

Why Science?

Undoubtedly, almost everyone working in the natural sciences came to science by way of a somewhat unique route. Mine, I believe, began one Christmas when I was around eight or nine, when I received a wonderful Christmas gift from one of my aunts. It was a large, generic hardback book about natural history. It began with some chemistry and astronomy, continued through the geologic time periods, surveyed the major plant and animal groups, and ended with some ecology of the Earth's biomes. Being a typical youngster, I especially recall the dinosaur section, which I read and "studied" repeatedly. I believe this book was without question one of the earliest influences that pointed me toward the sciences and made me more curious about the natural world.

Later, in my mid-teens, I read *Silent Spring* by Rachel Carson and *The Population Bomb* by Paul Ehrlich and became concerned with what humans were doing to the planet. I then developed (and today retain) a general disappointment in humanity for its general lack of interest and concern about the real world. By that I mean the world that exists outside of the numerous human-centered disciplines and interests like economics, business, politics, fashion, sports, art, and all the other assorted human creations of society. I noted early on that the "knowledge" in most of these areas was quite changeable on a short time scale, while knowledge of the natural world typically changed on an exceedingly slower scale. From this I deduced that knowledge in the anthropocentric disciplines would quickly become dated, whereas knowledge about the natural world would be more lasting – generally far beyond a human life span. From this conclusion, I came to believe that knowledge of the natural world was more solid, important, and "true" than knowledge of the changeable "virtual reality" humans had created for themselves, and which seemed to totally envelope so many of the world's people.

Also, a couple of my first biology instructors in college did a wonderful job of conveying their sense of excitement and wonder with the natural world. I was hooked. I believe it was also, in part, my unique form of youthful rebellion that I turned toward science and the natural world and away from the "frivolous" and ephemeral human-centered world and views. Recent societal values only confirm my bias as I see increasing numbers of technologically savvy people spending several hours a day viewing computer screens, television screens, texting, surfing the web, yet often being incapable of spending 45 minutes over a leisurely dinner having uninterrupted conversation with real people (face to face), or being able to enjoy time in nature away from their technological fixes. Also, and sadly, I find that most people today have little if any concern for or understanding of the environment, and of course we now seem to have the majority of a whole political party that regards any concern for the environment as false and dangerous thinking.

I am currently teaching a course in evolution – one which I haven't taught in a few years. I am finding myself completely engaged in what has been learned over the past two decades that impinges on evolutionary theory. Here is a grand and ongoing synthesis of facts and theory with implications that affect both humans and all other life on Earth – knowledge that reaches back to the earliest life forms 3.6 billion years ago and includes the strangest twists and outcomes imaginable. How could anything else in the

world be as interesting and exciting? Learning about the latest escapades of the currently "hot" Hollywood starlets and couples doesn't even rate by comparison – nor, sadly, does the seemingly endless series of Middle East peace talks and conflicts.

I am now a senior citizen (at least according to some restaurant menus), yet I am still as curious as ever about an increasing number of topics in biology and the sciences, and increasingly frustrated because I just don't have the time to learn all that I would like to learn about evolution, genomics, brain science, eukaryote phylogeny, parasitology, astronomy, and many other fascinating areas. Everyone must find something to do with their lives, and many of the multitude of choices made are indeed fulfilling and contribute to society. Still, a life spent in learning and increased understanding of the world and universe we inhabit is arguably a great choice – even a noble choice. My heroes are almost exclusively scientists, many of which were indeed noble in their quest for knowledge and understanding. We are their benefactors, whether it be from practical knowledge about the treatment and prevention of disease, or the amazing and puzzling new view we have of the human genome – and the many others being completed. Children are born curious, which is why they typically ask so many questions. If this curiosity is not stifled by adults, it can easily continue into adulthood, and certainly has done so for the majority of working scientists, as well as the many who teach in the sciences.

The world and universe is still a strange and fascinating place filled with a great many interesting organisms, events, and processes – with much yet to be learned. We must always strive to share this viewpoint with our students, to stimulate their innate curiosity, and perhaps even to bias them away from the changeable and shallow nature of so much of that sphere of anthropocentric interest that too often seems to be "much ado about nothing."

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