Invited Address: Dream On

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Can Dream Research Find a Home in Cognitive Science?

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Dream research left the Freudian couch decades ago. It found a temporary shelter in personality research, but was soon expelled for its lack of correlation with other personality traits under investigation. With the discovery of REM sleep in 1953, dream research moved on to the sleep lab — a seemingly perfect home. However, it turned out that the sleep lab could not accommodate dream research either.

Dream research is presently looking for a new home, and G. William Domhoff, University of California , Santa Cruz , in his invited address at the APS Annual Convention, asked cognitive psychologists to consider “taking part in the adoption process.”

Domhoff examined dreams from three perspectives — developmental, neuropsychological and content analysis — and observed that “they all show striking parallels with waking cognition.” “Let’s entertain the hypothesis that there are only small changes in waking cognition that lead to dreaming,” Domhoff suggested.

Dreams may be “accidental by-products of two great evolutionary developments: sleeping and thinking,” he argued. Dreams may simply “reflect conceptions and concerns of waking cognition.”

Domhoff began his review of dream research with developmental studies by David Foulkes. “They are the strongest basis for the cognitive turn,” Domhoff said. Foulkes, in his five-year longitudinal study, found that preschool children rarely reported dreams. When they did report dreams, their descriptions were bland and static, for example “I saw a dog; I was sitting.” Older children, seven to eight years of age, were able to put themselves in the center of a dream. Nine- to 10-year-olds dreamed almost like adults. Foulkes found that dream complexity correlated with visual and spatial abilities. He concluded that dreaming is a gradual cognitive achievement. Foulkes’s study led Domhoff to believe that “children learn what a dream is before they have a dream.” “The findings of these studies were totally counterintuitive,” Domhoff admitted.

It also might be possible “to extend the theory in a neurophysiological direction,” Domhoff suggested. He pointed to the evidence that links “a wide range of brain lesions to the absence of dreaming.” According to Domhoff, specific cognitive deficits might find their counterparts in dream anomalies. For example, the condition of static dreams correlates with impairments in visual imagery, and lack of dreaming is related to the loss of visual mental imagery during awakening.

“We find a tremendous continuity between dream content and waking concerns,” Domhoff reported. In addition, “there is an absolutely amazing consistency in what people dream about.” Domhoff claimed that blind analysis of dream journals enabled him to infer correctly: “Your greatest concern out of all the people in your life is Person A. How do I know? Because you dream about that person all the time. Secondly, I infer that you have a conflicted relationship with Person A. How do I know? Because there is more aggression than friendliness in the interaction patterns with that person than with other dream characters.”

According to Domhoff, “dream journals are a very valuable source of information.” He considers personal journals non-reactive measures, because their content is not influenced by research purposes. Domhoff analyzed journals kept by Jungians, creative writers, and a man who believed dreams contain the secret to picking winners at the horse races, and he concluded that all dream journals follow a predictable pattern.

“Dreams change amazingly little with age,” Domhoff noted. In general, there is more aggression in dreams than friendliness, more misfortune than luck.

Domhoff asked professors to “steer students away from Freud and Jung and activation-synthesis theory.” Instructors should urge dream-interested students to take courses in neuropsychology, cognition, development, and memory, and not only personality or clinical psychology. Domhoff suggested starting one’s own dream research by visiting dreambank.net, a Web site offering over 18,000 dream reports and sophisticated search programs for studying them.

“It would take me forever to learn cognitive neuroscience, but it would only take you a few hours to learn about the basic findings in dream research,” Domhoff claimed. Consequently, he asked cognitive and neuropsychologists to investigate how dream research could fit within their “already existent knowledge.” “I can’t guarantee this new approach is going to work but I think it has a chance,” Domhoff concluded.