Sleeping and Dreaming

ROSETTE'S DREAM

The jungle is dark and lusciously green. The river is deep and narrow, a brilliant blue. It is night but the sky is also a luminous deep blue with the light of the moon shining on the tropical forest and the flesh of the naked woman standing in the turbulent river. The water swirls around her thighs as she reaches deep for the iridescent fish that swim and dart all around her. They are large and strong and slip between her arms as she tries to catch them with her bare hands. I know as I dream that she is my mother. I have a feeling of beauty and strength but of something ominous and sinister as well. At last she manages to grasp the tail of a great squirming fish, its scales glinting and eyes staring as she throws it over her shoulder with both arms. She turns away to walk determinedly upstream through the river towards the distant horizon where the sun is rising. In that same instant, the living fish slung across her broad back becomes a dead fish and its silvery skin and pink flesh dissolve to reveal a bony white skeleton. The woman feels the weight of the bones but she

pushes her way through the water with power and concentration. I can't be sure whether I am having a good or a bad dream but I know I will not forget it. Like a cut in film the scene changes:

The hot sun burns in the pale yellow sky as I am attempting my first solo flight in a tiny airplane, flying over a grey sea that is bordered by my mother's jungle. I am very afraid and my heart is pounding. I just make a landing on a small sand bar in the shallow sea, miles away from the shore. It is difficult but I make the landing. I feel exhilarated and very proud.

When I awoke the dream was intensely present in my mind and I was utterly certain of its central importance to me. It has remained precise and clear and just as intensely vivid ever since. I had this dream two years ago.

It was one Saturday evening that Rosette told me her dream. We were sitting down to dinner at the home of a mutual friend. Rosette, on hearing that I was involved in dream research, insisted on relating her dream to me.

A hush came over the table as she began to speak. Rosette not only described her dream but also related her associations to it and her understanding of it. Later, I asked her to write it all down for me.

ROSETTE'S FIRST ANALYSIS

I spoke to a therapist about the dream but could make very little sense of the images although I appreciated the overall significance of the "solo flight." At the time, I was newly separated from my husband, an Italian archeologist working for long periods of time in Crete. I expected to understand something about myself and believed the naked woman must be an inner projection of myself and not my mother at all. I looked into the Jungian and Freudian literature and found that fish dreams were to be interpreted as memories of birth. I tried to make a connection between my dream and the birth of my children but could find no satisfactory explanation, nothing that unlocked the images in a meaningful way. I knew that I had to "solve" the dream: it presented itself as a sign for something else that I needed to know. I told my dream to many friends hoping to find some explanation or insight, but found none.

THE STORY OF ROSETTE'S MOTHER

More than a year later, my mother came to visit me in Leicester where I had a teaching post. She came to Europe most summers and always spent some of her holiday each year with a friend in London, a woman with whom she had survived from a Nazi concentration camp. I knew very little about her experiences and she never initiated any conversation on that subject. But on the second day of her visit she came into the kitchen and said she had something important to tell me. I had my back to her as I was washing the lunch dishes but I listened as she told me very calmly if briefly that before the war she had been married to an older man and had had a child, a daughter who had died in the camp. I was overcome with sorrow and burst into tears, something which only very rarely happens to me. She cried a little too and I remember putting my arms around her with my dripping rubber gloves still on. I asked a few guestions and learned the father of the child was still alive

He and my mother had been hiding with members of his family when they had been arrested and sent to the concentration camp. When they arrived, the father understood a selection was being made and that women with young children were being put in a separate group. He took the child from my mother's arms and gave her to his sister to hold. His sister and her own two children as well as my mother's seventeen-month-old baby were taken away and never seen again. My mother would tell me little else but the following summer she gave me two snapshots of herself and her sister-in-law with their babies. She said nothing but that I should look after the photos as they were "history."

ROSETTE'S ANSWER

My mother's revelation to me of her loss had a momentous effect on me. At the same instant I felt grief, and a communion of feeling as a mother myself, I was filled with an awareness of a lightening sensation in the top of my head. I felt enormous relief and the thought crossed my mind that at last I would no longer have to be everything that the lost child might have been. I was simultaneously surprised to be thinking such a thing and also angry and confused that I had not been told earlier, at least twenty years earlier. As I stood there with my mother wondering how her forty-year-old secret had suddenly taken her away from me and also brought me closer, the images of my dream flashed through my mind and I felt something inside my mind fall into place with a satisfying certainty. Unconsciously I had created an image of my mother courageously carrying the burden of her dead child through her troubled life, while I tried

to meet the challenge of navigating in a near empty sea. So much of her energy had always been directed toward keeping her pain at bay. I have been coming to terms with the ghost of my half sister ever since my mother told me her story, but I also know that somehow I always knew, If not the facts, at least the effects of that child's murder. I believe my dream was the materialization of all the felt emotions and pressures, a very rational conclusion that my brain had come to from a mass of information about my relationship with my mother. My dream was an intuition: a knowledge without conscious thought.

Rosette's dream is of course unique to her, as is her interpretation of it and her associations to it. However, what isn't special is her fascination with it. She found her dream to be intriguing. It seemed to her that her dream was somehow related to events in her life that actually predated her existence.

Rosette's interest in and speculation about the meaning of her dream mirrors the concerns with dreams expressed through the ages in many different societies. Their mysterious, surrealistic quality and the glimpses of a strange and unknown world they provide have caused people to wonder about their meaning and speculate on their potential prophetic properties.

EARLY THOUGHTS ON SLEEP AND DREAMS

The earliest evidence we have of interest in dreams is ancient Egyptian dream books written about $2000\,$ B.C. They're essentially books of dream interpretation, listing types of dreams people may have and what each of them may mean for the future of the dreamer. The Old and New Testaments also are replete with accounts of prophetic dreams and the work of skilled dream inter-

preters. One of the most famous of these interpreters, of course, was Joseph.

Joseph was brought to the attention of the Pharaoh by the chief Butler who had been in jail with Joseph. While there, the chief Butler and the Baker each had dreams. The Butler's dream was of a vine with three branches from which he took grapes to press into the cup of the Pharaoh. The Baker dreamed of carrying three baskets on his head from which the birds ate. On the basis of the dreams Joseph accurately predicted the return to favor of the Butler and the imminent demise of the Baker. The rest, as they say, is history.

Other individuals, not so concerned with the prophetic qualities of dreams, were struck by their apparent aid to the creative process. Robert Louis Stevenson, for example, would have claimed that as a creative aid, dreams have no peer. He noted that many of his stories were in reality transcriptions, with some changes or embellishments, of dreams he himself had had. But perhaps one of the most famous of stories concerning dreams and the creative process is that of Fredrich Kekulé, a professor of organic chemistry at Ghent University around the middle of the nineteenth century. Trying to solve the mystery of the atom configuration of the benzine molecule, Kekulé went to bed one night with the problem very much on his mind. During the night, he dreamed of a snake with its tail in its mouth. On awakening, he interpreted the dream as signifying the closed ring of the benzine molecule and the mystery was solved.

Admittedly, we aren't all Kekulés or Stevensons or Rosettes, for that matter, but we do have something very much in common with them. We are all dreamers. Many of us have at one time or another marveled at our own dreams and wondered at their meaning. Some of us, no doubt, have gained insight from our dreams, others may well have found them an aid in solving problems, and still others may have found them a stimulus to creativity. But all of us who remember our dreams now and then have

certainly been struck on one occasion or another by their vividness and their compelling quality.

Dreams, oddly enough, are at once a shared and unique experience. They are shared because we all have them. They are unique because they are peculiar to each one of us. They seem to both reflect and respond to our own personal experience. Consequently it's really not surprising that down through history people have marveled at and tried to unravel the mystery of dreams.

The puzzle is perhaps made even more enticing because dreams by definition are embedded in sleep, itself a mysterious state currently undergoing vigorous investigation. At one time, sleep was thought to be a passive rather than an active process. That is, sleep was considered to be merely a cessation of wakefulness. With the discovery of centers of the brain responsible for sleep, the pendulum has swung in the direction of the belief that sleep is actively induced by these centers. Nevertheless, one of the biggest questions that still remains is why we sleep at all!

Similar debates had been ongoing as to why we dream.² Philosophers from the time of Aristotle into the twentieth century presented arguments for and against dreaming as an active, self-induced process. On one hand, there was a school of thought that suggested that dreams were somehow produced by external stimulation. On the other hand, there were those who thought that dreams were ultimately products of the individual's mind. This latter view essentially suggested a continuity in functioning between the waking and sleeping states. But here again, just as with sleep, the question of great moment remains: Why do we dream?

COMMON NOTIONS ABOUT SLEEP AND DREAMS

Probably because we're all active participants in the sleeping and dreaming business, each of us has our own pet theory about the function of sleep and dreams.

For example, some think we sleep to restore our bodies from the physical demands of waking life. It's almost as if we run down like a clock and sleep is the mechanism by which we get wound up again. Along with this view goes the notion that we need a certain amount of sleep each night (usually thought to be eight hours) in order to function properly the next day. Still others think we sleep to dream, that dreaming is essential for proper functioning while awake, and sleep simply provides the medium for this activity. I'll have occasion to talk about these ideas a bit more when we examine some of the research on sleep and dream deprivation.

Common notions about dreaming are far greater in number than those about sleep, perhaps because as I mentioned before, dreams are often such riveting events they apparently seem to have to be there for a reason. Some of the earliest ideas about dreaming which I've already described have found their way into the twentieth century virtually unaltered.

There are people, for example, who believe that dreams foretell the future. In fact it's surprising to me how many people have called me up over the years dismaved because they were certain their dreams were predictive in nature. The dismay usually resulted because a dream of theirs had depicted an impending disaster occurring to themselves or to someone they knew. On careful probing. it invariably turned out that in past years these people had had a dream or two that they were able to vaguely interpret as premonitions that were ultimately fulfilled. The fact that such premonitions could have been coincidences much like those that occasionally take place during the waking state, never occurred to them. Also, the fact that the vast majority of their dreams had nothing to do with the accurate prediction of future events was readily discounted. Rather, it was the striking, catastrophic quality of their recent dream coupled with a seemingly predictive dream in the past that made them certain their dreams were ultimately portents of the future.

Another common notion is that dreams emanate from the experiences of the previous day or even those of the distant past. No doubt, the appearance in our dreams of events and conversations we've actually experienced as well as places and people we know provide compelling evidence for this speculation. Not unrelated to this notion is the idea that dreams somehow serve a problem-solving function. Some think that people going to bed with a problem on their mind (like Kekulé) continue to work toward a solution which may be revealed to them in their dreams.

Another idea, similar to the one espoused by Rosette, is that dreams arise from unconscious experiences. In her situation, Rosette felt that somehow she had known of her mother's terrible loss without being consciously aware of it. For Rosette, the dream reflected this awareness and brought it into consciousness.

And finally, of course, there is what Hadfield³ called the "Heavy Supper Theory," the idea that dreams are caused by indigestion or other bodily disturbances. Hadfield suggested there is a certain credibility to this theory: "A heavy supper, by drawing blood for the digestion, may affect the circulation of the brain and so give rise to the dream" (p. 5). However, he went on to point out it doesn't account for what we dream. "Four men have a supper of pork and beans, but whereas one may dream of his ladylove, another dreams of being pursued by horrible monsters, another of being murdered, another of a failing business" (p. 5).

So there in a nutshell Hadfield placed his finger on the two central and related issues I alluded to before. Why do we dream? That is, what causes us to dream? And what determines the actual content of our dreams? Most early and common dream notions seemed to confuse the two issues and treat them as one. In the twentieth century, the perpetuation of this confusion may in large part be due to the influence of Sigmund Freud.⁴ His monumental work, *The Interpretation of Dreams*, not only deemphasized concerns with the physiology of sleep⁵ but

also thrust to the forefront of theory and investigation the notion that dreams are products of various forms of stimulation. In doing so, Freud ignored the possibility that dreaming may be a self-generated product of the brain and a sleeping analogue of waking thought. We'll have occasion to examine this possibility later on.

We'll also take a more careful look at some of the ideas of Freud. In the final analysis, in whatever way we end up assessing his work, Freud's impact on contemporary theory and research on dreams probably cannot be overestimated. But before getting into all of this, I think it's important to get a feel for some of the difficulties involved in doing dream research. I know of no other field in psychology as fraught with obstacles as this peculiar area of investigation.

RESEARCH ON DREAMS

Probably the main difficulty in dream research, even with modern day techniques, is that we are always dealing with memories of past events. As Norman Malcolm⁶ pointed out, the sentence "I am dreaming" is essentially meaningless in reference to events taking place during sleep. It is only on waking that we can say, "I was dreaming." Consequently, reports of dreaming are subject to the vagaries of our memories.

Telling someone about our dreams is not unlike trying to tell friends about a movie or television show we have seen recently. Generally, we don't provide them with a detailed, blow by blow account. We tell them of some striking events which happened to stick in our memories. And we might provide them with a theme or thread of some sort to hold those events together. Similarly, when we describe our dreams on waking, we are likely to describe only incidents or events that have particular significance to us. However, unlike a description of a movie or television show, the description of the dream is solely the property of the dreamer. There is no way for our

friends to go back and examine what it is we are talking about as they could in the case of a publicly available event. So in the end, all that a dream researcher has to work with is the *report* of the memory of the dream, not the dream itself.

And memory, particularly when it involves recall of dreams, is more fragile than most of us realize. I'll talk more about this later when we discuss dream recall and dream recall failure, but suffice it to say for the moment that recall in general is not a simple process. And in the case of dreams it may be hampered by sleep itself.

As if this were not problem enough, in relating the dream to another person, the dreamer is often trying to translate a primarily visual, sometimes emotional, often disjointed experience into a form intelligible to the listener. Rosette's dream and subsequent report is a wonderful example of the process. Her dream was filled with exquisite visual images and profound emotions. Rosette managed to translate those images and feelings into words. But there are questions that still remain. How good a job did she do? How much has she left out? How much has she added? We'll probably never be able to have definitive answers to these questions. However, we can be certain that some degree of distortion has taken place.

In the telling of the dream, the dreamer is likely to fill in details to make the dream more comprehensible both to him or herself and to the listener. The dreamer must fit the memory of the dream into the grammar of a language. There is a little experiment by Bartlett⁷ that neatly illustrates the implications of this process. He gave a translation of a North American Indian folk tale to people in England to read. The story had a number of vivid images and in some cases the incidents had no obvious interconnection. After reading the story, the subjects were asked to reproduce it. Bartlett found that in general the story was shortened, was presented in what he termed a journalistic style and was placed in a framework more coherent than that of the original.

Presumably a similar sort of process goes on in dream reporting. The dreamer is often trying to convey an unconnected series of images to the dream researcher. The researcher in turn must try to understand the dream from the perspective of the dreamer. Even with the best of intentions on the part of the dreamer and the most careful, objective inquiry on the part of the researcher, all that finally remains is a product which is an unverifiable, probably somewhat distorted version of a very personal experience.

What this means, finally, is that those of us involved in dream research have had to go at our subject in a rather roundabout manner. We have had to peck away at an elusive event. And we have had to try to understand the source and function of that event on the basis of some very fragile data—the report of the memory of dreams. In spite of those difficulties, some exciting and interesting inroads have been made into the world of dreams.