

Book Review

In the last half-century, activation-synthesis theory became canonical, dictating American neuroscience of sleep and dream. Yet this powerful theory had been built on simplistic and baseless concepts of neuronal activation. REM sleep was not equivalent to dreaming, the neuroanatomic loci controlling sleep and dream could not be found, and low frequency, low activation states of sleep produced intense states of dreaming. Confronted with this evidence, activation-synthesis trained neuro- and computer-scientists shifted their emphasis to the other half of the construct - brain synthesis. The cognitive processing and thinking described as synthesis was initially adapted from Freudian concepts of psychodynamics. Kozmova, working from within Hobson's activation-synthesis constructs, adapts a Bayesian psychoanalytic-based technique of intrapersonal piloting to explore the transference surrounding non-lucid dream synthesis. Her text, as much a memoir as an intellectual synthesis, explores the misconceptions that have developed into the belief that dreams are degenerate, non-thinking states of consciousness. Her work incorporates the work of other dream scientists including Rechtschaffen, Foulks, Hunt, Moffat, Kahan, and Valli who have emphasized the alternative evidence that dreams are meaningful fully construed states of consciousness. Kozmova's dreams and those of the subjects she studies are executive, multiplicit, emotional, volitional, and problem-solving states of consciousness. Her dreams are overwhelmingly rational aspects of our awareness, generations of self-reflective thought, and constructs of our very human metacognition.

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Dr. Pagel is the co-editor of one of the major Sleep Medicine texts: *Primary Care Sleep Medicine* (Humana, 2007) (2nd Edition, Springer, 2014). Over the last 35 years, his clinical and research work, primarily focused on the cognitive state of dreaming, has resulted in more than 180 publications. These include work on the effects of dreaming on waking behavior, dreams and disasters, dream and nightmare use in creative process and film making, parasomnias, machine dreaming, narcolepsy, pediatric sleep, and non-dreaming, as well as the effects of insomnia, sleep apnea, and medications on dreaming and nightmares. His books include: *The Limits of Dream: A Scientific Exploration of the Mind/Brain Interface* (Academic Press – Elsevier, 2007), *Dreaming and Nightmares* (Ed.) (Saunders, 2010), *Dream Science: Exploring the Forms of Consciousness* (Academic Press, 2014), *Machine Dreaming and Consciousness* (Academic Press, 2017) and *Parasomnia Dreaming: Exploring Other Forms of Sleep Consciousness* (Nova Science Publishers).