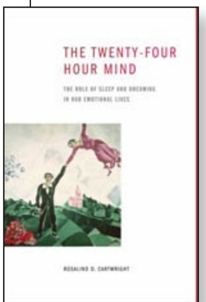
books

NIGHTTIME PROCESSING

The Twenty-Four Hour Mind: The Role of Sleep and Dreaming in Our Emotional Lives

by Rosalind Cartwright. Oxford University Press, 2010 ($27.95)



Less than six hours of nightly sleep can lead to obesity and even death, but sleep plays an equally important role in regulating our emotions. In *The Twenty-Four Hour Mind* psychologist Rosalind Cartwright gives an engaging account of the history of sleep research. She skillfully weaves in her 50 years' worth of work in the field, delving into her own theories about the purpose of dreams and highlighting the importance of sleep to maintain our physical and mental well-being.

Cartwright proposes that dreams diffuse the impact of otherwise disturbing emotions by matching them with similar experiences already stored in our long-term memory. Her own studies have shown that even when people go to bed angry or sad, their dreams can turn progressively more positive as the night wears on, allowing the person to wake up in a better mood. She has also built her theory on studies in which volunteers played virtual games and later associated the emotional situations in the games to experiences in their own lives. While they slept, volunteers reported pairing the virtual images with memories of similar emotional experiences. Cartwright concluded that this emotional matching process mitigates some of the negative feelings associated with the events.

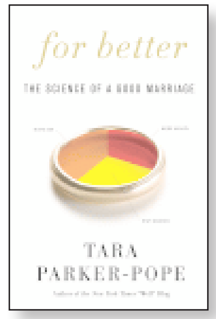
Cartwright describes why comparing these emotional experiences gives us some strange nightly adventures. For instance, you may be dreaming about your boyfriend, and he suddenly morphs into your uncle who recently left his wife. According to several studies, each consecutive 90- to 110-minute sleep cycle integrates more and more associations from your memory, stretching the story line "into increasingly illogical and bizarre connections." By the time you wake up, your dream has turned into complete nonsense. Cartwright's hypothesis, though compelling, is just one theory—sleep researchers are far from agreeing on the origin and purpose of dreams.

Sleep disorders can disrupt a person's emotional maintenance system, a predicament that Cartwright demonstrates vividly through detailed accounts of sleepwalking violence cases. Studies are also now beginning to show that continuous loss of sleep could be an underlying cause of depression, "affecting how we think, feel, define ourselves and relate to others," Cartwright says. *The Twenty-Four Hour Mind* brings home the importance of the brain's "essential night-shift." *—Nicole Branan*

WEDDED BLISS

For Better: The Science of a Good Marriage

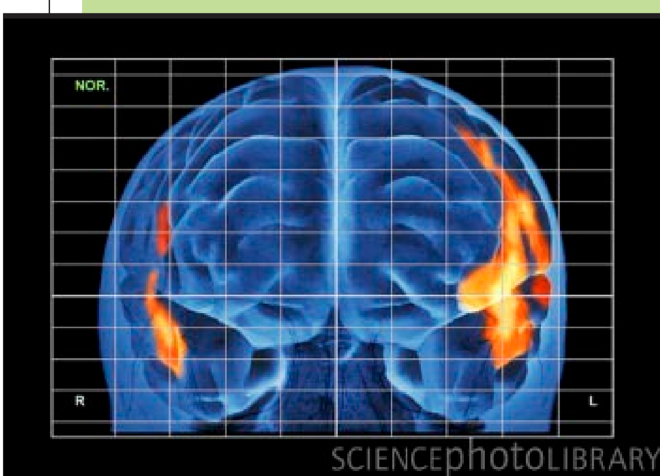
by Tara Parker-Pope. Penguin, 2010 ($25.95)



After her own 17-year marriage went bust, *New York Times* health blogger Tara Parker-Pope embarked on a new journey: to see what scientific research has to say about making marriage work. In her new book, she takes us on a journey through more than 100 scientific studies that tell us something about couples who have successful marriages: happy couples use humor to good effect, for example, and set limits on the way they argue. Unfortunately, we do not necessarily learn how the rest of us can have happy marriages, too.

The problem is that the book is based almost entirely on correlational studies—you know, the kinds that do not reveal anything about what is causing what. For example, based on a 1998 study by psychologist John Gottman, then at the University of Washington, and his colleagues showing that people in happy relationships tend to have five times more positive interactions than negative ones, Parker-Pope recommends that when you let someone

Philosophy Meets Neuroscience



Do we have free will? Is there meaning to life? A slew of new books provide some insights into how scientists are supplementing Plato with PET scans, hoping to answer these questions.

In ***My Brain Made Me Do It: The Rise of Neuroscience and the Threat to Moral Responsibility*** (Prometheus Books, 2010), Eliezer J. Sternberg examines studies that pinpoint areas of the brain associated with exercising free will, and suggests that our ability to decide makes us largely responsible for our actions.

Although we can easily spot and describe the features that make someone wise, defining wisdom is more elusive. In the new book ***Wisdom: From Philosophy to Neuroscience*** (Knopf, 2010), journalist Stephen S. Hall discusses studies that show brain activity corresponding to wise traits, such as moral judgment.

In ***The Brain and the Meaning of Life*** (Princeton University Press, 2010), philosopher and psychologist Paul Thagard discusses the reason we are wired to form social bonds: loving relationships can provide a sense of purpose in our lives.

—Compiled by Valerie Ross and Victoria Stern

down, you need to do at least five nice things to make up for it. But in successful relationships, people have far more positive interactions than negative ones; that is where the correlation comes from. Parker-Pope presents no evidence that deliberately moving in the direction of the five-to-one ratio will actually improve a relationship that is failing. My own 30 years of experience as a psychologist suggests that such formulas often fail. When a couple that is struggling leaves a counselor's office equipped with simplistic advice, efforts to behave more positively often seem fake or forced, and an unhappy partner might even find more to complain about, hoping to push his or her partner into buying more gifts or paying more compliments. A system of this kind can unravel in days or even hours.

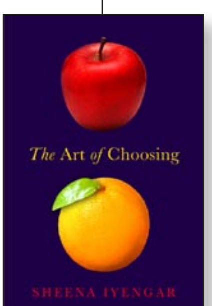
In spite of the upbeat title, the book is also filled with bad news: about the pressures of parenting, recent statistics on cheating (especially by young couples), the weight-gain problem, the toll that snoring takes on marriage (causing one third of couples to sleep in separate beds), and the problem that sexless couples have in rekindling the spark. On the bright side, *For Better* reminds us that many couples do achieve harmony. Being with the right person from the outset undoubtedly helps—an issue not explored in the book—and so does strong mutual commitment to withstand the challenges that every marriage inevitably faces.

—Robert Epstein

BETTER DECISIONS

The Art of Choosing

by Sheena Iyengar. Hachette Book Group, 2010 ($25.99)



In *The Art of Choosing,* Sheena Iyengar, a business professor at Columbia University and a leading expert on decision making, tells us that making sound choices is even more difficult than we think. To learn how to make better decisions, we first need to become aware of the pitfalls we typically encounter.

Iyengar reveals, for example, that having many options to choose from does not lead to better outcomes, despite popular assumptions to the contrary. For instance, she found that consumers were far more likely to buy jam when given fewer flavor choices, not more. "We frequently pay a mental and emotional tax for freedom of choice," she writes. To become better choosers, Iyengar proposes that when confronted with an abundance of options, people should focus first on the easiest elements of the decision and work up to the more complex parts.

She illustrates this point using one study in which Audi buyers had to choose among 144 total car features. One group started with the features that required fewer options, such as whether they wanted leather or upholstered interiors, and worked up to features with many options, such as choosing among 56 colors for the car's interior and exterior. The other group started with the hardest choices and moved toward the easier ones. In the end, those in the group that went from hardest to easiest spent an average of 1,500 euros more on their cars than the other group and reported they were less happy with their decisions.

Iyengar also explains that we often make decisions not based on our tastes but on how we think our decisions will be perceived. In 2000 a team of psychologists at the Massachusetts Institute of Technology and Columbia University showed that people receiving a free sample of beer chose against their tastes to avoid looking like copycats to their peers. Individuals who picked their beers in private, however, chose what they enjoyed and said they were happy with their decision.

Iyengar points out that the people who chose against their tastes were often unconscious of what motivated their decision. Thus, she proposes that one way to avoid strong and sometimes silent influences is to try to become more aware of them in the first place.

Ultimately, Iyengar wants us to recognize that our decisions—both the mundane and momentous—are influenced by many factors and that the more we recognize those factors, the more satisfied we will be. *—David DiSalvo*

dvds

CEREBRAL INSIGHTS

Charlie Rose Brain Series

www.charlierose.com

DVD (free online or $24.95 per episode)

Wouldn't it be great if you could eavesdrop on conversations between some of the greatest brain scientists in the world? Now you can, thanks to veteran television journalist Charlie Rose. In his 13-part series on the brain, which premiered in October 2009 and continues through November 2010, Rose and his co-host, Nobel Laureate Eric R. Kandel, along with esteemed neuroscientists, explore a different aspect of the brain in each episode. Recent forays have been into mental illness, anxiety and aging; upcoming topics include decision making and the artistic brain.

Although Rose comes to the table with questions and discussion topics, he is not afraid to let the conversations go in unexpected directions and to touch on contentious topics. In a recent episode, University of Cambridge neuroscientist Daniel Wolpert, a self-described "movement chauvinist," asserted that "we have a brain for one reason and one reason only, and that is to produce adaptable and complex movement." Wolpert went on to explain the controversial idea that movement mediates everything important that we do, including all communication. And in an episode dedicated to the emotional brain, Rose diverted a discussion on drug addiction to talk about the burgeoning fields of sex and risk addiction.

The program feels much more like a conversation between enthusiastic intellectuals than a talk show. After watching Rose's episode on the social brain, we understand why the show's intimate format feels so rewarding, too. "Our brains are not calculators, where you punch in a bunch of numbers and you get a number out at the end," Rockefeller University neurobiologist Cornelia Bargmann explained. "One of the most important things for us is each other."

—Melinda Wenner Moyer