



TIME AFTER TIME
by Garrett Nelson

From desk clocks to wristwatches, objects devoted to keeping time are increasingly being replaced by the omnipresent screen. And while new technology provides ease and efficiency in its multifunctionality, it can leave us longing for the real thing. Here, to help curb the effects of screen fatigue and the obsessive impulse to check phones, is a selection of some of our favorite artfully designed timepieces: George Nelson's Tripod Clock (top), Schoolhouse Electric's Flip Clock (middle) and Arne Jacobsen's Station Clock (bottom).

MATT CASTLE

On Measuring Pain

How much can something hurt?

Pain is hard to pin down. It can be sharp, dull, burning, constricting, throbbing or colicky. It can be acute or chronic. For many, there is no close correlation between physical damage and the degree of pain experienced. There is an inherently subjective aspect to pain: Mood, attitudes and external events can all influence how it is perceived. It is even possible to endure agony from a part of the body that no longer exists, as amputees suffering from phantom limb pain can attest. Compounding this, we frequently talk about emotional pain in the same breath as the physical variety, making it all too easy for us to dismiss pain as “all in the mind.”

It's hardly surprising that measuring pain is tricky business. Pain specialists are usually careful to avoid being judgmental, often recording patients' own descriptions of their symptoms. Despite this, numerical scores remain a necessary, if intrinsically flawed, element of pain assessment. The commonly used numerical rating scale (NRS) allows patients to score their pain between zero and 10—with zero being no pain, and 10 being the worst pain imaginable. Of course, whether that person has

experienced childbirth—or gout, kidney stones or cluster headaches—will likely skew their personal pain calibration scale. And for some, the worst thing about their pain is not so much its magnitude, but its relentlessness.

Accurate quantification may never be possible, but research continues to advance our understanding of pain perception. In 2011, Ethan Kross and colleagues published a study comparing the brain activity of participants receiving two different stimuli. First they were shown photographs of their ex-partner (all participants were selected on the basis of having recently ended a relationship). Then an uncomfortably hot “thermode end-plate” was applied to their left forearm. In both instances, similar brain areas were activated. The study's conclusion: “Social rejection shares somatosensory representations with physical pain.” So, both physical and emotional pain are objectively detectable phenomena. And they appear to be pretty much the same thing, neurologically speaking. So while we can't fully understand someone else's pain, we can agree that whether it's “in the mind” or in the body, it can really hurt.



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ALEX ANDERSON

Dead of Night

Compline was the hour for nightly prayer, marking the end of the day for monks of the Middle Ages. Normally involving meditation on death, it initiated the hours of dark and silence—a perilous time. As monks, priests and bishops drifted to sleep, their authoritative prayers faded and spiritual protections weakened.

And so, on their knees in darkened bedrooms, people intoned an ancient hymn, begging for divine protection: “From evil dreams defend our sight, / From fears and terrors of the night; / Tread underfoot our deadly foe / That we no sinful thought may know.” Continuing the bedtime litany, they recited yet more fearful prayers, urging themselves to “be sober, be vigilant, because your adversary the devil is prowling around like a roaring lion, seeking for someone to devour.” Hardly restful words to drift off with.

In the darkening night, the faithful and the superstitious lay awake and envisioned freewheeling devilry, unchecked by the dozing pious. The witching hour—from midnight until 3:00 a.m.—was when spirits and spells be-

came their most potent. Then at 3:00 a.m., during the devil's hour, Satan emerged transcendent to mock the Holy Trinity and Christ's 3:00 p.m. crucifixion—and to devour unprotected souls.

Supernatural threats aside, the darkest hour of night is no time for humans to be about. We are physiologically ill-suited to nocturnal pursuits. Lions, like other feline predators, have night vision nearly 10 times better than ours, a stealthy tread and a huge appetite. Owls see in the gloom one hundred times better than we do, cockroaches ten thousand times. Bats get by fine without any light at all.

Even for those tucked safe in bed, 3:00 a.m. can be devilish. Melatonin levels peak, carrying sleepers into the strangest and most vivid of the night's dreams. Body temperature drops, pulse slows, blood pressure weakens. If you happen to die at night, research suggests it will happen between 3:00 and 5:00 a.m. But when it's time for the monks to sing lauds in the moments before dawn, the light rises, our eyes adjust and body warms, and the last fears of the night evaporate with the mist.

Fey and fearful: the superstitions of the witching hour.