

## DARWIN AT 199: A WARNING

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It is a familiar observation. “We live in a vast and beautiful universe. Something must be behind it. How could it have just happened?” Inevitably you then hear a person’s response to their own question. “There must be a God.” Or if said by a UU: “It’s a great mystery.” Usually we just let these comments rest. Chances are this person has not thought about these questions further than “there must be a God, a mystery.” The implication of course is that universe must have a designer, a creator, an intelligent design. Can we just let this pass without responding?

In six months we are coming up on the 200<sup>th</sup> anniversary of Charles Darwin’s birth and eight months after that the 150<sup>th</sup> anniversary of the publishing of his revolutionary *On the Origin of Species*. We are going to be hearing a good deal about God, mystery and design, intelligent or not! Even worse we are going to be hearing not only what Darwin said, but the implications people have drawn from what he said. Not everyone who claims life is “survival of the fittest” is an armchair philosopher. Many are actively out to prove they are the “fittest” and things get rather ugly. In the next few minutes let me frame what I feel will be the physical and spiritual high road for the discussions we face ahead.

I find it amazing what people credit God with. The insurance industry calls “Acts of God” such things as floods, hurricanes and tornados.” So it is not surprising that super novas, black holes, galaxies crashing through each other and asteroids can all be attributed to the work of God. Our theological ancestors, the Deists, believed that God created the universe, put all the gears in place, wound up the clock, and let it go. He became a kind of “Creator Emeritus.” Others believe that God intervenes from time to time, making mid course corrections. On the Sistine Chapel ceiling, for example, God is reaching in his hand and touching the outstretched hand of Adam. Lately over the last century or so we have been looking out at a Universe where the gears are not meshing. Things seem to be pulling apart. Even the great theories about how Universe operates don’t mesh, for example Einstein’s Theory of Relativity or Heisenberg’s Uncertainty Principle. But they seem to serve us quite well in parallel.

In the 17<sup>th</sup> century Anglican Bishop, James Ussher, announced that our world was nearly 6,000 years old. To be exact, the first day of creation was October 23, 4004 B.C. The Catholic Church independently placed it about a thousand years earlier, others a few hundred years more recently. All resulted from extensive analysis of Biblical texts. Fortunately for us within two hundred years after Ussher the new science of Geology was blossoming and they were finding rock formations millions of years old. There was of course a response, namely that God had tossed in these rocks to keep us humble. God “moves in mysterious ways.”

We now know that universe (at least since the “Big Bang”) is 13.7 billion years old, give or take 120 million years. And we know our planet Earth is about 4.5 billion years old. Or do we? Eleanor intimated to a neighbor down the street that she believed evolution to be true and the neighbor responded, “Oh you poor dear.” So not all our favorite people are on board. At any rate Darwin and the Theory of Evolution itself could not have emerged had it not been for geology: granite, shale, limestone, glacial erratics. As vast stretches of time opened up, our minds opened too. As we learned about liquid rocks, volcanoes, earthquakes, erosion, layers upon layers of ageing stone, it became possible to think about ages and ages of species of animals and plants. I am still haunted by the PBS series years ago hearing the voice of Carl Sagan, “billions and billions . . . of years.” Charles Darwin was powerfully influenced by the geologist, Charles Lyell, and his *Principles of Geology*, stories of vast upheavals through vast time.

Another influence on Darwin was Thomas Malthus and his essay, *The Principle of Population*. . . where he asserts that food supplies increase only arithmetically while populations increase geometrically. We live in a world of scarcity where some people will be hungry, even starve to death, while the strong will live. Since Earth can’t support everyone, some of us should grab as much as we can. Malthus anticipated “survival of the fittest” by several decades. His theory was great news for the East India Company, chartered to grab as much wealth from India as they could to feed their ‘very fit’ stock holders back in England. It was an age of discovery, expansion, colonialism, racism, classical laissez-faire capitalism. Evolution was in the social air, and the geological air. Now it was time it caught the wind in its sails in the new science of biology. If Darwin had not captured it others would soon have done so.

Urged and recommended by his grandfather Wedgewood (a Unitarian by the way) Darwin set sail on the brig, Beagle, and for nearly 5 years was the official naturalist on a trip around the world. High in the Andes Mountains at 12,000 feet he found fossil shells above fossilized pine trees in marine rocks. It was clear that vast periods of time were involved. In the Galapagos Islands he studied finches that in isolation had developed several sizes of beaks. By the end of this trip “natural selection” was clearly documented in his mind. It took him more than 20 years of poring through the evidence before he published *On Origin of the Species*. He was a painstakingly careful scientist. He established evolution as a fact of biology. And he proposed natural selection as its means. This is the part of the theory that was weak then but has been thoroughly developed and modified since. He did not, for example, have the advantage of genetics as the reason for variation, knowledge of DNA and mutation such as we have now.

It is important to emphasize that Darwin was a careful scientist but he did not have all the answers needed for his Theory of Evolution. These results came from researches by many others in the next century and a half and continuing. Let's look close to home at the UUA Principles and Sources for an example for why this distinction is important. In Source # 5 we read:

Humanist teachings which counsel us to heed the guidance of reason and the results of science, and warn us against idolatries of the mind and spirit.

Most of this is fine as it reads until we think about the phrase, “the results of science.” Is it the results of Darwin's work that are most important, or the understandings of our world he played a part in discovering? We know that the Theory of Evolution was in its infancy at the time of his death. It has survived and evolved further; it has gained great power. It is not the results of Darwin's work that are important but his attitude, his process of discovery, what he left to be modified and developed further by others. “The results of science” are transitory; it is the methods of discovery and continuing unfolding of knowledge that is important about science. Our source, as it is written, alas, is “scientism” not science. It points to just exactly what is not intended: “idolatries of mind and spirit.” We need to put our own house in order if we are to adequately advocate for Darwin's memory in the year ahead.

Let's look at what he did have: natural selection. Species develop in response to their environment. Those most able to thrive and multiply would survive. Those weaker in their adaptation would gradually fade away

and perish. So the “result” of this observation, was the idea, “Survival of the fittest.” This was taken up by popularizers and social economists and became gospel not only for biology but for social engineering, relations among ethnic and racial groups, the development of capitalism. People jumped to such conclusions as if you are rich you deserve to be rich, if you are poor you deserve to be poor. Those who succeed are the “fittest.” This is known as Social Darwinism and is as strong a prejudice today as it was when Herbert Spencer introduced it as a “result” of evolution, of natural selection. It is exactly what led the oil lobby and neo-cons to advocate we shoot our way into Iraq and grab as much of a hold on oil reserves as we can.

Let’s look at another example of “the results of science,” what used to be called “Man the Toolmaker.” I remember books about human evolution used to have pages of pictures of chipped stone tools, evolving from the ‘primitive’ rocks to the advanced spear heads. The question to be answered: why did humans, or proto humans, stand up on their hind legs and walk erect? The answer seemed obvious, so we could use our hands to hold tools. This idea is now fading. It appears it was a long time before we were hunters. For 4 or 500 thousand years we were scavengers and gatherers. After the lions and hyenas had their fill we would throw stones and drive them away and eat the leftovers! Hunting came much later.

Why then did we stand up? In the group of ancestors and cousins who came before our species emerged, it appears we have been standing up some of the time or all the time in several branches of the family, beginning as early as about 4 million years ago. Yes, we could throw stones, and use stones as tools. We could also run faster on our hind legs when chasing or more often being chased by big cats. We could stand up to see over the tops of bushes and high grass. The more we stood up the better able we were to stand up. Mutations along the way favored longer hind legs, more flexible ankles, more dextrous front hands. Instead of being told to put our paws down we were told by our parents to put our paws up!

My favorite reason came very late in our evolution. Between 150 and 500 thousand years ago we began to talk. (I know this may be hard for the extraverted to understand, that we waited so long, but it appears to be true!) Our first major tool was language! Over a period of three or four hundred thousand years our brains doubled in size. We found we now had lots to talk about! But our brains came to weigh just over 3 pounds plus our skulls and

faces. Now you try to carry 4 or 5 pounds around on all fours! It hurts: it's a pain in the neck! So we stood up full time to relieve the pain. As a tall minister who has spent half his time looking down, I can feel their pain. So we stood up. Our parents now had plenty of words to remind us "to stand up straight." That presented a new problem, getting oxygen and glucose up there to feed that big brain. Needless to say we became very conscious of our brains, maybe too infatuated for our own good. We now have the idea that natural selection sorted for us, the highest primate, the one with the big brain on top!

That leads us to a further question: what were we doing out in the savannahs anyway? Why didn't we stay in the trees? Climate change a million or so years ago had increased the areas of grasslands and decreased the areas of trees. It's the old story of the alpha and the omega. The alpha males were strong, athletic and empowered. The omega males were the losers, driven out of the trees to survive the best we could. In a world of "survival of the fittest" the fittest apes stayed in the trees. Strong primate groups defended the trees against us. Our ancestors, the not-so-fit, were driven away into the great open savannahs. In a world of tigers, leopards and hyenas it is best for groups to stay together. We were fallen apes, huddling and cuddling together for reassurance and safety. If you went off into the grass alone you would be eaten! In our humiliation at being driven out of our homeland, we stayed together for sheer survival. Have you ever wondered why humiliation and terror are such powerful motivators among human groups?

Darwin often spoke of the wars of nature, the violence involved in sorting for who would survive. It was the strong individuals who would persevere to propagate future generations. We proved just the opposite in our human history. We lost the wars in the trees and were exiled into the savannahs. It was our cooperative tribes that kept us alive. So we protected the weak. By banding together it was not the strong and best adapted who survived. It was groups of misfits and weaklings who propagated and created our branch of the family of apes. Evolution it seems moves in mysterious ways. Values of cooperation, compassion for the weakest among us, care, reassurance, became the keys to survival, not individual aggression and prowess.

Darwin spoke of natural selection as the chief means of evolution. We should define "natural." Is nature a plan, a way of selecting out what in a sense is supposed to evolve? Is there room for mid course corrections by a Divine hand? Or are things more chaotic, circumstantial, random?

Buckminster Fuller used to define natural as “whatever nature permits.” The human brain, that heavy three pound weight at the end of our necks, was not really necessary for sheer survival. We were doing fine scavenging for a living. Most of our so-called success was a byproduct. Language, abstract thought, advanced consciousness were brilliant strokes of good fortune for a humiliated, terrified, fallen ape. But eventually we produced a Socrates, a Confucius, a Buddha, a Jesus. We came to walk on the moon.

So where are we now after a million years or so? I have heard many Unitarian Universalists, when they are asked when they feel most religious, respond that they feel most spiritually alive when they are “out walking in nature.” And I can’t help but ask them where they think they are right now! We are nature! Every moment of our lives we are in nature. Nature pulses in our veins. We are the hurricanes, the rain, the bright sun, the exploding bombs and the crashing waves on rocks. We are the poet writing verses in the blue moonlight. We are the sounds of piano and voices singing. We are universe, one great chaos of verse!

As we approach the 200<sup>th</sup> anniversary of Darwin’s birth, I hope we will treat it thoughtfully and compassionately. It does matter what we think of evolution, natural selection, and our place in universe. Our lives and the prospects for humanity hang in the balance.

A Gallup Poll a year ago found 53 percent of the population considered evolution either definitely or probably true and 44 percent considered it false. Even more considered creationism true, 66 percent. Only 31 percent considered creationism false. So there is a good deal of persuading for us to undertake ahead. It does matter what universe people think they are living in. It is unlikely a long arm will reach in from somewhere out there and rescue us from ourselves, to stop wars and global warming on the one hand, or on the other to bring history to a close with Armageddon and the second coming of Christ. We are not that central in universe. The big brained fallen ape needs to survive on our own here. It is a lonely prospect, thousands of light years from any other intelligent life, if there is any at all out there. And we can be pretty sure there is no “heaven” UP there. That was a flat earth concept. Earth is a sphere. There is no UP on a sphere, only vast spaces out there, seen through our telescopes, receding billions of years in time. There will be no Divine rescue. Darwin towards the close of his life had become an Agnostic.

And for those with inflated egos, who feel all of evolution exists for the purpose of producing our humanity, look out for the bacteria and viruses! Remember the dinosaurs! Get right with balances of earth and do it quickly! Control carbon and methane releases. Harness the sun and the wind. Breathe deeply while ye may. Drink pure clear water. Love your neighbor as yourself. Forget about taking resources from others, “survival of the fittest,” “nature red in tooth and claw!” Whatever heavens there will be, or hells, will be our planetary work, our negotiations, our cooperation, our compassion right here and right now. Our destiny will be manifest only with our best selves, those byproducts of a million years of evolution that made it possible for life to dream of plenitude for all, of freedom, of fulfillment, of love.

**For further reading:**

Branko Bokun, *Man: the Fallen Ape*.

Charles Darwin, *Origin of Species* and *Voyage of the Beagle*.

Theodosius Dobzhansky, *The Biological Basis of Human Freedom*.

Loren Eiseley, *Darwin's Century* and *All the Strange Hours*.

Jane Goodall, *In the Shadow of Man*.

Stewart Guthrie, *Faces In the Clouds*.

Julian Huxley, *Evolution In Action*.

Ashley Montagu, *The Human Revolution*.

Michael Polanyi, *The Tacit Dimension*.

William I. Thompson, *The Time Falling Bodies Take to Light*.

B. Wood & B. Richmond, “Human Evolution: Taxonomy and Paleobiology”