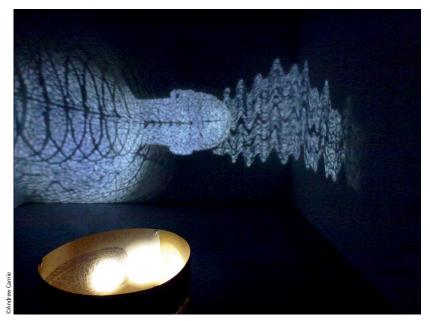


## The art of medicine

## Insomnia: a cultural history

"I cannot sleep", Alexander Pushkin wrote in his *Lines Written* at *Night during Insomnia* (1830). "Only the monotonous running of the clock/Sounds around me." Almost all of us, at one time or another, will have experienced the dreary desperation of insomnia. "The anxiety of the sleeping night", Pushkin continues in his attempt to capture this intolerable dynamic, "The mouse-like scampering of life". This "scampering" of daily life into the time set aside for rest has been reported for hundreds of years, but it is particularly pertinent to review the cultural history of sleeplessness from the present-day perspective, a world in which many of us take our electronic devices and daily lives to bed with us.

For many people insomnia is a temporary situation triggered by acute physical illness or psychological stress; but for some it is more permanent. Chronic insomnia affects an estimated 10% of adults in high-income countries and is associated with impaired quality of life, depression, and anxiety. Insomnia is a clinical diagnosis, based on subjective self-report by patients. Interestingly, though, overnight electroencephalography (EEG) brain recordings suggest that some patients with insomnia underestimate the amount they sleep. These misremembered periods of wakefulness may rather reflect hyperawareness of fragmented sleep. This phenomenon of "paradoxical" insomnia with normal sleep durations emphasises the limitations of a purely biological approach to insomnia.



Artist Andrew Carnie used EEG brainwaves as a motif for representing the "dusk of the brain"
The image alludes to the cyclical nature of wakefulness and sleep, both at the microscale of the EEG and the macroscale of hours and days, which he evoked by revolving light shone through a series of wave patterns onto the wall of an installation space.

Although insomnia does have a partly biological basis, as a disorder of hyperarousal, it is also shaped by prevailing cultural and historical conditions. In the few remaining pre-industrial equatorial societies, the prevalence of chronic insomnia is just 1–2%; indeed, within these communities there might not even be a word to signify involuntary sleeplessness. Thus, social factors have a determining influence on apparently natural patterns of sleep and sleeplessness. For this reason, insomnia can be illuminated by studies that are multidisciplinary and historically informed, which is a focus of our medicine-humanities project on insomnia.

It is illuminating, in the context of the western world, to compare the centuries immediately before the industrial revolution with the industrial and post-industrial periods. The mainstay of modern treatment of insomnia is the practice of good sleep hygiene—a bedtime routine that regularises sleep. Yet such treatment is usually sought only after sleep difficulties have arisen and become engrained. This state of affairs contrasts with pre-industrial epochs, before artificial lighting and central heating had been invented, when regular rise-times were the norm because they enabled people to take advantage of the availability of natural light and higher daytime temperatures. As the historian Sasha Handley has shown, many people in pre-industrial England differed from most of us today in that they made elaborate, often ritualised preparations for sleep. They cultivated a series of "cultural, sensory and environmental cues", Handley writes, including "familiar sounds, visions, smells and tactile sensations", to induce drowsiness. Night-time sleep was, for example, carefully optimised through the regulation of food and drinks in the daytime; through the use of soporific herbal remedies such as henbane, lavender, lettuce, and mandrake root; and through evening rituals of spiritual contemplation. Sleep was celebrated in the pre-industrial period as a sensory phenomenon, then—one that restored both body and spirit after the labours and travails of the day. Shakespeare's Macbeth emotes with anguished longing when he characterises sleep as "sore labour's bath,/Balm of hurt minds", and as "Chief nourisher in life's feast". In wealthy homes, in particular, bedroom textiles were often luxurious and highly personalised, and they would be repeatedly darned so that they lasted for generations. Continuity, familiarity, and safety, rather than any form of novelty, were the cornerstone of the peaceful bedroom environment.

Of course, sleeplessness still occurred in the pre-industrial era. Indeed, it is possible that it was institutionalised and normalised in terms of "watchfulness". The historian

Roger Ekirch has uncovered frequent references in the diaries and literature of the early modern period to what he calls "biphasic sleep", "with individuals waking sometime after midnight" between two distinct periods of rest, that appears to have been viewed neutrally and not as a marker of insomnia. But sleeplessness is nonetheless likely to have been more transient in pre-industrial society, where sleep and the sleep environment were regularised. This contrasts with many 21st-century bedrooms in high-income countries where smartphones, tablets, and televisions are often present, providing unhelpful opportunities for stimulation when we retire to sleep. As Jonathan Crary has argued, the internet technology to which we have become addicted, as a culture, facilitates online identities that "subsist 24/7, sleeplessly, continuously".

While sleep was prioritised in pre-industrial epochs, from classical times long sleep durations were inconsistent with sophistication. Plato, for example, dictated that citizens should sleep less than slaves, on the grounds that sleep is dead time when it is impossible to conduct business. A view that persists in later literary works. In Henry IV, Part 2, first performed in 1600, Shakespeare's king imagines sleep residing among his "poorest subjects", who lie on "uneasy pallets", rather than in "the perfum'd chambers of the great". A full night's rest is a luxury that the king cannot afford because of his unique political responsibility: "Uneasy lies the head that wears a crown". In the industrial period, for its part, some Romantic poets associated being awake rather than asleep at night with an intellectual creativity, a freedom of the imagination, that implied a refusal of the economics and politics of industrial society. For William Blake, for instance, the night functioned paradoxically as a site of enlightenment; and walking restlessly at night, while ordinary people were fast asleep, became a symbolic means of challenging the deadly rationalism of the everyday, diurnal world of industrial production that he abhorred. A couple of centuries on, there is probably less counter-cultural prestige associated with involuntary sleeplessness. In Dana Gioia's poem Insomnia (1986), to give an example, the narrator lies awake listening to the banal sound of the "mortgaged walls shifting in discomfort". Here, the poet's imagination is tethered to the dreary daytime responsibilities that make most people's everyday lives a struggle. Uneasy lies the head forced to devise excuses for the bank.

One development that helped reframe the concept of the poor sleeper from an important person of business, as envisaged by Plato and Shakespeare, to a product of everyday nervous stimulation, is the emergence of the term insomniac—as a noun rather than merely as an adjective—in the late 19th century. According to the Oxford English Dictionary, the noun first appeared in print in Alexander Morison's article on "Sleep and

Sleeplessness" in The Lancet in 1908. A London-based physician, Morison observed almost in passing that, "a given insomniac in more or less easy circumstances", cannot be expected "suddenly to assume a Spartan mode of life" in attempting to cure his sleeplessness. Here is the insomniac, whom Morison also identifies as a "neurotic insomniac", as a social and psychological archetype. In fact, the term "insomniac" had been in use for at least a couple of decades by the time Morison used it in The Lancet. For example, it appeared as the title of a short story printed in the British satirical journal Fun, a rival to Punch, in 1888. "We tell the story of the Insomniac in order that it may encourage those who believe insomnia incurable to hope", it begins. The sketch is full of satirical references to contemporary cures for sleeplessness, which include the insomniac pushing marbles across the floor with his nose. In the end, the insomniac overcomes his condition by working night shifts on the railway, a routine that infallibly makes him fall asleep at precisely the moments he is supposed to remain fully awake. By implication, the sleeplessness of this insomniac is contextual and has become psychologically associated with lying in bed, because sleep quickly overtakes him during his nocturnal work shifts.

Appreciating the emergence of the insomniac as both a pathological type and a social archetype can inform our contemporary attitudes to insomnia. While sleep and wakefulness are well defined neurophysiologically from birth, this contrasts with the subjectivity of the sleeping or sleepless body in which these states can be underestimated or overappreciated. To represent this tension visually for engagement work with adolescents and adults as part of our insomnia project, we collaborated with artist Andrew Carnie who created artworks that embedded representations of sleep brainwaves within depictions of the supine body. We have been using these materials to stimulate debate around our key argument: that both sleep and sleeplessness cannot be fully understood outside of the specific historical and cultural contexts in which they are experienced. Perhaps we could learn from the pre-industrial past, with its sleep-embracing rituals and neutral acceptance of transient sleeplessness, to combat the insomnia of the current generation.

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## Further reading

Beaumont M. Nightwalking: a nocturnal history of London. London: Verso, 2015

Handley S. Sleep in Early Modern England. London: Yale University Press, 2016

Ekirch R. At day's close: a history of nighttime. London:
Weidenfeld & Nicolson, 2006

Crary J. 24/7: late capitalism and the ends of sleep. London: Verso, 2013

Morgan Wortham S. The poetics of sleep. London: Bloomsbury Academic, 2013

Yetish G, Kaplan H, Gurven M, et al. Natural sleep and its seasonal variations in three pre-industrial societies. Curr Biol 2015; 25: 2862-68

Whitehead K, Laudiano-Dray M, Meek J, Fabrizi L. Emergence of mature cortical activity in wakefulness and sleep in healthy pre-term and full-term infants. Sleep 2018; published online May 14. https://doi.org/10.1093/ sleep/zsy096