Thought for Contemplation: "You can't get used to the stars no matter how long you live here." Jennifer Egan[1]

"On the Shoulders of Giants"

The Rev. Dr. Anita Farber- Robertson
First Parish in Northboro
Evolution Sunday
March 1, 2015

Readings: Genesis 1
Charles Darwin, by Timothy Lutts excerpted

It was the year 1950, at a park in New York City. A young mother, who was to be my mother-in-law, took out a very long rope and tied it around the trunk of a tree. The other end of the rope she tied around the waist of her two year old son. Then she opened up the blanket she was carrying, placing on it toys and snacks to entertain the child as they quietly played together. No child was to come near them. No child was to offer the boy companionship. No game of hide and seek or rough and tumble on the grass. Not because he was frail or sick, but because he was not. It was polio season.

How often she told that story to me. How often, as she watched me raise my son, did she remember out loud how scary it was to raise children a generation before, when it was polio season. I didn't remember our parents' terror. I was too young to notice. But I do remember being in the first grade and standing in a long line of nervous children. Eventually it was my turn to climb the steps to the stage and offer my arm to the doctor who sat at a table and gave me a polio

[1] Jennifer Egan, *A Visit from the Goon Squad*

vaccine. I felt brave and proud. I do not know, but I can only imagine now, that what my mother felt when I came home that day puffed up and proud, was incredible relief.

Nicholas Kristof, wrote two weeks ago in the Sunday New York Times:

> Can you name the discoverer of the small pox vaccine? Probably not: Edward Jenner is little known today. He lived roughly when Napoleon did…and he managed before he died to save many millions more lives than Napoleon cost in his wars of the same period.
>
> All told, up to the present, Jenner's vaccine appears to have saved more than half a billion lives since 1800…. Jenner should be counted as one of the great heroes of the modern world, yet he is forgotten while everybody knows of Napoleon. That's emblematic of the way vaccines get short shrift.
>
> In reporting on poverty worldwide, (he says) I've seen how much vaccines improve human well-being.[2]

They do. We no longer try to cure tuberculosis by putting people outside on balconies of sanatoriums in freezing cold weather, for "the mountain cure." We no longer use leeches to staunch a hemorrhage or cure high fevers. And we do not have to tie our children to trees to be sure they will not come into contact with someone who might be a carrier of the polio virus, at least we do not if our child has been vaccinated, or if we know that the community practices the universal vaccination of children.

[2] Nicholas Kristof, "The Dangers of Vaccine Denial," *New York times, Sunday Review*, Sunday, February 8, 2015

On December 7, 1972, for the first time, we got to see our beautiful planet. The image of the blue marble floating in space, infinitely beautiful and indisputably finite in reality, captured imaginations and evoked deep spiritual awakenings. It wasn't just that we had confirmed that the world was round, which we had taken in generations ago, we were confronted with the reality of its limitations and thereby, its preciousness. It was all we had. And it was beautiful. It may have been the deliverer of the deep insight into our ecological interdependence and vulnerability. The atmosphere was finite. The land was finite. The oceans were finite, and we were finite. There is no other place. No other home. Either we are going to manage to all live together and share this earth home, or we will perish.

Why do we know these things? Why do we have vaccines that eradicate small pox, and can eradicate polio, measles and other killers and cripplers? How do we know that the earth is a beautiful blue ball, that our oceans are finite, that and our land and our air?

Science. Science. It is science that has explored and uncovered these wondrous workings of the universe. It is science that has truly enabled and invited us to be co-creators of our lives and the universe in which we dwell. As we better learn how the universe works, we better learn how to support and sustain it. And we learn how it is that the universe pushes back, when we over-reach, disrupting its food chains, natural drainage systems, plant and animal balances, the intricate ecosystems that are intertwined.

And what is it that conveys to us not only that these things exist, that they are true and they are present, but that they are precious, even beautiful? How is it that although we are smart and have agency, we know that in the face of the eternity of time and space, we are but small

specks, brief travelers, guests of the gracious hospitality that has been extended to us simply by virtue of our being born? That l is something wondrous and wonderful, to be loved, cherished and protected? Something sacred.

Religion. Religion. Religion and science are different. And they are both important. Science to help us discover "What?" And religion to help us discover what it all means.

The beautiful words at the beginning of Genesis which we heard this morning, are the words to an ancient liturgy. They were spoken with reverence. They were sung with joy and praise, much as we sing "For the Beauty of the Earth," today. Reverence and praise. And the words answered the question, not how did it happen, but what did it mean? The answer is there, repeated over and over again. It is good. God saw that it was good. Whatever the sorrows, whatever the challenges, whatever the hurts and losses, the writers of Genesis, our forebears, wanted us to know one thing, if we knew nothing else. That it is good. And that we had a place in it, a place alongside the birds and fish and the animals with whom we share it.

Good to know. Essential to know. Essential to respect creation, and to know our place within it. Essential to know that it all works together in ways discernable, and mysterious. And we can step back in awe, with our ancestors and marvel at its beauty, its intricateness and its goodness.

But something troubling has happened in our country. There are folks who have confused religion and science, who have asked of religion scientific questions, and those who have asked of science religious ones. Science cannot really tell us why. And religion cannot,

and does not intend to tell us how. The six days of creation in Genesis are not meant to be human earthly counted days. They are increments. Spaces.

I am reminded of the quip, "Why did God invent time?" Answer: "So everything wouldn't happen all at once."

It's not that far off. Genesis gives it to us piece by piece so we can hold and hallow each dimension of creation in reverence, respect and wonder. It is not about time. It is about what does it mean.

One of the most accessible examples of what happens when the two are confused is the Creation Museum in Petersburg, Kentucky. This is a huge state of the art museum. It has huge displays, dioramas and interactive exhibits. In the dioramas it depicts human beings living together with dinosaurs. It teaches that the way the animals got across the oceans to populate the different continents was by using logs that had been knocked down by the great flood, as rafts. [3] What is presented as science is not science. It is religion, a very particular, specific religion with a very narrow interpretation of its sacred texts. The irony, which they seem to miss, is that the science they are using to offer these great state of the art exhibits could only have been created by people who had an open curiosity about how the world worked, and not been hamstrung by a preconceived notion they'd read in sacred texts.

Why am I preaching this to you, you who probably all believe in the scientific method, who understand that the universe was not created in six days, and that humans and huge dinosaurs did not walk the earth together? Because I am concerned.

[3] Matt Stopera reporting on his visit ot Creation Museum in *Buzzfeed.*

In fourteen states in this country, Creationism is taught in some of the public schools with public tax dollars.[4] In fourteen states in these United States, a country that has been a scientific leader, that has brought us computers and medicines, laser technologies and knee replacements, that put the first plane in the sky and a person on the moon, in this country, we are teaching our children fantasy and myth and telling them it is factual. In nearly one third of this country we are confusing our children about how the world works, and therefore, denying them the tools for making it better. I am concerned.

I am concerned that the pool of potential scientists in our country will shrink. That we will cease to be significant players in the increasingly connected and essential international scientific community.

Here in Massachusetts, close to Harvard University, MIT, University of Massachusetts, Brandeis, Tufts, and others, where authentic science is taught, and the difference between science and religion is clear, we may underestimate the danger. But I am talking about children, American children, our children, coming from nearly a third of our states where their public education undermines their capacity for critical thinking, and does not prepare them for studies or careers in the sciences. And we need them! We need those children, their insights, their creativity, their curiosity, their contributions, and we need for them to be prepared to take up the tasks of leading us forward.

We are standing on the shoulders of the giants who went before. Galileo, Copernicus, Charles Darwin, Isaac Newton, Edward Jenner, Jonas Salk, to name a few. Because of those giants we have been able to see farther than any could see before- see the heavens up close and the earth from a distance, see the limitations of the earth and the incredible

[4] Chris Kirk, in *Slate: Science, the State of the Universe*, January, 2014

possibilities of our biology, see the wisdom of our ecosystem, and understand what it means to be its stewards. And we must give our children the foundation they need from which to climb up upon the shoulders of the giants in science who uncover the workings of the world, as well as the shoulders of the giants of our faith who continue to plumb the depths and teach us what it means. We need them to know both religion and science as evolving disciplines, always learning, always growing, always amazing.

May we never stop learning. May we ever be grateful. And may we ever continue to lift up our children, high, high above us, so that they may see what has never been seen before.

Amen. And blessed be.

***Reading*:**

Charles Darwin was born in Shropshire, England, in 1809.

His parents were Unitarian, but his mother's family was adopting Anglicanism, and C.D. was baptized in an Anglican church.

Yet he attended Unitarian school.

His mother died when he was eight.

He studied medicine, learned taxidermy, and enrolled in the Bachelor of Arts course … to qualify as a clergyman, so he could earn a good income as an Anglican parson.

In his finals in 1831, he finished tenth out of 178. He was a gifted young man. But he never took holy orders.

He was diverted by an opportunity to embark on a two-year sea voyage to South America. His father thought it a waste of time, but was persuaded by his brother-in-law to accede.

The journey, in fact, took five years… The famous book that resulted from his sea voyage on the ship, The Beagle, was "On the Origin of Species," published in 1859.

…He died at age 73,… and was buried in Westminster Abbey, close to Isaac Newton.

But the truth is that Darwin, like most great men, only achieved that status by building on the work of those who came before him….

…the great Isaac Newton, beside whom Darwin rests, acknowledged this truth in a letter to fellow scientist Robert Hooke in 1676, writing, "If I have seen further it is by standing on the shoulders of giants."

And Newton himself seems to have borrowed the idea, because way back in 1130, Bernard of Chartres appears to have written:

"We are like dwarfs sitting on the shoulders of giants. We see more than they do, indeed even farther; but not because our sight is better than theirs or because we are taller than they. Our sight is enhanced because they raise us up and increase our stature by their enormous height." Timothy Lutts, Publisher, Cabot Wealth Advisory, adapted