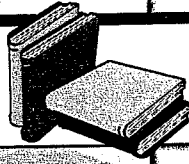


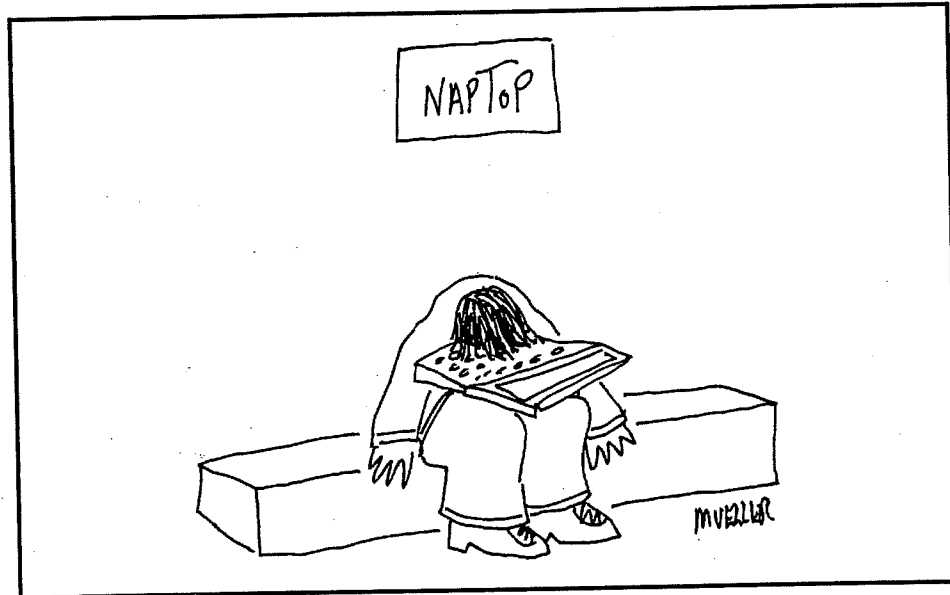
## READING



## 7

## Cross-Cultural Studies of Sleep

**Directions:** Read the following selection, then answer the questions that follow.



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What is your pattern of sleep? Do people in all cultures and throughout history share similar sleep patterns? Anthropological research indicates that sleep patterns in today's culture may be strikingly different from the patterns of our ancestors. New research may change the way we view sleep.

Ah, the sweet simplicity of sleep. You tramp into your bedroom with sagging eyelids and stifle a yawn. After disrobing, you douse the lights and climb into bed. Maybe a little reading or television massages the nerves, loosening them up for slumber.

There's a surprising twist, however, at the heart of this familiar ritual. It simply doesn't apply to people currently living outside of the modern Western world—or even to inhabitants of Western Europe as recently as 200 years ago.

In such contexts, and probably throughout human evolution, solitary shut-eye organized around a regular bedtime and a single bout of sleep proves about as common as stock car racing or teleconferencing. Surprisingly, anthropologists have rarely scrutinized the sleep patterns and practices of different cultures. . .

An initial attempt to draw back the veils of sleep in hunter-gatherer groups and other traditional societies has uncovered a wide variety of sleep customs, reports anthropologist Carol M. Worthman of Emory University in Atlanta. None of these snooze styles,

however, looks anything like what modern Western folk take for granted.

This finding raises profound questions for the burgeoning discipline of sleep research, Worthman says. Over the past 50 years, scientists have avidly delved into slumber's biology. Early research identified periods of rapid-eye-movement (REM) sleep, during which intense dreams often occur. . . . Researchers have also taken strides toward treating insomnia and other sleep disturbances.

While investigators readily concede that they don't yet know why people sleep and dream, they assume that they at least know how people should sleep: alone or with a partner for a solid chunk of the night. Sleep studies therefore take place in laboratories where individuals catch winks while hooked up to a bevy of brain and body monitors.

However, the distinctive sleep styles of non-Western groups may mold sleep's biology in ways undreamed of in sleep labs, Worthman suggests. They may influence factors ranging from sleep-related

genes to the brain's electrical output during various sleep phases. . . .

A seemingly innocent question awakened Worthman to her discipline's ignorance of how people sleep. In 1994, she had a conversation with pediatrician Ronald E. Dahl of the University of Pittsburgh School of Medicine, who studies the effects of mood disorders on sleep. He asked the Emory scientist to tell him what anthropologists know about the history and prehistory of sleep. "[My] bald, if somewhat overstated, answer was 'zero,'" she says. . . .

So, Worthman contacted seven researchers whom she knew had intimate knowledge of one or more traditional societies, including nomadic foragers, herders, and village-based farmers. Among these far-flung populations, none of the investigators, by their own admission, had systematically studied how people sleep. After plumbing what the researchers had absorbed about nighttime activities, Worthman has assembled a preliminary picture of sleep practices in 10 non-Western populations.

Worthman's findings rip the covers off any lingering suspicions that people everywhere sleep pretty much alike. Far from the wallpapered confines of middle-class bedrooms, sleep typically unfolds in shared spaces that feature constant background noise emanating from other sleepers, various domestic animals, fires maintained for warmth and protection from predators, and other people's nearby nighttime activities.

Groups in Worthman's analysis include Ache foragers in Paraguay, Kung hunter-gatherers in Africa, Swat Pathan herders in Pakistan, and Balinese farmers in Indonesia. For all these groups and six others, communal sleep equals safe sleep, because sleepers can count on there being someone else up or easily awakened at all hours of the night to warn others of a threat or emergency. . . .

Many rituals occur at night and exploit the need to sleep. For instance, initiation rites often force participants to cope with sleep deprivation. In other ceremonies, individuals enter somnolent, or near-sleep, states in order to magnify an occasion's psychological impact and to induce spiritual visions.

Consider the communal sleep of the Gebusi, New Guinea, rainforest dwellers, who grow fruit in small gardens and occasionally hunt wild pigs. Women, girls, and babies crowd into a narrow section of a community longhouse to sleep on mats. Men and boys retreat to an adjacent, more spacious longhouse area, where they sleep on wooden platforms.

Gebusi females retire at dark for about 10 hours of rest and sleep. In contrast, the men stay up later and frequently conduct rituals. About once a month, every-

one attends an all-night dance and feast, catching up on sleep the next day.

Each week or two, Gebusi men go to seances led by a "spirit medium," at which they try to keep spirits awake throughout the night. Participants attempt to slip in and out of a near-sleep state as the medium, who's usually adept at operating in this half-conscious condition, sings about the spirit world and other matters.

As in most of the other studied societies, the Gebusi express concerns about exposure to ghosts, evil spirits, and witchcraft during sleep. They consider deep sleep risky, since a sleeper's spirit may wander off too far and fail to return. The Gebusi view group slumber as a way to lessen the danger of spirit loss, which they view as especially likely while a person dreams.

Whether or not one believes that sleeping puts a person's spirit at risk, slumber appears to have crucial effects on body and mind. A culture's sleeping style serves as a growing child's training ground for managing biologically based systems of attention and alertness, Worthman contends. Balinese farmers provide a striking example of this sleep-related tutoring.

Balinese infants are carried and held continuously by caregivers so that they learn to fall asleep even in hectic and noisy situations. This grooms them to exhibit what the Balinese call "fear sleep" later in life, Worthman says. Children and adults enter fear sleep by suddenly slumping over in a deep slumber when they or family members confront intense anxiety or an unexpected fright. They are literally scared into sleep.

Infants in middle-class American homes, who usually sleep alone, may not learn to ground their sleeping and waking cycles in a flow of sensations that include bodily contact, smells, and background noises, Worthman proposes. In fact, babies forced to bounce back and forth between the sensory overload of the waking world and the sensory barrenness of dark, quiet bedrooms may often find it difficult to relax, fall asleep, wake up, or concentrate, she theorizes. . . .

If sleeping patterns in traditional societies remain little known, those of prehistoric humans are a total mystery. Still, in settings that roughly mimic ancient nighttime conditions, sleep undergoes an intriguing shift, says psychiatrist Thomas A. Wehr of the National Institute of Mental Health (NIMH) in Bethesda, Md.

When prohibited from using artificial light from dusk until dawn, people who formerly slumbered in solid blocks of time begin to sleep in two periods separated by an hour or two of quiet rest and reflection.

Wehr and his coworkers asked 15 healthy adults to rest and sleep in darkness for 14 hours (6 P.M. to 8 A.M.) each night for several weeks. Volunteers slept

(continued)

for 11 hours each of the first few nights, apparently to catch up on their sleep. They then settled into a pattern of lying awake for a couple of hours before falling asleep for 3 to 5 hours in the evening. An hour or so of quiet wakefulness ensued, followed by about 4 more hours of sleep in the early morning. . . .

Participants in Wehr's study usually awoke out of REM sleep to end their first slumber session. During REM sleep, the brain becomes about as active as it is when wide awake. One function of this sleep phase may be to set the stage for waking up, Wehr holds.

If prehistoric people slept in two nightly periods, then regularly awakening out of REM sleep may have allowed them to reflect on and remember their dreams in a semiconscious state that's generally unavailable to modern sleepers. Sleep compressed into a single stint may thus encourage modern humans to lose touch with dreams, myths, and fantasies, Wehr argues.

These results, first reported in 1993, also raise the possibility that people who wake up once or twice each night don't necessarily suffer from insomnia. "A natural human sleep pattern may reassert itself in an unwelcome world and get labeled as a disorder," Wehr says.

The two-phase sleep pattern observed by Wehr corresponds remarkably closely to the way in which most Western Europeans slept between 500 and 200 years ago, according to historian A. Roger Ekirch of Virginia Polytechnic Institute and State University in Blacksburg. While doing research for a book on night-

time behaviors during that era, Ekirch came across several hundred references to what he identifies as "segmented sleep."

From country farms and villages to city apartments, early modern Europeans usually sank each evening into what they called a "first sleep," which lasted for several hours. Shortly after midnight, they awoke and spent 1 or 2 hours in a "watching period." A "second," or "morning," sleep followed.

The watching period presented many opportunities, Ekirch notes. People coming out of their first sleep often stayed in bed to pray, converse with a bedfellow, contemplate the day's events or the meaning of a dream, or simply let their minds wander in a semiconscious state of contentment that was prized at the time.

A 16th-century physician wrote that many laborers dozed off exhausted at the start of each night. Sexual intercourse with their wives typically occurred in the watching period, after a recuperative first sleep.

These days, Western societies treat sleep more as an unavoidable stretch of downtime than as a prelude to sex or a time for inner reflection. Only intensive investigations across cultures and classes will illuminate the lushness of sleep's landscape, Worthman predicts.

Adds Wehr, "We're going to have to reconceptualize what it means to sleep normally."

Source: Bower, B. (1999, September 25). Slumber's unexplored landscape. *Science News*, 156 (13), 205-207.

## Understanding the Reading

**Directions:** Answer the following questions on a separate sheet of paper.

1. What is the primary difference between the current sleep practices in the United States and historic sleep patterns?
2. Why do people in some cultures sleep in communal groups?
3. What is "fear sleep" as experienced by the Balinese?
4. What did Thomas Wehr discover in his sleep study?

## Thinking Critically

**Directions:** Answer the following questions on a separate sheet of paper.

5. You have a friend who reports that he falls asleep easily around 11 P.M., but then awakens for about an hour most nights around 2 or 3 A.M. He seems near exhaustion. What would be the traditional explanation for his problem? How might the information contributed by anthropologists change this view? Given the anthropological view, what recommendations would you make to your friend?
6. Why do sleep patterns in America differ so greatly from those of our ancestors and those in more traditional cultures?