

The 50th Anniversary of the Moon Landing

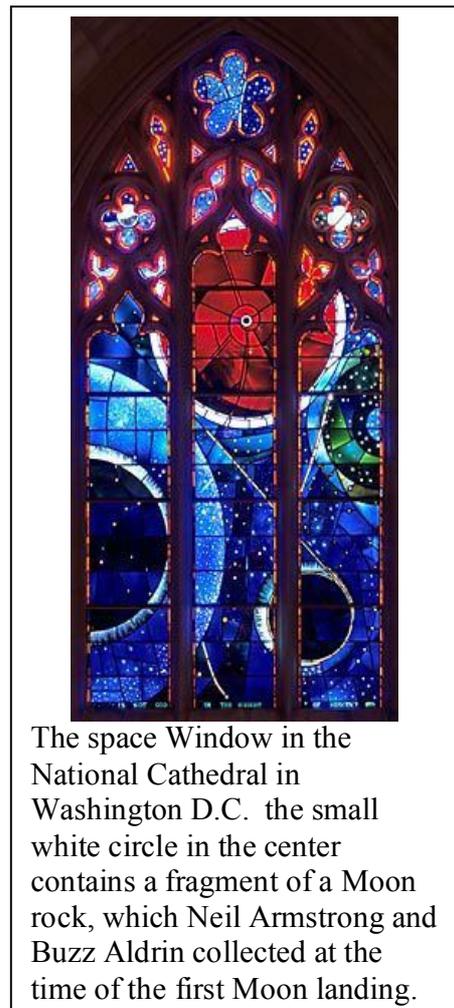
A Reflection on Cosmology, Evolution, and Humanity in the Space Age

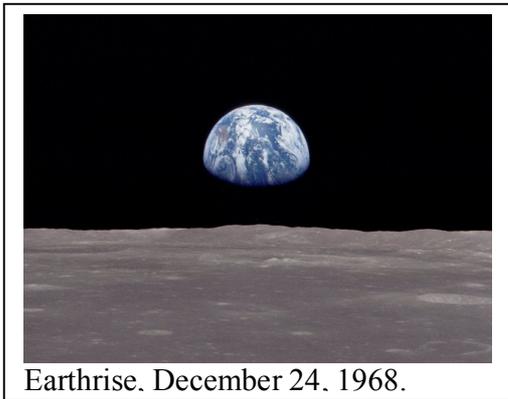
By Michael Parker

This year marks the fiftieth anniversary of Apollo 11 astronauts Neil Armstrong and Buzz Aldrin's landing on the Moon, which occurred on July 20, 1969. Six hours after the landing of the lunar model *Eagle*, on July 21, Armstrong became the first man to walk on the Moon. Armstrong's words upon first stepping on the lunar surface were triumphal but oddly innocuous: "One small step for man, one giant leap for mankind." Fortunately, there was no nationalistic braggadocio in his words. For him, landing on the Moon was a triumph for all humankind. But surely one misses a spiritual note in his words. Didn't humanity's first arrival on a celestial body give pause to human beings to consider their place in the grand scheme of things? In fact, it did.

On the fifth anniversary of the lunar landing, Armstrong, Aldrin, and Michael Collins – who orbited the Moon in the command model while his colleagues walked on the surface below – presented a 7.18-gram lunar rock to the National Cathedral in Washington D.C. At the presentation, Armstrong said that "this fragment of creation from beyond the Earth" is to be "imbedded in the fabric of this house of prayer for all people." It is now permanently lodged in a stain glass panel in the Cathedral known as the "Space Window," which shows majestic stars and planets in the heavens above.

The spiritual awe that many felt at the time of the lunar landing was anticipated seven months earlier when human beings first orbited the Moon. NASA launched Apollo 8 on December 21, 1968, and the fragile craft took the three-man crew of Frank Borman, James Lovell, and William Anders to the far side of the Moon after a three-day trip through space. They became the first human beings to voyage to another celestial body, entering into lunar orbit on December 24 and circling the Moon ten times. On their fourth time around they witnessed something no one had ever seen before, Earthrise. They saw the Earth rise up from the lunar surface as they came from the dark side of the Moon. Anders took the famous photograph of it. On their ninth orbit they made a television transmission back to Earth, which was watched in





Earthrise, December 24, 1968.

real time or shortly after by one of every four people on the planet. Each of the astronauts took turns describing the Moon, and then on this Christmas Eve they read the first ten verses of the book of Genesis, the story of creation. Borman finished the broadcast wishing a merry Christmas to “all of you on the good Earth.”

The success of the space program at this time could not have been better timed for Americans as this year was one of the most tumultuous in the nation’s history. The year 1968 saw the height of the Vietnam War, during which there were often violent protests in the streets of our cities. Following the poor results of the New Hampshire primary election, the sitting president, Lyndon Johnson, withdrew from the presidential race. Civil rights leader Martin Luther King was assassinated that year, a tragedy that was immediately followed by urban riots across the country. Bobby Kennedy, the leading Democratic presidential candidate, was assassinated just two months later; and the Democrats had what was probably their most tempestuous convention on record, with Chicago police greatly over-reacting to street protests around the convention. The Republicans nominated Richard Nixon for president, who later won, ironically, on a “law and order” ticket and with a promise to end the war.

When the three astronauts returned from their successful orbiting of the Moon, a stranger sent Borman a telegram, reading, “Thank you Apollo 8. You saved 1968.” *Time Magazine* named the three astronauts the “men of the year.” In the following year the “Earthrise” photo was turned into a postage stamp, with the words “In the beginning God...” printed at the center. Some say that this stamp marks the beginning of the Environmental movement – the first Earth Day occurred in 1970. When Borman went on a world tour that year, he met Pope Paul VI, who said, “I have spent my entire life trying to say to the world what you did on Christmas Eve.”

That trip around the Moon, the photograph of the Earth, and the words of Genesis seemed to strike a chord with many people at that time. Somehow the planet seemed more fragile and special that it ever had before. And the religious note struck by reading the opening verses of Genesis reminded everyone that the Earth didn’t just happen. It wasn’t an accident emerging out of the chaos of the universe. Rather it was the careful



Commemorative stamp of the Apollo 8 mission

work of a loving God – a God who created a beautiful home for his children.

Not everyone, of course, agreed. The famous atheist Madelyn Murry O’Hair brought a lawsuit against NASA for allowing the reading of Genesis because the astronauts were government employees and, therefore, should be banned from performing religiously inspired acts in space. The Supreme Court rejected the case, but in July of 1969 when Apollo 11 landed on the Moon, Buzz Aldrin quietly took Holy Communion but didn’t mention it until several years later so as not to fuel the controversy.

The Message of Genesis

The biblical verses that the three astronauts read that Christmas Eve are among the most inspiring and controversial of the Bible. The doctrine of creation out of nothing is not clearly taught in the first two verses, but later biblical authors interpreted it that way. The author of Hebrews said, “By faith we understand that the universe was formed at God’s command, so that what is seen was not made out of what was visible” (Heb 11:3) – the doctrine of creation *ex nihilo*. Later Christian theologians – especially Augustine – interpreted it that way too.

In the biblical account, the world is not presented as being created all at once but rather in stages over a period of seven days. From the earliest centuries these seven days were not always considered to be literal days. It was also recognized that the Genesis text on creation was more a poetic than a scientific account. The acts of creation are presented in pairs of three, the first three days with the second three days – a beautiful example of Hebrew poetic parallelism. Hence on the first day there is light, and on the fourth there are Sun and Moon. On the second day there are water and air, and on the fifth day there are fish and birds. On the third day there are land and vegetation, and on the sixth day there are animals and people on the land. The whole creative process is capped off on the seventh day when God rested.

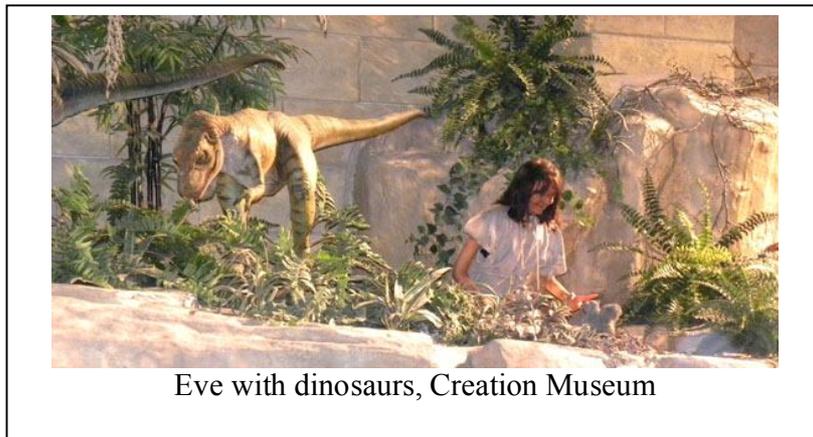
The Jews thought of the number seven as a perfect number, the number of God himself. The theological truth to be grasped here is that God is the creator, that all came about by his plan and his power. A second point is that after each day of creation God said, “It is good”; and after the creation of human beings at the end of the creative process, he declared, “It is very good.”

There is also a special message here for human beings. God created man (humanity) as male and female. He created them in his own image – so that we are in some way a reflection of the divine. Finally, these creatures were directed to fill the Earth with their progeny and to rule over the planet.

This is a controversial passage because there are many things to stumble over. In what way are we made in the image of God? What is the nature of man as male and female? In what sense are we to be rulers (or stewards) of the planet? What exactly was the process of creation? Should we interpret this passage poetically so that we come away with a sense of wonder and awe, or are we to take it more literally than that?

Creation Science

One answer to that last question can be found at the Creation Museum, which opened in 2007 in Petersburg, Kentucky – about four miles west of Cincinnati. This is a \$27 million facility organized by the Australian born Ken Ham. It purports to present the creation of the Earth from a literal interpretation of Genesis. In what is called the “young Earth” interpretation of creationism, the Earth was created only 6000 years ago; Adam and Eve are historical characters; and all the animals that ever lived on the planet were created in the same brief period – seven days. Hence the Museum includes a display that shows human beings living at the same time as dinosaurs.



Eve with dinosaurs, Creation Museum

Roughly 50 percent of all Americans believe in some form of creationism; and, though there are no statistics on this issue for all Christians on the planet, I suspect most would also say that they affirm creationism as opposed to evolution. In addition to the “young Earth” version of creationism, there is also an “old Earth” version that interprets the “days” of Genesis as being potentially long epochs of time.

There is also the school of thought called “intelligent design,” which should not be confused with creationism. Intelligent design, or ID, began in 1991 with a book by Philip Johnson, *Darwin on Trial*. This takes a very sophisticated look at the modern science of Evolution and points out all of the logical and technical problems with it. Johnson’s central view is that scientists are trapped in the scientific paradigm of evolution and are therefore incapable of seeing its flaws; or, if they see its flaws, they cannot admit them without committing professional suicide. These flaws, therefore, are not given the attention that scientists would normally devote to such problems. This is a very interesting view. It made a big splash in the 1990s, and it continues to present a challenge to the details of the theory of evolution. But the weak point in Johnson’s approach is that he is not able to present a credible scientific and naturalistic alternative to evolution – and neither is anyone else.

Science and Creation

Although many Christians reject the modern scientific understanding of cosmology and the evolution of life on this planet, scientists have undeniably given the world plausible,

richly fact-based, and truly thrilling accounts of how the universe began and developed, and how life on earth evolved.

If a modern scientist were to rewrite the first chapter of Genesis, the passage might read something like the following. The universe began with a singularity – or Big Bang – 14.7 billion years ago, and the Earth was formed about 4.5 billion years later. During its first 500 million years, our planet was under constant bombardment from asteroids and meteorites. It was at this time that the Moon was born, probably being a huge chunk of the Earth dislodged due to a giant asteroid strike. Then about 150 million years later microbial life appeared in the oceans. Scientists have yet to discover how this life came about, but it continued for several billion years. Then suddenly 550 million years ago a large number of new life forms appeared in what is called the Cambrian explosion. Four hundred million years ago plants appeared on the dry land, and 30 million years later animals appeared on the land. The dinosaurs appeared 230 million years ago, and then suddenly disappeared about 65 million years ago when scientists believe the Earth was struck by a large asteroid on the Yucatan peninsula in Mexico. The mass extinction that followed cleared the way for the rise of mammals on the planet. A number of humanoid types appeared over the last few hundred thousand years. All of them have died out except *homo sapiens* (ourselves), who date from about 195,000 years ago.

Even more contentious than modern cosmology for many Christians is the theory of evolution. Charles Darwin was the first one to teach us, in a well-reasoned, scientifically plausible way, that life on this planet evolved from single-celled life to more complex life forms. From fish came reptiles, and from reptiles sprung both birds and mammals. Darwin expressed various views on religion over the course of his life. At one time or another he was an evangelical Christian, a theist, an agnostic, and an atheist. But he writes at the end of *The Origin of Species* (1859) of his wonder over God's work of creation: "There is grandeur in this view of life [that is, evolution], with its several powers, having been originally breathed by the Creator into a few forms or into one; and that...from so simple a beginning, endless forms most beautiful and most wonderful have been, and are being evolved."¹

Francis Collins

Similarly, Francis Collins, the man who headed the human genome project (1990-2003), writes, "The elegance behind life's complexity is indeed reason for awe, and for belief in God – but not in the simple, straightforward way that many found so compelling before Darwin came along." Scientists, in working on the human genome project, have discovered that the alphabet that makes up the script of our DNA has only four letters but that each gene is made up of hundreds or thousands of letters of code. In fact the text of our DNA is 3.1 billion letters long. Collins writes that if you print "these letters out in regular font size on normal bond paper and bind them all together... [the result would be] a tower the height of the Washington Monument."² The amazing thing is that all that

¹ Cited in Francis Collins, *The Language of God: A Scientist Presents Evidence for Belief* (New York: Free Press, 2006), 98-99.

² *Ibid.*, 1-2, 86.

information is packed into each one of the tiny cells that make up our bodies. Collins writes of the beauty and eloquence of this system of genetic coding. It's also astonishingly versatile for the same type of coding that produces a human being also yields soil bacteria, mustard weed, and alligators. We human beings may look different from one another because of race and background, but we are all 99.9 percent the same on the genetic level, which of course suggests that we all share the same origin, that we all emerged from the same small family of people – perhaps even from the same mother.



Francis Collins, physician-geneticist who headed the Human Genome Project

The evidence of the human genome has virtually clinched the argument for human evolution because it has revealed that the genetic similarity between human beings and chimps is about 96 percent. Moreover, about 45 percent of our genetic coding is inoperative. These are “junk genes,” genes that are left over from earlier stages of evolution that our bodies no longer use. If God created human beings independently from other life on this planet, then why would he include the defunct DNA of other animals in our cells? The only reasonable explanation is that we are not a separate creation but have evolved from lower forms of life.

Scientists looking at this naturalistic, complex, intricate, and – yes – beautiful means by which life on this planet has evolved and human beings have been produced are not inclined to lose their faith, but to have it affirmed. Francis Collins when he was asked to direct the Human Genome Project in 1992 spent an afternoon in a chapel in North Carolina praying to God for direction. He doesn't say why, but I suspect that perhaps he was concerned that he was going to undermine the Christian faith, undermine the cause of God in this world. But he found a peace that afternoon, which led him a few days later to agree to direct the project. When the project was complete in 2003, he wrote, “For those who believe in God, there are reasons now to be more in awe, not less.”³

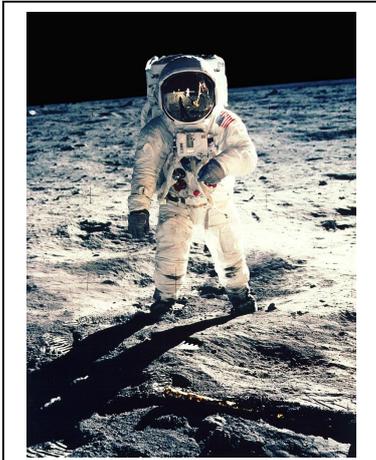
Conclusion

The science of our time has taught us that not only do the heavens declare the glory of God but so too does life on this planet – especially the climax of God's creation on the sixth day, the appearance of human beings. Though lowly creatures formed from earth, we have been given life from the very breath of God. Shakespeare caught the paradox of the baseness and glory of humanity in the famous lines of Hamlet:

What a piece of work is man, how noble in reason, how infinite in faculties, in form and moving how express and admirable; in action how

³ Ibid., 107, 119.

like an angel, in apprehension how like a god: the beauty of the world, the paragon of animals – and yet, to me, what is this quintessence of dust? (Hamlet, Act 2, Sc 2:327-332).



Buzz Aldrin on the Moon with Neil Armstrong reflected in his visor

The Genesis creation narrative and the discoveries of modern science together remind us of how exquisitely wrought this world is and, even more important, how inestimably precious we human beings are. We are neither, simply, the happy product of the collision of random particles over billions of years, nor are we the result of a fairytale-like creation event. Rather, as the Genesis account relates, we are part of this planet, for we emerged from it; and, as modern science teaches, we are also the direct result of a long, complex process of evolution – a process, Christians will add, guided at every step by a loving and all-powerful God. Human beings may be the “quintessence of dust,” but we are also the very purpose for which God made this world. How very appropriate, then, that the first astronauts to orbit the Moon should read the opening words of Genesis: “In the beginning God...”

There is reason, indeed, for awe and faith.

Michael Parker
Professor of Church History
ETSC