A Note to Fulk Bellers

Stephen Nowlin

"It is artists and storytellers, not scientists, who can potentially reconcile the viewpoints of the priest with those of the entomologist, who can expose the shortcomings in both perspectives and complicate deterministic philosophies, be they conveyed in the jargon of biology or the rhetoric of Scripture."

At London's Saint Paul's Cathedral on a 17th-century Sunday, preacher Fulk Bellers scolded his congregation. His admonition was to avoid gullibility over apocalyptic predictions surrounding Black Monday, so named as the next day's solar eclipse of March 29, 1652. They should take pause, he counseled, to identify confusions arising from occult astrology and a lack of Christian faith.

In the noxious brew of magic, supernatural memes, and ancient lore permeating England of the day, Black Monday's dour PR loomed over London, a dark harbinger of bad luck and a lot worse. Bellers delivered a more consolatory brand of caution for his listeners, comparing the eclipse darkness to a loss of grace when life is absent the light of divine guidance—which after all, he intoned, was the light that had caused the Earth, Moon, and Sun to be placed upon their orbital paths in the first place. Imbued with preternatural intent that commanded them on occasion to cross each others' lanes and wow the crowd below, the performance of these three celestial actors was thus portrayed as embodying profound Christian symbolism and evidence of the divine, to be contemplated and embraced (or else). It was cautionary—planetary mechanics tinged with the odd admixture of heavenly love and earthly fear that is standard ecclesiastical formulae. In reality, though, Bellers' retrofit of scattered spiritualist beliefs into conformance with England's mainstream Anglican faith was not without its irony: for he'd simply discarded one superstition and substituted another.

Meanwhile, the great rocky spheres in question hurled and spun weightlessly through the mute black of space, on schedule to arrive at their mathematical coordinates in obedience to gravitational physics. The forces propelling their mesmerizing choreography, while awesome to onlookers far below, were oblivious to the onlookers' beliefs.

Solar eclipses are surely among the most ancient of astronomical spectacles witnessed by Earth's inhabitants, human and otherwise. The slow pageantry of the event must have been even more ominous to prehistory—the unforeseen midday dusk, creeping shadow, and sudden darkness would have incited wild speculation as early peoples struggled to comprehend such a monumental anomaly. Fear of the unknown, mythical superstition and tragic misinterpretation would have dominated in the wake of such an event, even as insolent curiosity provoked the first stirrings of scientific questioning. Eclipses continue to have a cultural impact in the present, inspiring art, poetry, science, awe, religion and mythology. They serve as visceral reminders that we humans are very tiny witnesses to such very large cosmic forces.

A solar eclipse delivers an experience of the profound to its spectators, and unearths much residue to probe for meaning. The eclipse itself also reveals a residue of sorts—the solar corona—a chance to observe the enhanced edge and upper atmosphere of the Sun's circumference. It bestows a free opportunity for science to advance its star power by scrutinizing the coincidence of a Moon-Sun transit. In the old days before the advent of modern solar and space telescopes, astronomers flocked to eclipse sites by donkey and cranky sputtering autos in caravans, carting heavy technology to remote settings weeks in advance of the big event, enduring hardship and erecting makeshift observatories under the Moon's mobile umbrella, the "path of totality." In the fleeting passage of darkness that is past eclipses, science has been illuminated. So too, therein, has been activated our unique human form of biological recoil—the unnerving reaction to having been put in our diminutive place, of being left breathless by a brush with the numbing enormity of it all, and yet awash in the intuition that we are somehow connected to, and by, what we've beheld. We know an eclipse deep in our ancient evolved cells, and in our stunned aftermath it leaves the aroused sensations through which we forage for what it could mean. Not because we need to find the divine or occult at work there, but more simply because we, like the planets, follow the physics of our biology—and meaning is our evolved biology's epilogue to its own performance.

Artists for centuries have been trading in the commerce of similarly transcendent experiences. By its nature, art eclipses its physical reality and forges symbolic meaning, tampering with the bullish marketplace for those whose claim to sovereignty over the so-called human spirit is spoofed by supernaturalizing the natural. As science has revealed and expanded the natural universe by stairsteps of knowledge over time, and glimpsed truths independent of flawed speculations throughout recorded history, it also cautions against lingering fictions of today that are but urbane equals in fallacy to the inaccurate notions of 1652. We know that natural phenomena such as eclipses, earthquakes and meteors do not emanate from a divine cause, supernaturally portend human events, bring about plagues or cause bad luck to rain down. But they do nonetheless enthrall us—and such penetrating sensations, when ignited, beg to carry the validation of meaning something extraordinary.

It wasn't until the first several centuries AD, that history's painstaking observations, mistaken conclusions, corrections, debates and backtracked detours began to succeed in attempts to accurately predict the place and time of a solar eclipse. It was by this centuries-old trail, blazed through stubborn curiosity's hits and misses, that calculations were enabled that would eventually forecast the 1652 event. In the many complicated strands of knowledge-bits leading there over time, a long and arduous force of human endeavor finally churned out an ability to objectively know what had earlier been muddled speculation. Those hard-won calculations and that seasoned history of humans both named and unnamed which helped unravel the mysterious, are what cradles our true sensations of meaning. A solar eclipse, no longer feared, is an endowment to the beauty that is knowing. Its transcendent dimensions are not a divine snap of the fingers but an emergent quality of biological feeling that swarms into greater awareness than the sum of its parts. In short, it is art.

As it turns out, the Christians and the astrologers in 1652 both got it wrong about causes and effects, and both overlooked the obvious. The calculations of time and place had removed surprise and intimidation from the occurrence of solar eclipses, proving there was no shadow except along a path of predictable orbital regularities. These new understandings, provided by astronomers and mathematicians, should have displaced the superstitions borne of those earlier eons when no forewarning induced illusions of ominous intent. Bellers might have wondered why the interruption of sunlight by something coincidentally aligned with the eyes of a seeing organism would be any more supernatural if eclipsed by the heavens than by a passing bird or a sublime green canopy of forest. They're all shade, and all in their own way beautiful. The fledgling beginnings of science were revered by some in the 17th Century, but then, as with today, the science is often dismissed as mere mechanical process while superstition's powerful emotional grip is allowed to feign meaning. Nature seemingly tamed by calculation and untethered from the divine does not diminish its capacity to stir sensations of profound transcendence by its beauty and precision. That capacity proclaims the complexities of biology and physics, while not magic, to be every bit as magical as the fictions and supernatural causes to which our ancestors pretended.

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1. Theater critic Charles McNulty, paraphrasing biologist E.O. Wilson from Wilson's book "The Meaning of Human Existence" (Liveright Publishing, 2014): "The arts become Earth-aware: Dawning age of what are known as eco-arts," Los Angeles Times, December 26, 2014.