## THE FIELD OF DREAMS



## Nature's Rx: "Segmented Sleep"

Eat three meals a day and get eight hours sleep, so says conventional wisdom. But is it wise, or even natural to do so? These prescriptions, which do not correspond to our diurnal biorhythms, may be mere societal artifacts. Research on eating patterns, conducted at conferences and retreats where participants have unlimited access to food and can eat as they wish, indicates that hunger has a ninety-minute cycle. Research into sleep patterns, done by Virginia Tech historian Roger Ekirch, suggests that "consolidated sleep" —getting it all at once—is a recent historic development, not unlike frequent bathing and romantic marriage; "segmented sleep" is more typical for Homo sapiens.

Ekirch's work was featured by the BBC worldwide news service in February of this year and picked up by papers across the globe. The BBC headline, "The myth of the eight-hour sleep," captures the essence of Ekirch's ground-breaking discovery. For someone who has been troubled throughout my life by waking in the middle of the night, this came as a stunning revelation. For years, I had a neighbor, a woman scientist who also tended to wake mid-cycle; we consoled each other about this affliction

and laughed that we would welcome a call if the other's light were on. Within my own circle of friends and colleagues, I can name many who have one version or another of a so-called sleep disorder. Insufficient or broken sleep is practically epidemic these days. There are disorders that do need medical and/or psychological treatment. But what if much of contemporary sleep symptomatology is an artifact that could be corrected not by a new medicine, herbal potion, relaxation tape, or guided imagery exercise, but by a 180-degree shift in our understanding of what constitutes natural sleep?

Conducted over twelve years, Ekirch's research was supported by grants from the Guggenheim Foundation, National Endowment for the Humanities, American Historical Association, and the American Philosophical Society. Results were initially published in a 2001 historical journal and then in his 2005 book, At Day's Close: Night in Times Past, where he noted that sleep has been a grossly neglected area of study by historians. Little is known about when people in previous eras went to bed, how they slept, or when they rose. It was by combing diaries, court records, physicians' reports, and published fiction and poetry that Ekirch gathered his data. He found that Western Europeans generally experienced two major intervals of sleep nightly, bridged by up to one hour or more of quiet wakefulness. The two intervals were typically three to four hours in length and were referred to in English, Italian, French, and Latin as "first sleep" and "second sleep," or premier sommeil, primo sono. What convinced Ekirch that this sleep pattern was ubiquitous was the tone in the over five hundred references: first and second sleep, and the interval between, were taken for granted.

Here are some of the charming examples he cites. In 1628, essayist Owen Feltham wrote, "The wise man learns to know himself as well by the night's black mantle as the searching beam of the day." Night, Feltham said, is the superior of the two, for "in sleep we have the naked and natural thoughts of our souls." In "The Haunted Mind," Nathaniel Hawthorne described being awake at midnight: "If you could choose an hour of wakefulness out of the whole night, it would be this .... You have found an intermediate space, where the business of life does not intrude, where the passing moment lingers and becomes truly the present." In Ben Johnson's New Inn, a character reflects, "Is this a dream now, after my first sleep?" As we will see, it is after first sleep that dreams are often remembered that otherwise would have been lost to the passage of sleep. One of the latest references Ekirch found was in George Sturt's small classic, Change in the Village, (1912) where he mentions "first sleep" and also the "braying of motor cars" road lamps, and lit-up windows, which breach the "quiet depths of darkness."

References to segmented sleep also appeared in works of American fiction from the early nineteenth century, much of which was set in the eighteen hundreds: tales by Richard Penn Smith, James Fenimore Cooper, Washington Irving, and Hawthorne. The notion of first and second sleep is not limited to Europe or America in recent centuries. Ekirch found references to it in Livy, Plutarch, Homer, and Virgil.

Perhaps more important, segmented sleep also occurs in Africa, the continent from which our species emerged. Anthropologists P. and L. Bohannon, who studied the Tiv of Nigeria in the 1950s, reported that both children and adults were awake during the night between what they also

call first and second sleep. Carol Worthman, an anthropologist at Emory University who noticed the absence of data on natural sleep environments, contacted seven colleagues familiar with traditional nomadic, herding, farming, and foraging society, and assembled a preliminary picture of non-Western sleep practices. These include sleeping in groups because it's safer, being awake at various times during the night, and sleeping intermittently throughout the day and night.

Scheduled sleep is clearly associated with work patterns that arose in the industrial world, and segmented sleeping gradually was phased out as street lights came into being in the cities, permitting people to go out during the dark hours; and as candle, gas, and finally electric sources brought light into private dwellings, allowing people to stay up later. Ekirch says that by the 1920s, references to first and second sleep all but disappeared. Today, few sleep or dream researchers even recognize the term.

In the 1990s, NIMH psychiatrist Thomas Wehr conducted a month-long study in which participants went without artificial light for fourteen hours a day and invited to sleep or wake as they wished. By the fourth week, subjects had settled into a distinct biphasal pattern: sleeping for four hours, then awake an hour or two, and returning to sleep for another three to four hour period. Segmented sleep emerged as the natural circadian cycle. Wehr noted that this pattern of awakening would have allowed people to remember and reflect on their dreams in that semiconscious state that occurs during the night. Trying to compress sleep into one stint, he said, means we lose touch with dreaming and natural reverie. Russell Foster, Professor of Circadian Neuroscience at Oxford, tells patients who are disturbed by waking in the middle of the night that they are simply experiencing a return of the natural bimodal pattern.

Consolidated sleep may be unnatural, Erich believes. The historic implications of losing the traditional mode of repose are enormous, "especially in amounts of time. He likened this period to "an altered state of consciousness not unlike meditation."

I struggled for ages to tolerate my middle-of-the-night waking, and only in recent years have come to appreciate the quiet time for reflection that it provides. One reading of Ekirch's book could have spared me considerable hours on the analytic couch. I now concur with his opinion that "sleep disorders may be a misnomer," and I am quickly spreading the word about his

After following this practice for three months—expecting to be awake nightly, planning for daily naps—I am delighted to report that my general fatigue level has decreased, my dream recall increased, and a sense of fluidity between these two basic aspects of existence, waking and sleeping, is present in a way I've never experienced. Coming upon Ekirch's work has merely underscored what I've discovered for myself: segmented sleep seems quite natural. For those inclined to worry

about finding time for a daily nap, once sleep has been freed from being restricted to nighttime, it seems to come easily at almost any given hour of the day. Napping no longer feels like making up for the past night's loss; rather, it is its own thing, and comes willingly. With three periods of sleeping that now take place in any twenty-four period, there is plenty of opportunity for dreaming, as Ekirch predicted. For those of us who have noticed a decrease in dreaming with age, this may be the best news yet.

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light of the significance European households once attached to dreams for their explanatory and predictive powers." The biphasal pattern gave us more access to our dream life, since waking often follows REM. In 1728, a London tradesman, Christopher Pinchbeck, patented the "Nocturnal Rememberancer," an enclosed tablet of parchment whereby those awake during this time could record dreams, ideas, inspirations "which so frequently occur in the course of a meditating, wakeful night." The wakefulness that comes midcycle is not like daytime wakefulness: Wehr discovered that it has an endocrinology all its own, with elevated levels of prolactin, a pituitary hormone best known for enabling chickens to brood eggs for extended

discovery among my fellow sufferers.

For the past three months, I've made an experiment with my sleep pattern to see if I can get it to naturalize. This decision, ironically, preceded my acquaintance with Ekirch's work, and grew out of the advice given by "Seth," the wisdom figure channeled by Jane Roberts decades ago. As I mentioned in my last column, he challenged the strict barrier we've set up between sleeping and waking, conscious and unconscious, and recommended we sleep less at night and take regular naps, in order to facilitate more flow back and forth; this pattern, Seth claimed, would make the dream universe more accessible and reduce our overall fatigue level.

## References

Ekirch, A. Roger. At Day's Close: Night in Times Past. (2005) Ekirch, A. Roger. "Sleep We Have Lost" (American Historical Review, vol. 106, no. 2) See also "Segmented Sleep"

See also "Segmented Sleep" (Wikipedia), and Bruce Bower's article, "Slumber's Unexplored Landscape" (sciencenews.org, 9/25/99).

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