

The Science of Awe | Life Connection Magazine

Amelia Leigh 12 Posts

By Cassandra Vieten, Ph.D.

I'm standing on the cliff in Big Sur, overlooking the ocean, smelling the salty sea air drift over my skin in cool fresh gusts, seeing the bright blue sky and deep blue/green water upon which the sunshine sparkles, the light seeming to not only shine on, but come from within the trees, the grass, the birds. I'm both hearing and feeling the vibration of the crashing of the waves below, tiny droplets of sea water mist my face. I'm teaching my third workshop at the Esalen Institute, and thinking to myself, "It doesn't get much better than this..." when as if on cue, a whale breaches majestically and crashes back into the water. My eyebrows lift, my jaw goes slack, I get goosebumps, my heart opens, every blood vessel seems to dilate, tears spring to my eyes and an involuntary sound escapes my lips, "Ahhh..."

Think back to your own most recent or most memorable experience of awe. What was it in response to? What were you thinking, feeling, smelling, seeing, or tasting? How did it feel in your body and mind? How would someone observing you from the outside know that you were having an experience of awe?

The word "awe" is onomatopoeic — the word mimics the sound it makes in the world. In this case, it's the natural sound of human awe — wow, ahh, a deep inhalation and exhalation. Awe has been defined by my colleagues Dacher Keltner and Jonathan Haidt as a sense of vastness, with an accompanying need for accommodation. Thinking back to your Psych 101 class, accommodation is a term coined by the developmental psychologist Piaget, who said that we have two choices when we encounter something that doesn't fit into our current meaning system. One is to assimilate it, and the other is to stretch our worldview to accommodate the new and larger perspective. That stretching is one way people learn and grow.

Until about a 15 years ago, there was very little research on awe. It wasn't thought to be one of the most important emotions, and took a backseat to things like fear, happiness, or anger. It turns out though, that awe plays a meaningful role in our day-to-day lives and overall well-being. Experiences of awe allow for us to expand how we see the world, and one theory is that the raised eyebrows, dropped jaw, and inhalation of breath actually help to facilitate the cognitive resources necessary to process something that would otherwise be "mind-blowing" — too much for us to process. The experience of awe allows us to process more richly and deeply what is going on around us, and some research shows it actually expands our sense of time, feeling like we have more time at our disposal.

The Institute of Noetic Sciences, where among other things our team has been conducting studies of the transformative potential of experiences of awe, was founded by Apollo 14 Astronaut Edgar Mitchell, sixth person to walk on the moon. On his return from his moonwalk, he had the window seat in the space capsule, and was overcome with a profound experience of interconnectedness, a sense of order, intelligence, and divinity shining through everything, and a deep recognition of the need for greater consciousness to end war and degradation of the

environment on our planet. This led him to start the Institute in 1973, and for over 45 years now, we've been studying how people's awareness and belief systems can be broadened to see new possibilities for humanity.

It turns out that thousands, perhaps millions of people have had the kind of experiences Edgar had, right here on Earth. Stimulated things like majestic experiences in nature, being present at the birth of a child, or the death of a loved one, moments of deep love or intimacy, or spiritual experiences — people have been able to stretch their worldviews and reorganize their priorities and motivations, feel a greater sense of belonging and purpose. They've experienced letting go of an obsession with their own comfort and happiness, to prioritize taking action for the thriving of their community and the larger world, paradoxically finding the joy and meaning they were seeking by doing so.

The vast majority of these people encountered an unexpected, surprising Aha! moment — one that they did not plan for or intend. However, now that we know that awe and wonder can help us grow and learn, my research interests have grown into fostering the conditions under which awe is most likely to happen, and actually inducing it in the laboratory. Our first experiment is being developed now — a virtual reality awe induction that mimics Edgar Mitchell and other astronauts experiences in space — what has now come to be termed the “overview effect.” Along with IONS scientist Loren Carpenter, who was a co-founder of Pixar Animation Studios and recipient of two Academy Awards, and ImmersiveVR Education who has recently created award-winning Apollo 11 and Titanic virtual reality experiences, we hope to have the program completed by the end of summer. We are interested in how it might shift people's sense of self, worldviews, well-being, and behaviors.

In addition, a guiding principle for our programs at IONS is to include elements we know will foster the kind of awe that leads to cognitive and worldview stretching, so that people can see brand new possibilities for themselves, and innovate solutions for our world. At our conference coming up this July 18-21 in Santa Clara, CA aptly called “The Possibility Accelerator,” we bring together spiritual teachers, astrophysicists, cosmologists, healers, scientists, and artists with a group of 600-800 fellow explorers to tap into individual and collective wisdom that can come at the intersection of scientific evidence and spiritual wisdom. We'll also have a lot of room for conversation and experiences, including an exhibition hall with virtual and augmented reality demos, to help people explore and integrate the new ideas.

Ask yourself, in your own life, have you prioritized creating the conditions for regular experiences of awe? When you do experience even mini-instances of awe — the beauty of the ocean on a clear day, or the squeeze of a baby's little fist around your finger — do you take the time to savor them? In your work with others, do you purposely include some opportunities for awe and wonder, especially if you are working to help people see new possibilities? I hope this article has encouraged you to do so, since as Keltner and Haidt observed, awe-inspiring experiences “may be one of the fastest and most powerful methods of personal change and growth” (2003, p. 12.)

¹Keltner, D., & Haidt, J. (2003). Approaching awe, a moral, spiritual, and aesthetic emotion. *Cognition and Emotion*, 17, 297–314.

²Campos, B., Shiota, M. N., Keltner, D., Gonzaga, G. C., & Goetz, J. L. (2013). What is shared, what is different? Core relational themes and expressive displays of eight positive emotions. *Cognition & Emotion*, 27, 37–52.

