
An Approach to the Subject of Dreams

There has been a great deal of speculation about the dream, and much has been said and written. The subject of dreams remains inexhaustible, because the variety of dreams is unlimited; it is stimulating, because we do not know how dreams originate, and it is ultimately provocative, because there has, so far, been no answer to the question of why we dream. Beyond this, dreams are particularly fascinating because they take us into a world of experiences, where, seemingly separated from our waking lives, we lead a second existence. In dreams, we create our own world, during which we encounter experiences that appear as real as when we are awake.

Dreams are purely personal experiences, and the dreamer alone is witness to the dream. Even when, while dreaming, we relate to an environment, we only seem to share our experience with other people. It is only when we look back on our dream, and report it on awakening, that we are able to integrate the dream into the waking world. And while dreams belong entirely into our private sphere, they are nevertheless related to the community, because all people dream, and our dreams deal with people and their world.

Many common ideas concerning the nature of dreams are influenced by everyday experiences. In our individual experience, we are singularly impressed by the unusual and striking features of dreams that startle us in daily lives and thereby manage to hold our interest.

What Features Make Dreams Particularly Interesting?

Dreams continue to surprise us. We are unable to anticipate them, can't tell when they will happen, or what their topics are likely to be. Even though the dreamer is the only one who invents the dream, he or she is nevertheless merely an unconscious, unknowing creator, not able to select the dream's theme, and equally incapable of recalling it by sheer willpower. As the dream eludes conscious control, and occurs apparently without our input, many people find it difficult to imagine that they actually are the originators of their dreams.

Dreams tend to amaze us when their contents and progress are out of tune with our waking existence: people and objects appear whom, to the best of our knowledge, we have never encountered; we talk to individuals whom we have not seen in years; we find ourselves in unknown locations, move around without limits as to time and space; or act in a manner we would find alien in our waking lives. When we speak of the bizarre in dreams, we refer to those features that deviate from our experience and behavior while awake.

Dreams also make a lasting impression when their events take a dramatic course and when our emotions are strongly involved. Dreams may engage us in adventurous happenings, with rapidly changing situations, placing us at the center of events that lead to a dramatic climax. Dreams may be accompanied by intensive pleasure and feelings of happiness; alternately, they may become so threatening that we awake in a state of anxiety, with all the symptoms of physical excitement.

By far the most striking elements of a dream is our personal feeling of reality. Only when we are awake do we recognize the dream as a sleep fantasy. Detlev von Uslar described this unique feature of the dream phenomenon extensively in his book *Der Traum als Welt* (1964). He considers the dream initially as an existence of its own, as the

dreamer's actual world. Only on awakening does the transition take place, the conversion which turns the sleep experience into a dream, into an 'unreal' world. This second viewpoint coincides with the origin of the English word 'dream' and its German equivalent, 'Traum,' both based on the Germanic 'draugma,' or 'phantom,' possibly evolved from the Indo-European term 'dreugh,' which stood for 'deception.'

Finally, many people are fascinated by dreams because they can integrate their meanings into waking life. Dreams may be understood and interpreted as testimony of actual life situations, as efforts to come to terms with the past, and as an expression of hopes and fears regarding the future. Dream interpretation offers insight into areas of being that are not necessarily conscious and accessible when we are awake.

Defining a Dream

Dreams are daily phenomena and everyone has an idea of what a dream is. The question of how to circumscribe dreams, however, is not easy to answer. A definition of the dream is only simple and clear-cut when we are satisfied with the observation that we are dealing with an experience that occurs during sleep. This definition refers to the physiological state in which we dream, but it does not testify to the structure and nature of dreams.

It is much more difficult to define the dream based on content and quality, because dreamlike phenomena exist outside the sleep condition. The daydream, for instance, is a waking experience that is qualitatively related to the dream. Just as images during the waking state may be dreamlike, thoughtlike events occur during sleep that do not display the dreamlike features usually expected from a dream.

The following examples should provide an initial view of the qualitative variety of dreams. A 23-year-old female student recorded all three reports in a dream diary, upon awakening in the morning, over a period of four days.

“There’s a border control in the middle of City Hall Square, on the way to the Railroad Station. A customs officer stands there, people go past him, and he checks them now and then. I hear from people around me that border checks have recently become quite lax, and that it is fairly easy to do a bit of smuggling. I approach the officer and ask him how often he searches people. He answers that he usually checks every fifth person. I figure that, under these circumstances, smuggling remains a pretty risky business.”

“I walk along the Rhine river bank, together with several other people. We want to get to the town of Breisach. It is still far, one can only see the landscape by the river and, far away, a village. The river bank is wet. There seems to have been some flooding. I walk ahead of the others. I hear my friend Rita as she cries out. The embankment behind her has collapsed and she nearly skidded down the slope. She turns back, looks down laughing, but bends too far forward and now really goes into a skid. I walk back, too, laugh at her as she sits helplessly in the mud. But, before I know it, my feet give way and I go, smack down, right next to her.”

“Some kind of crime has been committed, related to me. Everything seems to work out all right, but the chain of proof is still incomplete. A big sheep dog, my trusted companion, leads me through a dark forest. It is a steep uphill and I make only slow progress. We are looking for fresh traces of the perpetrator. The dog, triumphantly, discovers a small egg that is somehow connected to the case. I praise him and we slink ahead. I see a shadowy figure that crosses my path and disappears to the right. All of a sudden, another one pops up. In the light of a burst of fire I recognize a sailor in blue. I drop to the ground, pretend to have been mortally wounded and hold my breath. I know that the sailor speaks only French and I try desperately to find the right words. Once again, the fire flashes brightly, and I am terribly frightened.”

The first dream appears quite mundane and realistic. While its theme is a ‘border situation,’ it is not particularly

dramatic and presents no striking oddities. The dreamer behaves appropriately at the border point and thinks reasonably. It could have been the kind of event that might actually take place, although a customs officer would, in reality, not be quite as forthcoming in talking about his work. It could just as well have been an incident that the student imagined while awake, as she toyed with the idea of smuggling. However, additional information reveals the dream's setting to be unusual: the square in which the dream took place was in the center of the town where the dreamer lived, where there could be no customs control. In this case, the dream contains one bizarre feature, the location of its setting.

The second dream is somewhat more imaginative than the first example. Still, could not the mishap involving a friend during a walk, after the rain, have taken place while awake? On the one hand, it might seem possible; on the other hand, it is rather odd how quickly the embankment collapses during the dream. The accident was forecast by the wetness of the river bank, but the dream characters are quite unprepared for it. Once again, additional information indicates an unusual element within the dream. The dreamer's friend Rita, who was the first to skid down the slope, had actually gone to school with her, but they had not met in years and lived in different places. In this case, the dream merged elements that were unrelated in either space and time.

The third dream fits the dream category most easily, as it contains specific features that are usually associated with dreams. Its theme is a mysterious crime, which the dreamer seeks to track down, accompanied by her gifted dog. Strange things happen during this adventurous search. Her encounter with the shadow and the threatening sailor give events a dramatic turn. Finally, an anxiety-filled climax is reached: the dreamer fears an attack on herself, which she can only avoid by pretending to be dead. The dream is startling in its mythological nature, which extends beyond mere parallel reflection of a life situation, presenting as it does the symbolistic recreation of an existential situation that expresses self-discovery.

These examples provide a first impression of the multifaceted images and thoughts that may appear during sleep. These dreams share a staging of settings and events which, at the time they took place, were regarded as real by the dreamer. Although the three dreams were recalled by the same person over a short period of time, they differ greatly as to the degrees of their dreamlike qualities and the drama of their events. They illustrate how difficult it is to arrive at a definition that encompasses the total qualitative variety of dreams.

The American dream researcher Calvin Hall, who collected and classified the dreams of several hundred people, sought in his book *The Meaning of Dreams* to present a cautious definition of the structure and content features of the dream experience by establishing their 'greatest common denominator':

"A dream is a succession of images, predominantly visual in quality, which are experienced during sleep. A dream commonly has one or more scenes, several characters in addition to the dreamer, and a sequence of actions and interactions usually involving the dreamer. It resembles a motion picture or dramatic production in which the dreamer is both a participant and an observer." (1953, p. 2-3)

Hall did not, at this point, refer to the origin and meaning of the dream, but attempted a general reflection of the ways in which dreams make their appearance, as related to structure and content categories. Such a descriptive definition has the advantage of being subject to immediate verification of appropriate phenomena. We may examine whether Hall's dream criteria are necessary or even sufficient to identify dreams comprehensively.

"Avenues" to the Dream

Two questions, "Where do dreams come from?" and "What is the meaning of dreams?", have been pursued over

centuries, and new answers have constantly been put forward. All these dream theories were related to prevailing philosophical and psychological concepts of the human condition and to links between body and mind. Contradictory views regarding the origin and meaning of dreams were, for example, polarized in such beliefs as the dreams' physiological causes ("Dreams come from digestion") or their psychological bases ("Dreams are a mirror of the soul"), or by imbuing them either with significance ("Dreams reflect unconscious motives") or meaninglessness ("Dreams are like dust").

As contradictory hypotheses regarding the origin and meaning of dreams always existed simultaneously, changes in attitudes toward the dream do not fit neatly into different periods of cultural history. Even Aristotle questioned the prominent belief of his time that dreams were messages from gods and demons when he stated that they might just as well be "motions of the senses." A comparable contrast is still evident today. According to the neurophysiologists Allan Hobson and Robert McCarley (1977), dreams are caused by the random activity of certain nerve cells within the brain stem. Conversely, representatives of parapsychology, who regard the appearance of telepathic and prophetic dreams as established, favor the concept that certain dreams have an extrasensory origin.

Ever since Sigmund Freud demonstrated, in *The Interpretation of Dreams* (1900), that the dream should be viewed as a meaningful psychological phenomenon, based on an unconscious latent wish, the origin and psychological significance of dreams have been the subject of numerous theories and methods of interpretation. Since then, a variety of dream theories have continued to center on the psychological content of dreams, although they propose a different understanding of its significance. Thus, Medard Boss (1953) considers dreams as representations of existential life situations, Thomas French (1954) assigns them the function of coping with current psychological conflicts, and C. G. Jung (1928) sees dreams as anticipating the individuation process.

Dream theories and the practice of dream interpretation occupy a prominent position in the long history of dream psychology. Therefore, it was the origin and meaning that have largely stimulated speculations concerning the dream. Conversely, an approach to the dream that would reveal how dreams 'really' are has enjoyed less attention. Such an examination of the dream is not least required because many views have long been based on the dream's particularly striking features but not on its general elements. If dreams are consistently considered as bizarre, dramatic and emotionally-oriented, one needs to know whether the exceptional in the dream also represents the typical.

While selected dream examples illustrate specific aspects of the dream experience, they do not permit conclusive findings concerning the nature of dreams. Only extensive, systematic examinations enable us to determine what is exceptional and what is typical regarding dreams and to clarify whether dreams present a much wider panorama of experiential characteristics and forms of expression than is generally assumed.

If we want to establish clearly what dreams actually are we need to define their appearance, independently of their interpretable content. It is logical and appropriate for basic dream research to follow Hall's descriptive definition of the dream. We regard this as the best presupposition, one designed to establish specific hypotheses concerning the origin and function of the dream.

Historical Development of Dream Research

Although a psychology of dreams has existed for centuries, the history of actual dream research is relatively short. The moment of its birth is difficult to fix, depending on how broadly or narrowly research is defined.

Systematic observation of dreams began with the work of individual dream psychologists during the second half of

the nineteenth century. For example, the French scientist Alfred Maury observed his own dreams carefully and, in addition, sought to influence them through external stimuli (Maury 1865). His contemporary and fellow-countryman, Marquis d'Hervey de Saint-Denys, published a book in 1867, based on his own dreams, collected over a period of five years and recorded in twenty-two notebooks, complete with illustrations. He was particularly interested in establishing to what degree dream events may be controlled and whether dreams contain creative solutions of problems.

The American psychologist Mary Whiton Calkins occupies an important position in the history of dream research, as she was the first to not only observe dreams, but to systematically evaluate 375 dreams which she and her partner recorded on awakening. She categorized dream contents, for example, which groups of people appeared in dreams and in what setting the dreams occurred. She captured the appearance of a dream by decoding sensory perceptions, and she sought to reach the sources of dreams by establishing their links to life situations. Her study, published in 1893, presented these stock-takings in the form of carefully annotated tables.

Experimental psychology, well established at the beginning of the century, experienced a rapid advance. However, compared to numerous published studies dealing with the waking experience, dream research utilizing a broad empirical basis was a rarity. The few dream studies that were undertaken remained largely based on self-observations, though they utilized extensive dream material designed to deal with the phenomenology of dream events in a differentiated manner. Thus, the German psychologists Friedrich Hacker (1911) and Paul Köhler (1912) analyzed the image and thought activities in hundreds of dreams, recorded in their diaries, with great scientific precision, but their results were not developed in any subsequent studies.

The dream as a research theme was not neglected because of any lack of interest on the part of psychologists, but because researchers lacked appropriate methods to reli-

ably grasp events that occurred during sleep. Dreams seemed to elude every experimental technique and failed to meet experimental requirements: dream events could not be observed in an organized manner, were only recalled haphazardly, could not be provoked systematically, and occurred erratically. As a result, experimental variations could not be planned in advance and phenomena had to be recorded retroactively.

Any examination of the dream was, therefore, subject to severe limitations. All questions of dream psychology, whether concerned with the phenomenology or significance of what was dreamed, depended on spontaneously, mostly sporadically remembered dreams. All of the vast dream literature in the non-experimental realm was inevitably based on selected dreams that offered no assurance that they represented the whole gamut of experience or that they were actually experienced during the sleeping state. This restriction had, however, no impact on the practice of dream interpretation. The casuistic approach toward the dream, aimed at interpretation, is not designed to objectivize the dream experience; it utilizes dream contents entirely as codes, designed to reveal unconscious dynamic processes.

Up until the 1950s, empirical dream research found itself in a highly uneasy position. On the one hand, there were numerous techniques and standards enabling psychotherapists to interpret their patients' dreams; on the other hand, little was known about the very basics of dreams as such. Many simple, but decisive questions concerning dream events could not be answered with certainty. One was not even sure whether everyone has dreams: some people were able to talk about their dreams each morning, while quite a few insisted that they had never had a dream.

There was much speculation about the frequency and timing of dreams during sleep, areas in which individual claims were particularly at odds. Many people thought they remembered to have dreamed all night long. Others expressed the view that their dreams took place only as they fell asleep, and still others concluded from their expe-

riences that it was the transition from sleep to awakening which encouraged their dreams. Although opinions concerning the timing of dreams during sleep covered all possibilities, the sleeping periods closest to the waking state were regarded most favorably—either, because phenomena could be most easily observed at this time, or because it seemed plausible that dreams are related to the waking state.

It was, however, thought that the length of dreams could be fixed quite readily. Many people who awake in the morning and then fall asleep again, remember a long dream after they wake up again, only to discover that they had, in fact, slept only a few minutes. These observations support a viewpoint, maintained for decades in dream literature, that complicated continuities of dream events could be condensed into a very brief timespan, and that the dream should therefore be regarded as a phenomenon that occurs within a few seconds.

Even more controversial and stubborn in its domination of dream literature was the opinion that the dream is prompted by an external signal, an outside stimulus. Key witness for this view was Alfred Maury's often-cited guillotine dream (1865), which seemed to show convincingly that a bedpost that fell on Maury's neck caused, in fragments of seconds, a detailed and dramatic dream of the French Revolution, climaxing in Maury's execution. The impressive quality of this dream silenced all counter-arguments, including the fact that Maury did not record this dream until ten years later.

The questions of whether everyone dreams, how often they dream, just when dreams occur and how long they last, could not be answered with certainty, as long as there was no criterium independent of self-observation that somehow indicated mental experiences during sleep. The bases of dreaming could only be specifically examined once better documented knowledge of the physiology of sleep became available. And these, in turn, could only be achieved when appropriate methods of measuring were at hand.

One historic dream example anticipated the period of psychophysiological dream research. In 1910, Paul Köhler recorded the following dream:

“I am lying on a sofa, at an unknown place. I was awakened by a gentleman I know. He stands before me and says: ‘You just had a dream lasting 35 minutes.’ I answer quickly, surprised: ‘How come? How did you find out?’ The gentleman: ‘That’s really a very simple matter!’ I, quickly: ‘Thanks a lot! Simple matter! Until now, we’ve known next to nothing about the length of dreams.’ The gentleman interrupts me: ‘I tell you, a friend of mine has settled the matter brilliantly and has written to me that it is very simple!’” (1912, p. 461–462)

Köhler cites this case as proof that a dreamer is fully capable of criticizing a false statement cogently. Today we would judge this dream differently, noting that the dreamer mistakenly questions a known fact. As it happens, Köhler’s absurd dream was fulfilled in 1953. Since then, we are aware that dreams can, indeed, last 35 minutes and that the gentleman who “settled the matter brilliantly” is the American Eugene Aserinsky.

Aserinsky, a doctoral student of the well-known sleep researcher Nathaniel Kleitman of the University of Chicago, recorded the eye movements of sleeping subjects, in order to study cortex activity during sleep. While engaged in these experiments, he made the unexpected discovery that, aside from slow, gliding eye movements—which actually were his only target—rapid, jerky and conjugate eye movements took place, remarkably similar to vision actions while awake. Both scientists assumed that such rapid eye movements might be related to dream events and decided to test this hypothesis with awakening experiments. Ten sleepers, whose eyes made jerky movements, were awakened a total of 27 times. They remembered vivid dreams in 20 instances, while 23 control awakenings from phases of eye rest yielded dream reports in only four cases. Thus, a first ‘objective’ feature became evident that seemed to chart the process of

dreaming, and a decisive impetus for systematic psychophysiological dream experiments emerged (Aserinsky & Kleitman 1953).

Actually, Aserinsky and Kleitman were not the first to link rapid eye movements with dream activity. In a study of falling-asleep phenomena, published in 1892, George Trumbull Ladd, professor of philosophy at Yale University, voiced the supposition that people move their eyes as rapidly during vivid dreams as they do when they perceive their environment while awake. Many years later, the American psychologist Edmund Jacobson (1938), today often cited because of his relaxation technique, was prompted by occasional observations to draw attention to the same phenomenon. He even suggested that, to prove his point, sleepers should be awakened during eye movements and asked about their dreams. The presentiments of the two authors were, however, overlooked and only the independent discovery of rapid eye movements by Aserinsky and Kleitman led to their resurrection from the literature.

At least two elements were responsible for the fact that the renewed discovery of rapid eye movement during sleep, at this time, led to intensive follow-up experiments, as well as to a revitalization of experimental dream research. First of all, the Chicago University team itself, aided by the physician-psychologist William Dement, took the initiative to elaborate its surprising results through additional experiments. Furthermore, extensive knowledge concerning the physiology of the sleeping state was available by then, ready to be linked to these new insights.

Sleep research, although just as neglected as dream research, nevertheless entered a new period three decades earlier. This development started 1924 in Jena, Germany, when the psychiatrist Hans Berger succeeded in recording fluctuations in the electrical potentials of the human brain. In 1931, Berger for the first time demonstrated changes in the electroencephalogram (EEG) during the sleep state. Subsequent systematic studies soon showed that sleep is not a uniform condition, but that several different stages,

which manifest during the course of sleep, alternate as part of a cyclical process.

The methods and findings of sleep research finally enabled experimenters to link the physiology of sleep with the psychology of the dream experience. For one thing, it was of decisive importance now to be able to determine whether a dream report had been preceded by a sleeping state. Then, too, it became possible to find out whether different features of the sleep state were indications of a dream's specific aspects of experience.

In recent decades, empirical psychological dream research has expanded into psychophysiological dream research. At present, not only are psychological aspects of the dream under scrutiny, but it has become possible to study bodily processes as they occur during this experience. Psychological aspects of the dream continue to be approached by traditional as well as new methods. Therefore it is not that the original questions concerning the dream have changed decisively, but that methods of inquiry and evaluation of the dream experience have become more abundant.