

BOOK REVIEW

Waking, Dreaming, Being

By Evan Thompson

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According to Evan Thompson, a Buddhist philosopher at the University of British Columbia, Buddhists' primary goal is to achieve peace of mind rather than to understand reality. Therefore, their emphasis has long been on studying the mind more than the physical world. Their investigation of the mind has relied almost exclusively on introspection, a method that psychologists have disparaged for the last century. What can psychologists and neuroscientists learn about consciousness from the Buddhist and ancient Indian traditions? Thompson delves into this topic with an interest in both contrasting and reconciling Buddhist thought with modern research in psychology and neuroscience. At a minimum, what we can gain from Buddhist thought is a series of questions we might not have considered otherwise.

For example, the Buddhist view holds that experience is not truly continuous, as in William James's "stream of consciousness," but instead consists of discrete units. Presumably, that must be true, because modern physics holds that time itself comes in quantal units of 5.391×10^{-44} seconds. (Don't ask me who measured that.) However, Buddhists' supposed units of consciousness, though small, are certainly much larger than the physicists' units. As support for the idea that consciousness consists of discontinuous units, Thompson cites studies showing that people do not consciously perceive very brief visual stimuli (less than 15 milliseconds for the best observers), and that your probability of detecting a very brief stimulus depends on when it occurs relative to the brain's alpha and theta rhythms. In other words, he concludes, perception occurs in periodic cycles.

According to traditional Buddhist teachings, the conscious mind is permanent and immortal. That idea raises the question, what happens to the mind during deep, dreamless sleep? Thompson argues that you are not entirely unconscious at that time. When you awaken, you might say that you slept well. But how would you remember that you slept well, if indeed you had no experience at the time? Therefore, you must have had a kind of minimal or subtle awareness. "Deep sleep isn't a nothingness of experience, but rather an experience of nothingness" (page 247). This issue is, I submit, a matter of how we define consciousness or experience.

In Buddhist philosophy, consciousness exists independently of the brain. Even the Dalai Lama today concedes that "mental events correlate with brain activity," at least with regard to processing of sensory information, but he holds out the possibility that a "subtle" form of consciousness independent of brain activity may exist when sensory consciousness fades, such as when

someone is dying. According to Tibetan Buddhism, as consciousness deteriorates at death, a new phase of awareness begins with "the dawning of extreme clarity and vacuity as well as of light" (page 86). How could anyone possibly find any empirical evidence for such an idea? One suggestion is the anecdotal report that the bodies of some "advanced meditators" were very slow to decay after death, as if the meditation were continuing. However, even if we assume that these anecdotal reports are accurate, Thompson admits that more parsimonious explanations are possible for slow decay, based on temperature, humidity, and the type of bacteria in the body. Other possible lines of evidence for mind-brain independence come from reported "out-of-body" experiences and "near-death" experiences. Thompson carefully discusses the research on those topics, concluding with well-reasoned skepticism. Overall, however, Thompson seems to remain open-minded about consciousness separate from the body, although he admits that nothing currently available would look like evidence except to someone who was already convinced.

Another issue: When you have a lucid dream, do you *know* that you are dreaming, or are you *dreaming* that you are dreaming? Daniel Dennett (1979), another philosopher, previously raised this question (which probably would not occur to most of us). Thompson reports research confirming that lucid dreams occur during REM sleep; several young adults learned to signal their lucid dreams by dreaming that they were looking in certain directions, thereby causing eye movements that researchers could observe (LaBerge et al., 1981). Thompson concludes that a lucid dream really is a dream, but the dreamer's ability to exert partial control indicates that the dreamer *knows* (as opposed to *dreams*) that it is a dream.

Although Thompson is certainly aware of the evidence for mind-body monism, he sometimes lapses into apparent dualism. A couple of quotes: "[T]he mind can lead the way by altering how the brain and body sleep" (page 177). "Dreaming channels brain activity" (page 178). Admittedly, slipping into dualistic terminology is easy to do. As soon as you say that brain stimulation or brain activity produces a mental experience, you are flirting with mind-brain dualism, and then it seems reasonable to ask the reverse question of whether mental experience influences brain activity. At that point, you have gone all the way to dualism. The difficult concept is that mental activity *is* brain activity. Why or how that is true remains a mystery, of course. Thompson several times makes the justifiable point that to understand the mind-brain relationship, we

probably need to revise our concept of matter.

For a discussion of research on brain mechanisms of consciousness, I strongly recommend Stanislas Dehaene's (2014) book, *Consciousness and the Brain*. For a review of the phenomenology of consciousness, this book by Thompson is highly suitable.

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