

There Has to Be a God . . .

Evolution is described as the ultimate and inevitable result of random mutations occurring over successive generations, leading to functional improvements in organisms that provide a survival advantage. As a man of science, I believe evolution to be fact and responsible for our existence.

But humans exhibit many biologic characteristics that, although very helpful, do not lead to a survival advantage. How does evolution account for these features? One example, which the neurologist Oliver Sacks discussed in his 2010 book, *The Mind's Eye*, is the fact that humans can learn to read—or at least recognize visual notation—even though writing is a relatively recent cultural invention. Sacks suggested that we refer to this as the “Wallace problem,” after the British naturalist Alfred Russel Wallace, who described natural selection independently of Darwin. Wallace noted that the human brain is capable of many skills, including reading, writing, and mathematics, that would be of little benefit to primitive man. Wallace felt that natural selection could explain the appearance of immediately useful abilities only, meaning that something else must account for these higher abilities.

Although human intellect is arguably the most evolved of all human characteristics, far more mundane examples exist of features that lack immediate usefulness. For example, why do humans have urinary sphincters? Rectal sphincters play a key role in allowing the resorption of additional water from stool, aiding us in our constant need to retain water since our prehistoric ancestors departed the oceans millions of years ago. But no water reabsorption or other processes occur in the bladder. Although we would be extremely embarrassed to have urine constantly dripping down our legs, this would not qualify as an evolutionary advantage that would be selected for under the rules of Darwinism.

In 2013, *Current Biology* ran an article by Andrew Berry to honor Wallace on the centenary of his death. Berry wrote that Wallace eventually became a spiritualist, inspired by the observation that—paraphrasing Wallace—“even the ‘savage’ in his mud hut has the potential to play Chopin études on the piano, despite the fact that he will never even see a piano.” As Wallace stated in *Darwinism* in 1889, “We thus find that the Darwinian theory, even when carried out to its extreme logical conclusion, not only does not oppose, but lends a decided support to, a belief in the spiritual nature of man. It shows us how man’s body may have been developed from that of a lower animal form under the law of natural selection; but it also

teaches us that we possess intellectual and moral faculties which could not have been so developed, but must have had another origin; and for this origin we can only find an adequate cause in the unseen universe of Spirit.”

Wallace, it might be said, used the presence of a divine being to illuminate why the human brain developed certain characteristics that do not appear to be explained by evolution. Two of my favorite quotes apply here. The first quote, by the research engineer and scientist Emerson Pugh, is: “If the human brain were so simple that we could understand it, we would be so simple that we couldn’t.”

In *The Mind's Eye*, Sacks responded to the Wallace problem by stating that there is no problem: “The origin of writing and reading cannot be understood as a direct evolutionary adaptation. It is dependent on the plasticity of the brain, and the fact that even within the small span of a human lifetime, experience—experiential selection—is as powerful an agent of change as natural selection. Natural selection, for Darwin, did not forbid cultural and individual developments on a timescale hundreds of thousands of times faster than evolutionary development—on the contrary, it prepared the ground for them. We are literate not by virtue of a divine intervention, but through a cultural invention and a cultural selection that makes a brilliant and creative new use of a preexisting neural proclivity.”

This brings me to the second quote, from the astronomer Carl Sagan: “The idea that God is an oversized white male with a flowing beard who sits in the sky and tallies the fall of every sparrow is ludicrous. But if by ‘God,’ one means the set of physical laws that govern the universe, then clearly there is such a God. This God is emotionally unsatisfying . . . it does not make much sense to pray to the law of gravity.”

Ultimately, being human—and demonstrating the epitome of evolution—has to involve the realization that we can never know the truth about certain things, and being alright with that. My final quote, from the master himself, Yogi Berra, is: “You can observe a lot just by watching.”

Sincerely,



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