

A PHOTOGRAPHER'S INTERPRETATION OF HER SLEEP LABORATORY DREAMS

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Contemporary sleep research and sleep medicine both evolved from studies of the relationship between dreaming and the scientific recognition of REM sleep 50 years ago. Interest in dreaming rose rapidly following Freud's classic text at the beginning of the 20th century, *The Interpretation of Dreams*. But more of the dream's rise to preeminence later in the century was due to the discovery by Aserinsky and Kleitman in 1953 that subjects awakened during periods of rapid eye movements reported vivid dreaming. Psychoanalysis, which held dream interpretation as crucial to understanding unconscious motivation, was one of psychiatry's principle tools at the time of Aserinsky and Kleitman's report. Dreaming was center stage in psychic life.

Aserinsky and Kleitman's discovery that dreaming was temporally correlated with eye movements and an awake-like EEG fueled scientific interest in uncovering central nervous system activity at the time dreams were reported. Suddenly, sleep was not an uneventful period of recumbent dormancy, but contained discrete packets of eye movements that possibly signaled not only the occurrence of dreams, but might indicate information about the dream itself. Interest emerged in more scientifically understanding the mechanisms underlying dream formation.

I undertook a series of sleep laboratory studies, utilizing REM awakenings, with colleagues in Dallas and New York, including Howard Roffwarg, to understand how waking images entered dreams. My colleagues and I embarked on a series of experiments in which subjects wore red (Kodak #29 filter) goggles every waking moment to determine how and if this would influence dream content. Would dreams ignore this novel red world, would they incorporate it, or would there be a compensatory after-effect causing dreams to be colored oppositely?

Our studies showed that the waking red experience gradually permeated the night of sleep, at first effecting only the first REM period, but within 5 days of goggle exposure, the red chroma began to infiltrate the visual content of REM sleep throughout the subject's night of sleep, even if the content of the dream dealt with past events. Control studies showed that this was not the result of suggestion. Our "red goggle" studies had demonstrated that the visual properties of dreaming directly incorporate recent perceptual experience.

Susan Grant's proposal, to spend an extended series of nights in the sleep research laboratory at University of Texas Southwestern Medical Center at Dallas, to record her recollections following REM sleep awakenings, and use the content to formulate artistic representations of her dreams, interested me greatly. In essence, she intended to fuse the newly developed capacity of researchers to immediately capture just-produced dream material with artistic creativity.

I modified the methodology for REM sleep awakenings and dream questioning in a sleep laboratory that had gradually been developed by a number of sleep investigators, most notably William Dement and David Foulkes. I applied a specifically visual approach to questioning Grant about the images in her dream recall. Grant used the resulting interview tapes for initiation of her artistic process.

Grant has created an artistic interpretation of REM sleep dreaming that is faithful to the properties of dreams that were simultaneously emerging from sleep laboratory studies: the desaturated appearance, the indistinct, ethereal properties of seemingly familiar objects, and the strong narrative quality.

Sleep research has continued to flourish. Dreaming is universally accepted as a normal form of sleep-related mentation produced by virtually all individuals. REM sleep is widely accepted as a third state of existence along with waking and NREM sleep. Grant's photographic images are on the one hand the byproduct of the seminal discovery of REM sleep by Aserinsky and Kleitman in 1953, and on the other, represent the interplay of art and science at the beginning of the 21st century.

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