



The Twenty-Four hour Mind: the Role of Sleep and Dreaming in our Emotional Lives

By Rosalind D. Cartwright, 208pp, \$27.95, ISBN: 978-0-19-538683-7, Oxford University Press, New York, 2010

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If one wishes to get a good sense of a particular topic in medicine, one needs to read articles describing recent advances and discoveries, as well as review articles or book chapters which provide a more comprehensive overview, thus avoiding overlooking something important which might otherwise have been missed. As medicine is constantly evolving, with more than two thousand new articles added to the PubMed database daily, most restrict their searches to a relatively narrow time frame, usually the last two to five years, so as not to waste time with outdated information.

The problem with this approach, however, is that it often results in a similarly narrow perspective. It is easy to conclude, for example, that current dogma has always been accepted as fact, and not to appreciate just how much thought, effort, time, and painstaking research were involved in arriving at it. The process of discovery, after all, begins with the observation of a phenomenon. It continues with the definition of normal and abnormal and the ability to distinguish between the two, the development of theories about what causes the abnormal to occur, and the proving or disproving of the theories. It then culminates in ideas about ways to prevent or to treat the abnormal state, and the testing of their efficacy.

By understanding the arduous and long process through which observation evolves into knowledge, one gains a number of things. The first is a healthy dose of skepticism about the immutability of accepted wisdom in any given area of medicine. The realization that, in the past as in the present, one is likely to be met with opposition and resistance when proposing ideas which challenge current dogma is an important one, capable of sustaining the intrepid investigator who knows, deep in his heart, that the proverbial emperor has no clothes. It also reinforces the understanding that, despite all of the advances which have been made in medical knowledge, there remains much more to be discovered. While one might occasionally be tempted to agree with Lord William Kelvin, who is reported to have told the British Assembly for the Advancement of Science in 1900 that "there is nothing new to be discovered in physics now. All that remains is more and more precise measurement," this is, most assuredly, not the case.

"The Twenty-Four Hour Mind" provides just this kind of longitudinal overview, and it is a riveting one. Dr. Rosalind

Cartwright, founder, director of, and researcher at the Sleep Disorders and Research Center at Rush University Medical Center for 31 years, has written a memoir of her work in the field of sleep medicine across more than forty years, into which she has woven insight from her decades of research, specifically on dreaming and parasomnias. She describes how when she first started out, psychologists investigated dreams by analyzing their content, whereas neuroscientists tended to study the cells and synaptic networks involved in dreaming. She was frustrated, however, by the inability of either discipline to convincingly explain why it is that we dream at all, and what purpose (if any) dreams serve.

While some have held that dreams are simply the cortical response to spontaneous neuronal activity during sleep (the activation synthesis theory of Hobson and McCarley), others, including Freud, have viewed dreams as the attempt by the unconscious mind to fulfill desires and resolve conflicts repressed during wakefulness by the conscious mind. This theory was based upon dream recollection studies which were often biased due to the fact that the most vivid and complex dreams are usually those which occur right before awakening, and which are also those most frequently recalled. Still others, such as David Foulkes, have concluded that children's dreams reflect a sense of self rather than serving to regulate basic drives such as sex and aggression.

Cartwright's conclusion is that dreaming serves an important emotional regulatory role and effectively down-regulates negative mood by matching disturbing daytime experiences with earlier memories, leading to their fusion and thus facilitating the integration of the disturbing experiences into the larger sense of self. It is fascinating to read her account of the evolution of her theory through the observation of sleep pattern abnormalities in patients suffering from major depression, and its honing and development through comparison studies of the dreams of subjects going through divorce (with and without mood disorders) and those of non-divorcing controls.

Cartwright has also spent a considerable amount of her career studying NREM parasomnias, and has testified in a number of court cases as an expert witness, including the trial of an Arizona man convicted of murdering his wife during what she became convinced was a NREM parasomnia for which she felt

he should not have been held legally culpable. She describes this case in considerable detail, and suggests potential ways of identifying people at higher risk for sleepwalking, which she feels could be useful in future legal proceedings.

This very absorbing and beautifully written book describes cogently some of the psychophysical aspects of sleep and how our present understanding of them has been reached, and in doing so underscores just how much remains outside our comprehension. It also reviews the illustrious career of one of the pioneers in sleep research, compelling in its own right. Readers interested in either will not be disappointed.

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DISCLOSURE STATEMENT

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