely call the phenomeno-logical tradition together, most of these sources—nineteenth century, descriptive phenomenologies, ancient world, tribal societies—roughly agree on the following forms of dreaming. You can certainly find reference to so-called "ordinary dreaming." Some tribal people call these "little" dreams. They seem to largely be based on reorganizations of personal memories, and they may be relatively bizarre or relatively mundane. There is also some agreement that there is something like a somatic medical form of dreaming. Most of these sources would also want to distinguish a so-called prophetic-telepathic kind of dream. If one wants to talk naturalistically, I think we could talk about these as dreams of maximum intuitiveness, and put to one side the ultimate question of scientific reality. Certainly as a form such dreams have occurred in all peoples at all time.

Then we come to the so-called "big" dreams in tribal peoples. Jung used this term as well for dreams that phenomenologically and subjectively are a point of con-tact with the sense of the sacred. These kinds of "big" dreams, as I'm sure all of you know, are extremely prominent in tribal societies. They are dreams where the indi-vidual may make direct contact with the mythic archetypal beings of that society. And there is quite a bit of evidence from cultural anthropology that dreams like this are part of an ongoing cultural maintenance in that they are a source of direct renew-al in

mythological stories and art forms. The nineteenth century Romantic tradition of dream studies would see this so-called big or sacred dream as a point where dreaming is taken over by a kind of autonomous imaginative factor, having much less to do with memory, much more to do with an intrinsically creative imagination. And of course, this is the point of departure for Jung's own approach to dreams.

Then again, most times and societies and peoples have talked about a nightmare form of dreaming, and here we might want to follow recent distinctions, and dis-tinguish fantastic, bizarre nightmares of monsters and strange creatures from post-traumatic nightmares that tend to repeat, often seemingly endlessly, an actual trauma that has been suffered. We might want to separate both of these in turn from night terrors. Finally, and very much to the point today, most of these sources identify some-thing like a lucid-control dimension of dreaming. Whatever the hoopla about dream lucidity in the last ten or fifteen years, this is not a new phenomenon historically or cross-culturally. Aristotle mentions lucid dreams. The shamanistic traditions of trib-al people, by strong implication, seem to be talking about a lucid control dimension of dreaming, because the classic forms of sacred or big dreams are very often in-duced and guided by the trained shaman. There is an element of lucidity in reaching a kind of launching point for these uncertain mythological encounters. Similarly, if we look at the Eastern meditative traditions we find what we are now calling lucid dreaming, identified in both the Buddhist and the Hindu traditions as the natural form of meditative state available during dream consciousness. In other words, the Eastern traditions present techniques for developing what we would call lucidity or a form of lucidity as a means of meditative growth.

Well and good. Dreams are a multiplicity. But what is worth pointing out is how much this idea goes against the fundamental assumptions of both the Freudian and the experimental laboratory tradition of dream studies. Freud, as many of you will remember, was after the essence of dreaming. For Freud, dreaming was primarily one thing. The Jungian James Hillman is quite eloquent in describing the way that Freud brilliantly synthesized the different multiple strands of nineteenth century descriptive dream studies. He points out that Freud took the Romantic tradition of dream studies, the ides that dreams were an extension of creative imagination, and relegated that to the dream-work proper, the mechanisms of visual representation, condensation, and displacement. He also took the rational line of thought in nineteenth century dream studies, the views that dreams were delirious nonsense and "froth," and said "yes" for the manifest dream, but "no" for the underlying latent structure. Finally, the idea that dreams could express somatic states was relegated to his notion of biological instincts driving the process of dream formation (Hillman, 1979).

A brilliant synthesis, but the price was the exclusion of the natural varieties of the

dreaming process. In fact, Freud had to take the variations of dreaming we are talking about today and redefine them as somehow not really dreaming. The most instructive example comes from his 1922 paper on telepathy in dreams. Near the end of that paper he says, in effect, well after all telepathy really has nothing to do with the essence of dreaming. He says that the essence of dreaming has to rest in his pro-cesses of dream work. If we find a dream that seems to be telepathic, ". . . let us in-stead call it a telepathic experience in sleep and not a dream, because a dream without condensation, displacement, wish fulfillment (etc.) hardly deserves the name." Similarly Freud takes dreams that are mundane and true to daily life, and which we now know from laboratory research are the average form of dream, and says, well those aren't really dreams either. Since there is no dream work in them, let's call them fantasies instead. Jung's archetypal-mythological form of dreaming, which I will talk more about later, is understood by Freud as the reappearance in the dream of fairy-tale motifs from childhood.

Lucidity, of course, becomes for Freud a defensive version of secondary revi-sion. He knew about lucidity, and about St. Denys. But what we would call lucid dreaming becomes the ability of the dreamer to dismiss the dream and defend his or her self against threatening content by saying, "It's only a dream." You could wake up. You could ignore it. This certainly misses the subjective power of many accounts of lucid dreaming.

I think we find the same monolithic attitude to dreams within the laboratory experimental tradition. Here again we find dreaming considered as a single process. The interest is predominantly in the average or norm of dreaming. Since only ten percent of dreams by some reckonings are markedly or strikingly fantastic and imaginative, these researchers feel they can ignore such dream transformations, even though it is fantastic, imaginative dreaming that has historically been the source of fascination with dreams. Similarly, one finds in the laboratory tradition what I increasingly would have to see as a curious suspicion and discomfort with respect to lucid dreaming. What one ends up with then from the laboratory tradition is a similarly monolithic approach, now increasingly centered on cognitive approaches and on the idea that dreaming must involve some sort of memory reorganization or memory consolidation.

Now even if it is the case that truly imaginative dreams are rare, and that lucid-ity is only open to some people as a natural form of dreaming, we know already from the clinical, neurological and psychiatric traditions that you study the excep-tions, the extremes of a phenomenon, in order to get at its underlying dimensions of construction. Such dimensions are hidden within the norms, hidden within the average, and get crystallized out in so-called special types. That brings us to an attempt to

talk more systematically about the multiple forms of dreaming, before we get into some recent research on them. For this purpose I'm going to inflict on you my diamond of dream forms (see Figure 1), which hypothetically represents some of these dream forms in terms of systematic dimensions that would underlie all dreaming. These dimensions have nothing to do with frequency of dreaming, but more to do with underlying principles of dream generation. So, initially, we have a vertical dimension representing the vividness or intensification of dreaming. At the minimal level of vividness, on the bottom, we have dreams that are either predominantly mundane or relatively clouded and confused. These may very well be the most common form of dreaming, at least in the lab, and here perhaps we are dealing with dreams that are predominantly understandable in terms of memory models, as reorganiza-tions of recent memories. At the maximum level of intensification, at the top of the picture, we have the dreams that I'll talk about in much more detail in a moment and which probably reflect some sort of principle of formal or abstract self-reflection of the kind that interested Jung and Herbert Silberer and that may also be involved in the meditative traditions. Now along this vertical dimension there is a hypothetical point, a point at which memory models are insufficient and we need models of crea-tive imagination metaphor, and intuition to make sense of the dreaming process.
In terms of the diamond structure there is also a horizontal dimension intended to represent the degree of symbolic integration or differentiation among these dream forms. The more integrated around one function, the narrower the pyramid. So ordinary dreaming, at the bottom, represents an integration and organization of the dreaming process largely in terms of the principles of semantic memory and language. Here of course we find Foulkes's model of dreams as diffuse mnemic activation with the imposition of narrative structure (Foulkes, 1982). At the points of maximum differentiation, which it is not really my intention to talk about today, we find dreams that may be based on relatively separate imaginative-intuitive frames of mind: the somatic-medical form of dreams, dreams predominantly based on creative visual metaphors, and dreams based on various sorts of word play, some of it quite intricate and creative. Freud often dreamt in this form when his dreams became relatively fantastic. One would also need a panel for so-called telepathic-intuitive forms of dreaming. This would be the point where dreaming is in some sense directed towards conditions in the objective world. It might also include problem solving dreams in the context of scientific investigation.

What I really want to get at is the top of the pyramid, representing the points where the dreaming process is maximally intensified. Here we see the dreaming process integrated predominantly in terms of a visual spatial intelligence, rather than a linguistic one. These forms would be based on metaphoric visual kinesthetic fu-sions. This top section of the diamond, which includes lucidity, nightmares, and archetypal dreaming, is sufficiently intensified to be transitional to waking. This is something

that both lucid dreams and nightmares have in common. They usually wake you up. You are right on the edge of waking. And as we'll see, both lucid and nightmare dreams are about equally open to turning into the more archetypal form of dreaming. In fact the dreams at the top of the diamond occur in a kind of transi-tional or trance state that can probably be entered about as easily from certain waking conditions as it can from the dream state. Here we are addressing an overlap between dream phenomena and so-called altered states of consciousness, where dreaming becomes a potential transpersonal process.

Each of these forms of intensification would exaggerate a fundamental dimen-sion of dreaming that would run through, albeit usually invisibly, all dream formation. Along these lines, we can take from Alan Moffitt the suggestion that lucid dreaming is one extreme on a dimension of self-reflectiveness, also heightened in meditative traditions, and which calls attention to the general human ability to be self-conscious —not very well and not very completely, but at least the potential to be relatively self-aware Moffitt et al., 1988). Nightmares might highlight a dimension of affect and kinesthetic sensation that is probably usually suppressed in most dreaming. Archetypal dreams with their subjective qualities of awe and sense of the uncanny, parallels with classical mythological stories, and encounters with mythological-spiritual beings, and their tendency to resist free association of the usual sort may show a visual metaphoric ability to self-present the total life context. Certainly both lucid and archetypal dreams easily develop towards experiences of geometric forms, of the sort described with psychedelic drugs, and experiences of white light similar to the mystical meditative traditions. This does imply that they have something to do with a visual-spatial form of intelligence.

I've added another category for the sake of completeness that we can term titan-ic dreams, a name adapted from Herbert Silberer for a form of dreaming closely related to archetypal dreams. I think Jung would have called them "archetypes of transformation." These dreams can involve vivid, powerful kinesthetic feelings of flying, falling and spinning, sex and aggression (not just ordinary sex and aggres-sion, but really perverse, nasty, driven forms of sexuality and aggression), and lots of forceful nature imagery—storms, seas and caves. Roheim called this the "basic dream;" I think these are very similar to what Kohut, the psychoanalyst, called self-state dreams. They often seem to function as kinesthetic metaphors, for general ex-istential features of one's own life. So at points of crisis one dreams of crashing to earth, or soaring over difficulties, or spinning in confusion. These may also call attention to what a number of cognitive psychologists have hypothesized as a kines-thetic core or aspect to human metaphorical thinking.

Hopefully having made some case for dreaming as a multiplicity and for certain forms

as intensified dreaming, I would like to talk to you about recent research, at Brock and elsewhere, on these dreams of maximum intensification. Here we get more into the relation of lucidity to other dream forms. One thing that lucid dreams have in common with nightmares is that they are both transitional to waking. They also have in common a dimension of affective enhancement. Lucid dreamers often mention a peak experience-like quality to lucid dreams, a sort of rush of bliss and euphoria. But in nightmares you get a very similar kinesthetic rush of dread. I think that is quite striking in really good nightmares, the way they can sit you up in bed with really strong bodily sensations. Another thing that lucidity and nightmare dreaming has in common which again suggests that there is something common un-derlying them, is considerable sensory detail and vividness, especially kinesthetic. Jayne Gackenbach has brought that out with respect to lucid dreams, and Ernest Hartmann has mentioned it with respect to nightmares. And in fact the most com-mon form of lucid dreaming occurs in the context of nightmares. Celia Green made this point years ago. It may be the least interesting kind of lucidity, but many, many people in the midst of stressful anxiety dreams suddenly realize, "My God, this couldn't be happening. Oh, it's a dream, I'll wake up." Similarly I would suggest that when we look carefully at Hartmann's descriptions of intense nightmares, we find the subcategories of lucidity and prelucidity according to Celia Green. Hartmann mentions the tendency in nightmare dreams to question whether this could really be happening (Green's prelucidity), to suffer false awakenings, and there is the tendency for nightmares to show Green's apparitional pattern. In the latter, your dream is actually in your bedroom, maybe with an ominous feeling or bizarre intrusion (Gackenbach, 1988; Hartmann, 1984; Green, 1968).

As I mentioned before, I think one can make a good case from the descriptive literature that lucidity and nightmares are clearly transitional and lead in to this idea of archetypal and titanic forms of dreaming. Certainly some of the worst nightmares seem to involve pretty horrific occurrences of bodily mutilation, of the kind that you find described in some accounts of early schizophrenic onset and in shamanistic initiation dreams. Lucid dreaming seems to be transitional to so-called archetypal dreams as we have seen and is itself a form of meditative state. Certainly meditative states and lucid dreaming have in common the same heightening of a detached obser-vational attitude—which, as Charles Tart rightly said, is very similar to Gurdjieffian self-remembering. They also have the same quality of peak experience in the sense of Maslow, and there is the same potential in both meditative states and lucid dream-ing to unfold into experiences of vivid bright light, with feelings of sacredness, geometric forms of the kind that Jung called mandala patterns, and encounters with mythic half-man, half-beast beings. I reported last year on a study we did at Brock, of the dreams of long-term meditators, in which we found that the longer they had been meditating the more likely they were to report lucid-control dreams, and that their lucid dreams

were characterized by archetypal categories (Hunt, 1987). In other words, there were accounts of light, geometric forms, flying, feelings of awe, and mythological beings. Jayne Gackenbach and Charles Alexander have extended these findings considerably, showing parallels in content and physiology between meditative states and lucid dreams (Gackenbach, Cranson & Alexander, 1986). Anecdotally we know from people like George Gillespie and Ken Kelzer that lucid dreams do seem to have this potential to transform themselves in a Jungian direction (Gillespie, 1988; Kelzer, 1986).

Up to now each of these dream types have been researched separately, although there are some implications of experimental overlap. We know from the research of Ernest Hartmann and Kathy and Denis Belicki that nightmare sufferers tend to test as highly imaginative and creative on various measures (Hartmann, 1984; Belicki & Belicki, 1986). We know from Hartmann's studies of what I think turn out to be rather unusual nightmare sufferers, that these dreamers are hypersensitive to stress. Lucid dream research, almost entirely based on the work of Jayne Gackenbach, has shown lucid dreamers to be similarly highly imaginative and creative, and to have unusually developed spatial skills: abilities in things like embedded figures and block designs, and the mental rotation tests that torture so many people in college admission tests. Lucid dreamers also tend to have a highly developed sense of phys-ical balance. Jayne Gackenbach has shown that lucid dreamers are quite responsive in terms of the vestibular system, and that they can walk a balance beam better than people who don't lucid dream (Gackenbach et al., 1986). Now that may sound very strange, but it is quite similar to research on mystical experience. Paul Swartz at the University of Alberta, using the Hood questionnaire, measuring the tendency of people to have spontaneous mystical type experiences when awake, showed that the higher you scored on the Hood test, the better visual-spatial coordination you had. His measure was pin the tail on the donkey (Swartz & Seginer, 1981). We replicated that at Brock. The least research has been done on archetypal dreaming, although Kluger developed a scale to measure it and Cann and Donderi have used it to show that people who dream in this archetypal style are highly intuitive and low on neurotic tendencies (Kluger, 1975; Cann & Donderi, 1986).

Present Study

All this brings us to our own study at Brock, done with Aurelia Spadafora. This was an experimental attempt, the first as far as we know, to compare lucid dreamers, archetypal-mythological dreamers, and fantastic nightmare dreamers. On the basis of all the information I've given, we hypothesized that lucid dreamers, archetypal dreamers, and nightmare dreamers would be highly imaginative. The lucid and archetypal people would have good spatial and balance abilities, and be high on the Hood

scale of mystical experience. The nightmare people would correspondingly have poor balance, poor spatial abilities, and high stress. We advertised in school and town newspapers for people who dream in a lucid style, people who have fantastic nightmares as opposed to post-traumatic nightmares, and people who dream archetypally, which we defined for them much in the way I've done today. Since all of the subjects had very high levels of dream recall, we developed a control group simi-larly high on recall but as low as possible on the special types.

We started with a hundred subjects. Archetypal dreams in this first hundred were the most infrequent, with a mean of eight per year. Lucid dreams had a mean of 36 per year and fantastic nightmares had a mean of 24 per year so we did not do too badly in getting subjects with unusual dreams. All three of these estimates were sig-nificantly correlated with recall and with each other. Thus one can conclude that they are common or overlapping expressions of an intensification of the dreaming process, as also indexed by their high degree of recall. Yet they were different enough to permit some differential testing, and this is what I will describe to you today. We went after relatively pure groups. This was hard to do because we want-ed people who were well above the mean on nightmares, but at or below the mean on lucid and archetypal. We ended up with ten nightmare sufferers in the pure night-mare group, eleven lucid dreamers, only four archetypal dreamers, and five who were mixed dreamers. The latter were unusual people. They were all respondents to the newspaper ad. They were almost twice the mean on nightmares of the pure nightmare group, almost twice the mean on the archetypal, and very high on lucid. They also had unusually high dream recall. Their average was ten dreams a week. The rest of the sample recalled five dreams a week. We now had three pure groups, the mixed group, and a control group of eleven. Apart from the mixed group they were all matched on dream recall, so dream recall can't be an explanatory variable (except of course in the mixed group). We then set about looking at group differences. (I want to emphasize here that this is an exploratory study, and I will be reporting some individual and group tests where overall group differences failed to reach significance—although most had F's less than .10. At least I would argue that this study is suggestive of a way that dream research should go in the future.) With respect then to our measure of overall imagination, we used combined Z-scores from tests of imaginative absorption, thin boundaries, creative pursuits, and physiognomic cues (see Table 1). What we found was that the archetypal dreamers—even though there were only four of them—were significantly greater than both the pure nightmare and the control group. Now this is somewhat contradictory to Hartmann's findings that nightmare sufferers are highly imaginative, but interestingly enough the mixed group—which I'll try to show is probably very much like Hartmann's intense nightmare group—was also significantly greater than both the nightmare and the control group on the imagina-tion measure. We then looked at the Hood questionnaire for spontaneous mystical experience, which

by the way correlated with all our measures of imaginativeness quite strongly. It probably measures, within an imaginative capacity, the ability to let go and undergo a positive alteration of consciousness. Here what we find again is that the archetypal group is significantly greater than the nightmare. The lucid is also significantly greater than the nightmare, while here the mixed group is in a level similar to the nightmare group. In other words the mixed group may be highly imaginative but they do not have positive experiences when they let go. Next we can consider the spatial ability measure. This was a combination of scores on the block designs and mental rotations. The lucid group was the highest and the night-mare the lowest of the pure groups. Only when the mixed group is added do we get significant differences, in that the lucid group was now significantly better on the spatial measure than the mixed group. The balance measures were more complex. First of all we looked at the balance beam, and there we found, to our surprise, that the archetypal group was signif-icantly greater than the lucid group, which is basically the lowest in balance. The archetypal group was also significantly greater than both the nightmare and the con-trols as well. Now that doesn't fit with some of Jayne Gackenbach's findings (Gackenbach et al., 1986).

On the other hand, we had another measure of balance, body sway with eyes closed and feet one behind the other. We took sway primarily as a measure of vestib-ular responsiveness, which I think makes some sense since we didn't have anybody who had enough vestibular problems so that they actually fell, which would indeed have been nonadaptive. But within the normal range if you sway your vestibular system is responding, whereas lack of any sway may indicate nonresponsiveness. Here more as predicted, we found the archetypal group swaying the most, the lucid group next, and the nightmare least. The lucid and archetypal group were significant-ly greater than the nightmare group on the T-tests. The mixed group was generally in the middle in balance.

The least successful group comparisons were with the stress measures. What we found was that the nightmare group was the highest, the archetypal, control, and lucid were lower, but only the mixed group produced statistical significance, being significantly greater than the control group.

This brings me to the question, why were the nightmare people low in imagina-tion, when previous studies have found them to be high? It could be a subject selec-tion factor, in that if we compared with average dreamers who don't recall that much a week, they might have been comparatively high on imagination. On the other hand, their Hood scores were quite low. I would suggest that we may have some indication of a defensive self-inhibition of imagination in the pure nightmare group. In other words, it is possible that what nightmare research has really been measuring is the

extent to which nightmare sufferers also have lucid and archetypal dreams. Hartmann, in fact, went to the extreme of the nightmare phenomenon, and in doing so selected people who are extremely artistic, sensitive, and imaginative. It is likely that they had lucid (or prelucid) and archetypal dreams, as implied by his own ac-counts. In that case they would be like our mixed group: very imaginative, but with negative experiences when they let go, especially poor spatial abilities, and lots of stress. In other words, these are people, in contrast to the pure lucid and archetypal dreamers, who are in some sense victimized by their imaginations. It looks as though if you intensify the dreaming process and if you have poor spatial abilities, what you are in for is a disorganizing negative experience rather like a bad trip with LSD and perhaps on the same model.

A similar picture emerges with the correlations from the entire special sample of 41 (see Table 2). What we find is imaginative measures correlating with stress, the Hood, ordinary dream bizarreness scores from home diaries, and archetypal dream categories. The nightmare and the lucid subject estimates were not in fact significantly correlated with imagination; only the archetypal estimates were. I think the implication is that future research on any one of these dream types had better ask about the others, since they have hitherto been confounded. There is a negative relation between nightmare estimates and both spatial abilities and the Hood, again reflecting the individual group comparisons. Finally subjects with good balance tended to have the most imaginatively transformed or bizarre dreams. An implication, consistent with Jayne Gackenbach's work as well, is that good balance allows dreaming to develop. Perhaps you can tolerate better the different places the dream may take you if you have good balance.

Conclusions

With respect to some conclusions, each of the forms I was talking about today —the archetypal, the lucid and the nightmare—can be defined as positions on relatively independent dimensions. The archetypal and the lucid are closest. They are high on imaginativeness, spontaneous mystical experience and spatial abilities. The relationships are less clear with respect to balance, but certainly the archetypal had very good balance, and the lucid on one measure. Nightmare sufferers on the other hand were low on imagination, spatial abilities and balance. Again, intensified dreaming in the context of poor balance makes for trouble. An implication might be tai chi as a potential therapy for nightmare sufferers!

Intensified dreaming comes in two forms: one relatively organized and the other more disorganized. Vivid imagination combined with spatial abilities and balance allows the dream to unfold towards its archetypal, "big" form—the most imaginatively

transformed development of dreaming and its point of maximum cultural impact as witnessed in the shamanistic and meditative traditions. On the other hand, poor balance may be part of the organismic "mechanism" of repression, self-inhibiting imagination in the form of low levels of dream bizarreness. Inten-sified dreaming in such a context would be associated with panic.

What is the place of lucidity in all this? In our findings it was midway between the archetypal and the nightmare measures. On the basis of this work, and on previ-ous work that both Jayne Gackenbach and I have done, lucidity offers a stable access to the archetypal-transpersonal form of dreaming. The true significance of lucidity, its importance in terms of dream research, is as a gateway to this culturally signifi-cant form of dreaming. Here dream research approaches a natural transpersonal growth process, overlapping with the meditative traditions and based on a visual-kinesthetic imaginative capacity. This conclusion requires of cognitive psychology an account of creative imagination that goes well beyond its current preoccupation with memory and language.

Jayne Gackenbach: Let me clarify our findings on gross motor balance of lucid dreamers. Stabilometer performance was powerful in favoring lucid dreamers, while the balance beam was not. Stabilometer performance seems to be essentially the same as your body sway measure.

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