

Royal Road of Dreams Is Paved with Affect

Sheldon Roth

The Greek poet Homer in *The Odyssey* wrote the most concise summary of the meaning of dreams 3000 years ago. After a 20-year absence, Odysseus comes home, disguised as a beggar, and meets his wife Penelope. She offers "the beggar" her dream for interpretation, and perhaps dissatisfied with his understanding, Penelope replies:

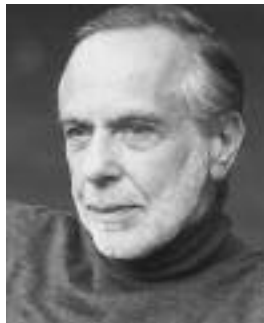
Stranger,
Dreams are hard to unravel,
wayward drifting things—
Not all we glimpse in them
will come to pass.

Two gates for ghostly dreams there are:
one gateway

Of honest horn, and one of ivory.
Issuing by the ivory gates are dreams
Of glimmering illusion, fantasies,
But those that come through
solid polished horn
May be borne out,
if mortals only know them.

Girded with belief in Homer and Freud, I met an article by Ogden that left me bewildered and exasperated: "On Not Being Able to Dream." I now faced a third gate, a closed gate—the non-dreaming dream. After reading Ogden's exegesis of Bion's views on undigested experience, the mind's "beta elements" of white noise that precedes the formed, symbolic "alpha elements" of dreaming that create unconscious and conscious thinking, I was left with my own white noise. What on earth were they talking about! What do they mean by non-dreaming dreams, dreams that are evacuation products akin to hallucinations

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or psychosomatic symptoms, dreams bereft of meaningful interpretation that could promote understanding and psychic change? The following morning, as if preordained by the gods of Homer, Freud, Bion, and Ogden, a patient walked in and explained the article. Sitting down, his first words were "I have had my first real dream!" Mr. X was referring to his most recent period of dreaming subsequent to a resurgence of bipolar psychosis; currently he was in a state of increasing compensation.

As I moved closer, Raphael dissolved; he turned into a vague, blurred image of my mother, but more exactly, like the mother who had the feeling of my mother when I was a little boy. I suddenly felt deep love, my heart opened up, it felt good, and I hugged her. I woke up and felt an affection and love for her that I have not felt in many years, but then I became sad, even I would say, a bit depressed.

Mr. X explained that the angels were "manic figments," symbols that he poured himself into as a way to feel great, mighty, especially loved, and they were a diversion from the longing, sadness, and love he felt in the "red glow" dream. Mr. X had cut off all communication with his mother and father for many years, and subsequent to this dream re-established contact. Considering his tormented past history with them, this new relationship was also "realistic." Angels, who were formerly prominent in his dreams (non-dreams) disappeared.

What I wish to emphasize is the role of affect in organizing the dream and representing its meaning as a solution to the affective dilemma of non-productive mania.

Mr. X said:

You know how when I am manic, I am guided and watched over by the angels Raphael, Michael, and Gabriel. These angels were in my dream last night and having a conversation with me, perhaps advising me on some action. Slowly, I noticed a small red glow on Raphael's chest; you know Raphael is my most special angel, the one closest to me. The red glow fascinated me, and as I allowed myself to focus on it, it seemed to glow even more, as if in response. At first, I felt excited, but seduced and frightened by the glow, and its power to hold me. Increasingly, I felt a warm affection to the glow, and I moved toward it.

The "red glow" dream induced a change in conscious thinking, a change that was guided by informative affect linked to unresolved mourning, unresolved grief, unresolved conflict over love. The dream's affect did not solve the problem, it suggested a route for solution, or as Homer might put it: "May be borne out, if mortals only know them." The "borne out" part requires conscious thinking and action.

AFFECTIVE PICTOGRAMS

Elias M. DaRocha Barros's views augment the views of this patient, Bion, and Ogden. DaRocha Barros (2002) refers to dreaming as "affective pictograms.... It is my contention that the psychical working-out function performed by dreams is a form of unconscious thinking that transforms affects into memories and mental

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Dreaming: The Contemporary Theory

Ernest Hartmann

In this brief space I can only summarize what my many collaborators and I call the contemporary theory of dreaming, based on numerous research studies over the past 20 years. I will not be able to discuss here the biological substrates for the theory, except to say that it is entirely compatible with all recent brain imaging studies of REM sleep and neuropsychological studies of dreaming. Also, I will leave it to the reader to note the various divergences from Freud's views, as well as the convergences. Let me say that I am in full agreement with at least one of Freud's major theses—that the dream is the royal road to the unconscious.

I will begin where our research began, with a dream we came across a number of times in our clinical work and in collections of dreams for research purposes—the tidal wave dream.

TIDAL WAVE DREAM

I was walking along a beach with a friend, I'm not sure who, when suddenly a huge wave, maybe 40 feet high, swept us away. I struggled and struggled in the water. I'm not sure whether I made it out. Then I woke up.

We have frequently found this dream, or something very like it, in people who have recently experienced a trauma of any kind. I have heard it from victims of rape or attempted rape, victims of attacks, from people whose close relatives or friends were killed, and from people who have barely escaped from a burning house.

I consider this dream especially important, in fact paradigmatic, because it lets us see so

clearly what is going on. The dream does not picture the actual traumatic experience—the burning house or the rape. It pictures the powerful emotion of the dreamer: "I am terrified. I am overwhelmed." Similar tidal wave dreams have been reported by others after major natural disasters such as the Berkeley/Oakland fires of 1991. The image is not always literally a tidal wave. We have many examples, from people who have experienced a severe trauma, of images such as being swept away by a whirlwind, being tortured, or being chased off a cliff.

Terror is perhaps the most straightforward emotion after trauma, but there are others, also pictured clearly in dreams. For instance vulnerability is often pictured:

I dreamt of a small animal lying in the road bleeding.

Several of us were wandering around on a huge plain. There was no shelter. There was rain beating down on us. We had no place to go. We were all lost and helpless.

There were shellfish creatures all around me, like lobsters or crayfish, lying there with their shells torn off, all white and pink and exposed.

Grief and sadness are also frequently portrayed clearly. Here are dreams from two people in the week after their mothers' deaths.

There was an empty house, empty and barren, the furniture all gone. All the doors and windows were open and the wind was blowing through.

A huge tree has fallen down right in front of our house. We're all stunned.

Most dreams, of course, are not so straightforward. The simple picturing of an emotional state seems to occur most when there is a single powerful emotion present, as in someone who has just been traumatized. More commonly a dream can be seen as guided by an emotion or an emotional concern.



Ernest Hartmann
Freud's metaphorical grandson and great-great grandson

EMOTIONAL HEART OF THE DREAM

Starting with the tidal wave dream, we have conducted a number of studies, concentrating on the central image (CI) of the dream, which appears to picture, or at least be most sensitive to, the underlying emotion. First, we developed a scoring sheet for the CI of the dream, which can be applied to any written dream material. The reader or scorer is asked to decide whether there is a CI, how intense it is, on a simple scale of 0 to 3, and then guess what emotion might be pictured by the CI. Scorers achieved very high inter-rater reliability on the scoring sheet, especially in rating the intensity of the CI.

Using this measure we have shown that, as expected, content from REM sleep is scored higher on CI intensity than non-REM content; that people who have experienced an acute trauma have dreams with higher CI scores in the weeks after a traumatic event compared to other dreamers, and also higher scores in the weeks after the trauma than in the weeks before. The "most recent dreams" of students who checked off on a questionnaire that they had experienced any abuse, either recently or in childhood, were scored higher than the "most recent dreams" of other students on a blind basis.

Finally, we studied dreams before and after 9/11/01 on the assumption that we had all experienced at least some trauma at that time. Forty-four people, all over the U.S. who had kept dream journals for many years, each

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Dreaming: Guardian of Sleep ...and Memory

Andrew J. Gerber



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A curiosity about the function of sleep and dreams is as old as our interest in the mind itself and has played an essential role in the history and development of psychoanalysis.

The discovery in the 1950s by Aserinsky, Kleitman, and Dement that dreams take place mainly during rapid eye movement (REM) sleep has long seemed enticing, though has added surprisingly little to our understanding of the function of sleep and dreams. Into the 1990s the debate continued to simmer about whether dreams contained meaning, as long postulated by psychoanalysts, or were merely the dreamer's interpretation of non-specific brain reactivation, as postulated by Hobson and others.

However, as a result of new techniques and recent work this may be about to change. Two new and complementary hypotheses about the function of sleep, with immediate relevance to our understanding of dreams, have emerged in the past several years. In 2006, Tononi and colleagues, using animal models and the techniques of molecular biology, reported evidence that sleep serves to overcome the brain's ongoing struggle with increasing energy needs. As every day we acquire new declarative knowledge and skills, neural synapses are strengthened, causing a steady increase in energy expenditure. In order to avoid exceeding the energy capacity of the organism, the brain needs to down-regulate the strength of synaptic connections, but without losing the

crucial information stored there. The brain solves this problem, during sleep, by "reactivating" recently learned memories and skills, while simultaneously weakening synaptic connections throughout the brain. The result is an overall decrease in energy expenditure, while selectively preserving recently learned material.

Simultaneously, Macquet, Rasch, and Stickgold, working with their respective research teams, have reported emerging evidence suggesting that sleep is necessary for the consolidation of newly acquired memories for long-term storage. Consolidation is generally thought to

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involve gradually adapting new memories to pre-existing long-term structures. In the March 2007 issue of *Science*, Rasch and colleagues described a study in which they demonstrated that enhancing the memory of a recently learned piece of information during slow wave sleep (SWS, also referred to as non-REM sleep) led to greater consolidation of that memory and better performance on a memory-related task the following day. Taking a page from Proust, they began by teaching awake subjects the location of an object on a grid while simultaneously exposing them to the smell of roses. That night, while the subjects were in SWS (from which they were not awakened), experimenters exposed half to the smell of roses and the other half to no smell at all. The subjects exposed to roses at night did better remembering the location of the object on the grid the following day. Furthermore, the area of the brain most associated with declarative memory consolidation, the hippocampus, was differentially activated in these subjects at night.

Cognitive science has increasingly demonstrated that the neural systems underlying declarative memory are distinct from those

underlying procedural, or skill-based, memories. This has important implications for psychoanalysis, as discussed by Westen, Gabbard, and others, because both declarative and procedural learning may be descriptively unconscious, though have different properties and respond differently to analytic interventions, such as interpretation. Interestingly, recent evidence suggests that while non-REM sleep enhances the consolidation of declarative memories, REM sleep may be more important in consolidating procedural memories.

These findings raise important questions and challenges for psychoanalysis. What goes on during the process of memory consolidation and how is this process different for declarative versus procedural memories? How does this affect the way we deal with REM dreams, which usually have a more narrative form, and

non-REM dreams that are more emotional and fragmentary? It has been argued that sleep is the best time to consolidate memories because external sensory input is at a minimum and the brain thus can strengthen recent connections and weaken older connections without being unduly influenced by the immediate surroundings. Does psychoanalysis work, in part, by reproducing such a situation and making it possible to reconsolidate declarative or procedural memories? Finally, where is the place of affect, drive, and motivation in these processes? These concepts at the heart of psychoanalytic theory may describe the signals that we use to select which memories to consolidate and which to allow to fade. Dreams may, in fact, be the royal road to uncovering unconscious material at the core of what we learn from the environment and how we succeed or fail at change.

APSA

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Royal Road of Dreams

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structures...it is part of the process of the metabolization of emotional life." In the analytic setting DaRocha Barros includes the analyst's interpretations as part of the thinking about the affective dream figure. An interpretation completes, transmutes, the cognitive process into verbal symbolic understanding that improves the capacity to think. In the case of Mr. X, he had already made a key interpretation within the context of the dream and continued it as he awoke from the dream with a particular mood (people often ignore a morning waking mood that is related to dreams of the night). Of course, the development of Mr. X's thinking following his dream occurred in the context of his therapeutic relationship with me, which preceded and continued after the dream. The development of love for his mother in the dream was preceded by a long period of transference love of a similar nature for me.

What I wish to emphasize is the role of affect in organizing the dream and representing its meaning as a *solution* to the affective dilemma of non-productive mania. Affect was essential to turning "non-dreaming" into dreaming. Affect is profound cognition, the ultimate in condensation. What allows a person to experience and tolerate affect—to have a capacity to bear affect—is essential to understand since that capacity is necessary to institute true dreaming, true thinking, and psychic change. This royal road of inquiry turns to psychoanalytic process and technique, which I shall put aside in this brief communication.

But this angle of affect evokes Elvin Semrad, the figure legendary to those of us trained by this Nebraskan-Bostonian guru. He summarized treatment as helping a person to "acknowledge, bear, and put into perspective." Acknowledge and bear can create the dream, but putting it into perspective (interpretation) requires thinking. I know Homer agreed.

As for that Ogden article, I recommend it to all. It's a dream!

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Editor's Note: Clinical material was printed with patient consent.

Dreaming

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supplied us with 20 dreams from their journals, the last 10 recorded before 9/11 and the first 10 after 9/11. The 880 dreams were given random numbers, and all scored on a number of standard dream measures, as well as the CI intensity scoring. When the code was broken, we found that the only measure on which pre vs. post 9/11 dreams differed significantly was CI intensity ($p < .002$). Dreams after 9/11 were not of different length nor more "dream-like" or vivid overall, and interestingly they did not contain more airplanes or tall buildings.

It is useful for us to be able to think in clear, focused, serial fashion at certain times, and at other times to associate more broadly and loosely—in other words, to daydream and to dream.

Thus in all these studies, CI intensity appears to be a kind of measure of emotional arousal or the power of the underlying emotion. In these studies the ratings on "emotion pictured by the CI" also shifted towards more scores of terror and vulnerability, as expected. However, the inter-rater agreement on these was not as strong, and the change after 9/11 not as statistically significant as the change in CI intensity.

We also have data showing that high CI intensity scores characterize "big" dreams, in many senses of the word, including memorable dreams, dreams called "important dreams" by the dreamer, and dreams called "especially significant and impactful" dreams. The CI is what makes a big dream big.

CONTEMPORARY DREAM THEORY

These studies support the central tenets (points 3 and 4) of the contemporary theory, which is stated below:

1. Dreaming is a form of mental functioning. It is one end of a continuum of mental functioning (and cerebral cortical functioning) which runs from focused waking thought at one end, through reverie and daydreaming, to dreaming at the other end.

2. Dreaming is hyperconnective. At the dreaming end of the continuum connections are made more easily than in waking, and connections are made more broadly and loosely. Dreaming avoids tightly structured, overlearned material.
3. The connections are not made randomly. They are guided by the emotions of the dreamer.
4. The dream, and especially the CI of the dream, pictures or expresses the dreamer's emotion. The CI is a measure of the power of the emotion. The more powerful the emotion, the more powerful (intense) is the central image.

5. This making of broad connections guided by emotion probably has an adaptive function, which we conceptualize as "weaving in" new material—that is, taking new experiences, and gradually and multiply connecting them into existing memory. This process rebuilds our memory systems, guided by emotion.
6. In addition to this basic function of dreaming, the entire focused waking-to-dreaming continuum has an adaptive function. It is useful for us to be able to think in clear, focused, serial fashion at certain times, and at other times to associate more broadly and loosely—in other words, to daydream and to dream.

The first point is worth some discussion since it appears counterintuitive. We usually think of dreaming as somehow totally separate from the rest of our mental functioning. I have tended to think that way too. Freud considered the dream (manifest dream) as written in a different language, which we need to translate back into our usual language to arrive at the thoughts (latent dream thoughts) which gave rise to the dream.

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I argue that despite initial appearances the dream is not totally different from other forms of mental functioning, and it is useful to consider it as one end of a continuum. There are many relevant studies showing, for instance, that extremely dreamlike material occurs in waking subjects under sensory isolation, that under some conditions daydreams are as bizarre as dreams, and that daydreaming imagery can be as metaphoric as dream imagery. In one recent study my group obtained one recent dream and one recent daydream in written form from each of 40 students. Scored on a blind basis, the dreams overall were more bizarre and more "dreamlike" (using standard scales) than the daydreams. However, the dreams and daydreams of students characterized by "thin boundaries" (on the well-validated Boundary Questionnaire) scored so much higher on bizarreness and dream-likeness than those of the "thick-boundary" students that the *daydreams* of the "thin" students were rated just as bizarre and just as dreamlike as the dreams of the "thick" students. Thick boundaries imply separation, solid distinctions, serial thinking, black/white thinking. Thin boundaries imply the opposite.

Furthermore, none of the features we often think of as most characteristic of dreams—the highly perceptual quality, the lack of thought or planning, the condensations, the discontinuities, the lack of control (lack of free will), and the difficulty in remembering dreams—are truly specific. All can occur in daydreaming or reverie, though usually to a lesser degree, and all are sometimes absent in dreams.

The second point does not need much discussion or defense. Everyone, from Freud and Jung to biological theorists such as Hobson and McCarley, who consider dreams to be random and relatively meaningless, consider dreams to be hyperconnective: A lot of mental material is thrown together. Connections are made more broadly than in waking thought. Studies show that we dream very little of focused, well-learned activities such as reading, writing, typing, and calculating.

In points 3 and 4, the contemporary theory considers the connections to be not at all random. They are guided by the dreamer's emotions. We discussed above the relevant studies on the central image of the dream. The CI pictures some important emotions or emotional concerns, in picture-metaphor.

(Portraying a wish as fulfilled is one way, but certainly not the only way, to do this.)

Finally (point 5), we can briefly try to suggest the functions of dreaming, though it is always hard to pin down function. Even the functions of sleep are not established, so it is hardly surprising that we are uncertain of the functions of dreaming, and indeed some researchers have expressed doubt that dreaming per se has any function. The contemporary theory suggests that dreaming has a function relating to memory but not memory consolidation, rather a "weaving in" of new material, guided by emotion—an integrative function allowing memory to be reworked and reintegrated with the addition of new experiences, always guided by emotion.

Research studies cannot prove this with certainty, but the idea is based on a number of series of dreams in patients and research subjects who have experienced a single trauma. These series allow us to follow what happens to dreams over time. These series sometimes, but not always, started with one or a few dreams involving the actual trauma. Then there were tidal wave dreams or similar powerful pictures of emotion. Then gradually material from the past entered the dreams, often material relating to previous trauma or stress which involved the same or similar emotions. Then the dreams slowly returned to the "usual" patterns that had characterized the person's dreams before the trauma.

Our hypothesis is that these series of dreams after a trauma let us see more clearly what is probably happening all the time. Dreams are weaving in new material, and reorganizing our memory systems guided by emotion. This can be called building of affective memory, as discussed, for instance, by Arnold Modell. Modell and others see this rebuilding as happening constantly, day and night. However I see a primary role for dreaming. If we think of our continuum, above, I suggest that when we are doing a math problem, or typing text, at the focused-waking-thought end of the continuum, we are doing very little emotional rebuilding. We do it perhaps a bit in reverie or daydreaming, and we do it especially in dreaming.

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Dreams in Cyberspace

To replay interviews on dreams visit these Web sites:

PRESIDENTIAL DREAMS

Canadian writer Sheila Heti recently started the Web site "I Dream of Hillary, I Dream of Barack," where hundreds of people have now submitted dreams they have had of the U.S. presidential candidates. Public Radio's *Here & Now* host Robin Young interviews president Prudy Gourguechon about what these dreams might tell us about the collective unconscious of the American public this election year.

<http://www.here-now.org/shows/2008/03/20080326.asp>

100TH ANNIVERSARY OF THE INTERPRETATION OF DREAMS

Past-president Bob Pyles debates Harvard sleep researcher Robert Stickgold in an interview marking the 100th anniversary of the publication of Freud's *The Interpretation of Dreams*. Do dreams allow a view of the inner workings of the psyche, or is it "time to give Papa Freud a rest"?

http://www.pbs.org/newshour/bb/health/july-dec99/freud_11-4.html

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This last tenet of the theory—point 6—suggests that the entire continuum has a function. This is difficult to prove definitively, but it appears to me self-evident. As we think of human beings living normal human lives, focused waking thought is obviously useful. It is clearly important and functional for us to be able to think directly and clearly, to accomplish a task, to make and carry out plans for the future. To take a very simple case, when we are in the outfield, trying to catch a fly ball, we turn our minds/brains insofar as possible into straightforward navigational machines to observe the ball's trajectory and move in exactly the right way to meet it. We try not to let our emotional concerns influence us while we are engaged in this pursuit. We do not

want to think broadly or widely. Similarly when we are balancing a checkbook or doing some kind of math problem, we want to focus directly and totally on the task for a time, with as little distraction as possible.

However, focused waking thought is not what we need all the time. It sometimes gets us into a channel. In focused waking, our thinking is stuck in a rut and cannot make the broad imaginative leaps sometimes required. This is where daydreaming and dreaming are useful. Dreaming has played a role in any number of new ideas in the arts and sciences. The broad connections of dreaming can also be useful in our relationships and in helping to make major decisions such as choosing one's path in life. There is no question in my mind that these abilities found in daydreaming and dreaming can be useful to us, and that a human being is thus better off (better adapted) when



the full range of mental functioning is available, from focused waking thought to daydreaming and dreaming.

APsA

This article is based on a lecture presented to the Boston Psychoanalytic Society, December 2007.

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