**Neel Burton, 2014**

**“A Study of Wonder”**

Burton, N (2014) *“A Study of Wonder”* [ONLINE] Available at: https://www.psychologytoday.com/gb/blog/hide-and-seek/201412/study-wonder [Accessed 22 January 2019].

* [Wonder is a complex emotion involving elements of](https://www.psychologytoday.com/gb/blog/hut-her-own/201707/the-sense-wonder) **surprise, curiosity, contemplation, and joy.** It is perhaps best defined as a **heightened state of consciousness and emotion** brought about by something **singularly beautiful, rare, or unexpected**—that is, by a marvel. ‘Marvel’ derives from the Latin mirabilia (‘wonderful things’), and ultimately from the Latin mirus (‘wonderful’).
* Wonder is most similar to awe. However, **awe is more explicitly directed at something that is much greater or more powerful than we are.** Compared to wonder, awe is more closely associated with **fear, respect, reverence, or veneration than with joy**. Without this element of respect, reverence, or veneration, all that remains is fear, that is, no longer awe but terror or horror. Awe is also less detached than wonder, which allows for greater and freer contemplation of the object. Other near-synonyms of wonder include **astonishment, amazement, and astoundment.** In essence, to astonish means to fill with sudden and overpowering surprise or wonder, to amaze means to astonish greatly, and to astound means to amaze greatly. This overbidding ends with dumbfounding, which means—you guessed it—to astound greatly.
* Wonder involves significant elements of **surprise and curiosity,** both of which are forms of **interest.** Surprise is a spontaneous and short-lived reaction to **something unexpected, immediately followed by at least some degree of confusion and one or more emotions such as joy, fear, disappointment, or anger.** Surprise spans the divide between **expectation and reality**, directing our attention to something unforeseen and prompting us to re-examine and revise our concepts and beliefs. To be **curious** about something is **to desire knowledge of that thing. Knowledge extinguishes curiosity but not wonder.**
* Wonder can be excited by **grand vistas, natural phenomena, human achievement, and extraordinary facts, among others.** It is **expressed by a bright-eyed stare that is sometimes accompanied by an opening of the mouth and a suspension of the breath.** By drawing us out of ourselves, wonder **reconnects us with something much greater and higher than our daily humdrum**.
* However, notice that this kind of wonder is not quite the same as the more engaged, pregnant kind of wonder that moved Theaetetus to philosophy. This latter kind of wonder, or **Socratic wonder,** is not so much wonder in the sense of awe as wonder in the sense of puzzlement and perplexity. Rather than grand vistas and such like, it arises from **contradictions in thought and language,** and goads us on to examine these contradictions in the hope of resolving or at least understanding them.
* In contrast, **Socratic wonder** is much more rarefied, and, as Socrates implies by calling it ‘the feeling of a philosopher’, not given to everyone. Yet, both kinds of wonder have in common that they are directed at something that is in some **sense greater and higher than us, and beyond our grasp.**
* ...not only by philosophy but also by science, religion, and art, giving rise to a third and even more exalted kind of wonder, which is the **wonder of discovery and creation.** Culture does not sate but nourishes wonder. **Scientific theories and discoveries** such as the Big Bang theory and the periodic table of the elements are often more wondrous than the perplexities that they intended to solve. **Religious buildings and rituals** make us feel small and insignificant while at the same time elevating and inspiring us. Wonder begets culture, which begets yet more wonder, and the end of wonder is **wisdom, which is the state of perpetual wonder**

[**Karin Arndt, 2017**](https://www.psychologytoday.com/gb/blog/hut-her-own/201707/the-sense-wonder)

**“The Sense of Wonder”**

Arndt, K. (2017) “The Sense of Wonder” [ONLINE] Available at: https://www.psychologytoday.com/gb/blog/hut-her-own/201707/the-sense-wonder [Accessed 22 January 2019].

* Living as we do in an almost exclusively human-centric/human-made bubble, we forget how to truly see the world outside, a world which is turned into material objects – natural “resources” – under our gaze. **We forget that, as animals, the world of nature is our home. We forget that we belong here.** That forgetting has serious consequences, most obviously for the health of the non-human natural world. But human psychological health is endangered as well. When a significant aspect of our humanity is repressed we fail to thrive. Something feels wrong or off. **We suffer from a sense of alienation, according to psychotherapist and wilderness guide, Bill Plotkin.** He argues that despite their varied presenting concerns, most of his psychotherapy patients over the years have struggled with a “core restlessness,” a deep-seated sense of homelessness:
* To our human-centric mind, this alienation Plotkin describes equates to an **alienation from human society.** While this may be partially true, it’s too narrow an interpretation. It fails to acknowledge a central root cause. Indeed, Plotkin ties this core restlessness, this homelessness, to a disconnection from nature. He argues that **our sense of wonder is the key to reconnection: “**I believe a big part of this experience derives from our not feeling at home in nature. But it's never too late to learn how to do this. It's not even learning, actually; it's to **use our sense of wonder to embrace this wild world again**. It's one of the most important and effective therapies, I believe.”
* Reawakening the sense of wonder does not simply help us appreciate the beauty of nature. It can **help heal a sense of alienation and loneliness.** Because when a person is truly present to more-than-human world, how could they ever really feel alone? In working toward the recovery of a sense of wonder, we are cultivating an ability to see beyond ourselves, beyond the limits of the human bubble. It is a humbling process; **humility is a necessary ingredient to the experience of awe and wonder.** Via our humility, via our personal smallness, the larger world reveals itself to us more fully.
* Rachel Carson clearly understood the benefits for adults of reconnecting with the sense of wonder: “Those who dwell…among the beauties and mysteries of the earth are never alone or weary of life. Whatever the vexation or concerns of their personal lives, their thoughts can find paths that lead to inner contentment and to renewed excitement in living. Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts. **There is symbolic as well as actual beauty** in the migration of the birds, the ebb and flow of the tides, the folded bud ready for the spring. There is something infinitely healing in the repeated refrains of nature — the **assurance** that dawn comes after night, and spring after the winter.”
* ...**Solitary retreat in a wilderness or semi-wilderness setting. Practicing silence, solitude, and simplicity** for days or weeks on end can change a person.
* The women found themselves standing in awe, open-eyed and open-eared as they took in the larger conversation all around them – **the sound of snow melting, the deep blue of twilight, the dance of gathering storm clouds, the crying of foxes at night, the reflections in raindrops on fallen leaves.**

[**Jesse Prinz, 2013**](https://aeon.co/essays/why-wonder-is-the-most-human-of-all-emotions)

**“Why wonder is the most human of all emotions”**

Prinz, J (2013) *“Why wonder is the most human of all emotions”* [ONLINE] Available at: https://aeon.co/essays/why-wonder-is-the-most-human-of-all-emotions [Accessed 22 January 2019].

* 18th-century Scottish moral philosopher Adam Smith, better known for first articulating the tenets of capitalism, wrote that wonder arises **‘when something quite new and singular is presented… [and] memory cannot, from all its stores, cast up any image that nearly resembles this strange appearance’.** Smith associated this quality of experience with a distinctive bodily feeling — ‘that staring, and sometimes that rolling of the eyes, that suspension of the breath, and that swelling of the heart’.
* The essential components of wonder -
  + **Sensory**: wondrous things engage our senses — we stare and widen our eyes.
  + **Cognitive**: such things are perplexing because we cannot rely on past experience to comprehend them. This leads to a suspension of breath, akin to the freezing response that kicks in when we are startled: we gasp and say ‘Wow!’
  + Wonder has a dimension that can be described as **spiritual**: we look upwards in veneration; hence Smith’s invocation of the swelling heart.
* Smith’s analysis appears in his History of Astronomy (1795). In that underappreciated work, he proposed that wonder is crucial for science. Astronomers, for instance, are moved by it to investigate the night sky. He might have picked up this idea from the French philosopher René Descartes, who in his Discourse on the Method (1637) **described wonder as the emotion that motivates scientists** to investigate rainbows and other strange phenomena. In a similar spirit, Socrates said that philosophy begins in wonder: that **wonder is what leads us to try to understand our world.** In our own time, Richard Dawkins has portrayed wonder as a wellspring from which scientific inquiry begins. Animals simply act, seeking satiation, safety and sex. Humans reflect, seeking comprehension.
* **Knowledge does not abolish wonder**; indeed, scientific discoveries are often more wondrous than the mysteries they unravel. Without science, we are stuck with the drab world of appearances. With it, we discover endless depths, more astounding that we could have imagined.
* Dacher Keltner, professor of psychology at the University of California, Berkeley, has found that **awe, an intense form of wonder,** makes people feel physically smaller than they are. It is no accident that places of **worship often exaggerate these feelings**. Temples have grand, looming columns, dazzling stained glass windows, vaulting ceilings, and intricately decorated surfaces. **Rituals** use song, dance, smell, and elaborate costumes to engage our senses in ways that are bewildering, overwhelming, and transcendent.
* Bringing these threads together, we can see that s**cience, religion and art are unified in wonder.** Each **engages our senses, elicits curiosity and instils reverence.** Without wonder, it is hard to believe that we would engage in these distinctively human pursuits.
* An alternative possibility is that wonder is a natural by-product of more basic capacities, such as **sensory attention, curiosity and respect,** the last of which is crucial in social status hierarchies. **Extraordinary things trigger all three of these responses at once, evoking the state we call wonder**
* The primatologist Jane Goodall was observing her chimpanzees in Gombe when she noticed a male **chimp gesturing excitedly at a beautiful waterfall.** He perched on a nearby rock and gaped at the flowing torrents of water for a good 10 minutes. Goodall and her team saw such responses on several occasions. She concluded that chimps have a sense of wonder, even speculating about a nascent form of spirituality in our simian cousins
* Anatomically modern humans have been around for 200,000 years, yet the earliest evidence for religious rituals appears about 70,000 years ago, in the Kalahari Desert, and the oldest cave paintings (at El Castillo in Spain) are only 40,000 years old. Science as we know it is much younger than that — perhaps only a few hundred years old. It is also noteworthy that **these endeavours are not essential for survival, which means they probably aren’t direct products of natural selection. Art, science and religion are all forms of excess; they transcend the practical ends of daily life. Perhaps evolution never selected for wonder itself.**
* Wonder alone is not sufficient. It imbues us with the sense of the extraordinary, but it takes considerable intellectual prowess and creativity to cope with extraordinary things by devising origin myths, conducting experiments and crafting artistic representations
* Art, science and religion reflect the **cultural maturation** of our species. Children at the circus are content to ogle at a spectacle. Adults might tire of it, **craving wonders that are more profound, fertile, illuminating**. For the mature mind, wondrous experience can be used to inspire a painting, a myth or a scientific hypothesis. These things take patience, and an audience equally eager to move beyond the initial state of bewilderment.
* If this story is right, **wonder did not evolve for any purpose. It is, rather, a by-product of natural inclinations**, and its great human derivatives are not inevitable. But wonder is the **accidental impetus behind our greatest achievements. Art, science and religion are inventions for feeding the appetite that wonder excites in us.** They also become sources of wonder in their own right, generating epicycles of boundless creativity and enduring inquiry.