

*Earthrise: The Iconic Image and its Signalling of A New Era in Human Self-Awareness*

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Earth, United States, 1968. Mayhem erupts throughout the country, and indeed the world. Assassinations, wars, arms, counterculture, rock music, and pop art culminate into one of the greatest single decades of change in modern history. Though nearly all these far-reaching changes caused great fear and concern, one shining event permeated through the global consciousness of the 1960s, indicating the beginning of humankind's greatest crowning accomplishment, the result of over 400,000 of the best workers, creating an industry that has only, and will only, grow bigger and more daring, and inspire people to push beyond the bounds of what is thought to be possible: the birth of the Space age. The world changes with each accomplishment, ranging from Sputnik and Yuri Gagarin all the way to today's International Space Station. However, these ventures are experienced firsthand only by the select few who have the skills and temperament required to complete a mission from liftoff to landing. Therefore, photography and video have been the only way us terranauts are able to see this planet from the outside.<sup>1</sup> One of the most famous of these photographs was captured on the 24th of December 1968 on Apollo 8 by astronaut William Anders. As the first mission to leave Earth and visit another planet, Apollo 8 was the beginning of a new era in consciousness of humanity's view of our planet. The story of this change is best examined through the eyes of the 24 people who saw the full circle of the Earth in person. Though I facilitate the development and organize their words, this is their story; and, indeed, the story of that iconic photograph, *Earthrise*.

Apollo 8 left for the Moon on the 21st of December 1968 with a crew of three: veteran

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<sup>1</sup> to use Frank White's terminology from his well-known treatise *The Overview Effect*.

astronauts CDR Frank Borman, CMP James Lovell, and rookie LMP William Anders. Their mission was to orbit the Moon for approximately one Earth day, conduct observations, experiments, and extensive photography, then return to Earth safely. The primary objective was to test fly the Apollo CSM in cislunar space and lunar orbit; and the secondary objective, almost as crucial, was get people in lunar orbit before the USSR.<sup>2</sup> At this point in the space race, not much, if any, thought was invested in looking back at Earth once en-route to the Moon. President Kennedy had said land a man on the Moon and bring him home to Earth, not land him on the Moon and turn the camera back the other way. It wasn't until the voyage to the Moon itself that the crews of Apollo missions realized the implications of what they were seeing. Apollo 14 astronaut Alan Shepard did not expect to become emotional at the sight of Earth, later admitting that "when I first looked back at the Earth, standing on the Moon, I cried."<sup>3</sup> The accounts of the crew of Apollo 8, the first to see the sight, add perspective spectacularly. William Anders, our astronaut-photographer extraordinaire, realized that "we came all this way to explore the Moon, and the most important thing is that we discovered the Earth."<sup>4</sup> James Lovell was most moved by "the fact that just from the distance of the Moon, you can put your thumb up and you can hide the Earth behind your thumb. Everything that you've ever known, your loved ones, your business, the problems of the Earth itself, all behind your thumb."<sup>5</sup> Frank Borman noted the "sobering experience of not being able to see any of man's familiar works—cities, highways . . . no visual evidence they even existed."<sup>6</sup> It would not be until 8 slowed into lunar orbit that the famous

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<sup>2</sup> David Singleton, *In the Shadow of the Moon*, (United Kingdom, Vertigo Films, 2007).

<sup>3</sup> New Mexico Museum of Space History

<sup>4</sup> Andrew Chaikin, *A Man on the Moon*, (Alexandria, VA, Time-Life Books, 1999), 119.

<sup>5</sup> David Singleton, *In the Shadow of the Moon*, 2007.

<sup>6</sup> Frank Borman, *Countdown: An Autobiography*, (New York, W. Morrow, 1988), 206-207.

*Earthrise* photograph would be snapped.

The exact moment *Earthrise* was taken is well documented by NASA, just as every detail of spaceflight is recorded and studied. As the spacecraft came around the trailing edge of the Moon (Eastern hemisphere), the crew was busy photographing and studying potential volcanic impact basins. Borman performed a scheduled roll to the right to point a camera in Window 2 at a crater intended to be photographed. As the spacecraft rolled gently, Anders, in the right couch, saw Earth rise above the horizon through Window 5. Until this point, the crew had not seen an earthrise due to the spacecraft's attitude in the previous three orbits. He instantaneously exclaimed: "Oh wow! Look at that!"<sup>7</sup> Then, the scramble for a color film roll began. Luckily, Lovell was able to fly one to him from the Lower Equipment Bay, equally excited by the sight. Due to the spacecraft's gentle roll, Anders re-positioned the camera to Window 4, then took the image that changed the world. Lovell and Anders' enthusiasm was not initially shared by mission commander Frank Borman, who ordered with his task-oriented mindset: "Don't take that! It's not scheduled," and "Calm down, Lovell!"<sup>8</sup> Borman's temperament was not uncommon in the astronaut corps. The success of each mission depended on a levelheaded, by-the-book approach. However, as shown by later lunar flights, there is no stopping the view of Earth from pervading the flight plan. This entirely incidental moment was the start of a new view of the world, and of life, for the 24 humans who have been to the Moon.

In 1948, esteemed English astronomer and philosopher Sir Fred Hoyle reckoned that "once a photograph of the Earth, taken from outside, is available, a new idea as powerful as any in history will be let loose."<sup>9</sup> Indeed, the global reaction to *Earthrise* was immense, with people of

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<sup>7</sup> "Earthrise: The 45th Anniversary," Goddard Space Flight Center, NASA Scientific Visualization Studio, 2013.

<sup>8</sup> Goddard Space Flight Center, 2013.

<sup>9</sup> Al Reinert, *For All Mankind*, (United States, Apollo Associates, 1989).

every profession and belief system taking meaning from the event. Arthur C. Clarke, author of the *2001* series, wrote: “the world that existed before Christmas 1968 has passed away as irrevocably as the Earth-centered universe of the Middle Ages.”<sup>10</sup> The Christian Science Monitor wrote: “perhaps with the new understanding will come reverence for our planetary home and for the uniqueness of life. We should cherish our home planet . . . [We] have no other sanctuary in the solar system.”<sup>11</sup> Later on, astronomer Carl Sagan, known for his ability to put grand ideas into concise and profound statements, mentioned in his book *Pale Blue Dot* the same inability to find traces of humans on Earth as Borman, as well as saying that “the Apollo pictures of the whole Earth conveyed to multitudes something well known to astronomers: On the scale of worlds . . . humans are inconsequential, a thin film of life on an obscure and solitary lump of rock and metal.”<sup>12</sup> He continues to discuss the effect of this idea in his field, saying astronomy “is a humbling and character building experience. There is perhaps no better demonstration of the folly of human conceits than this distant image of our tiny world.”<sup>13</sup> This is the power of photography—to bring a sight that is 300,000 kilometers away into the hands of regular people, going so far as to change their worldview. So, this begs the question: how do the 24 people who saw, in person, the full circle of Earth, that minuscule spec of dust lost in space, express their emotion, the meaning, their literal *weltanschauung*?

The majority of NASA astronauts in the 1960s and 1970s were pilots—almost without exception, test pilots. The profession of test piloting is inherently unemotive. To make a quick

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<sup>10</sup> Robert Poole, *Earthrise: How Man First Saw the Earth*, (New Haven, Yale University Press, 2008), Introduction.

<sup>11</sup> Poole, *Earthrise*, Introduction.

<sup>12</sup> Carl Sagan, *Pale Blue Dot: A Vision of the Human Future in Space*, (New York, Random House, 1994), 6.

<sup>13</sup> Sagan, *Pale Blue Dot*, 9.

decision in a dangerous situation, one must have a clean, logical temperament that can analyze facts and scenarios in quite literally less than a second. CMP Michael Collins of Apollo 11 is frank when he says that “the best crew for the Apollo mission would be a philosopher, a priest, and a poet. Unfortunately, they would kill themselves trying to fly the spacecraft. You are left with test pilots.”<sup>14</sup> Proceeding with that context, here are some accounts of their journeys. Michael Collins himself said that “the overriding sensation I got looking at the Earth was: my god, that little thing is so fragile out there,” a frequent statement among the astronauts.<sup>15</sup> Eugene Cernan of Apollos 10 and 17 told Frank White of the differences between an Earth-orbit mission and a trip to the Moon:

“One minute you’re over the United States, the next minute, you are over another area of the world, but physically you are still part of the world . . . a system you can understand and relate to. When you leave Earth orbit . . . you can see from pole to pole and ocean to ocean . . . I had to stop and ask myself, do you really know where you are in space and time and history?”<sup>16</sup>

Cernan’s experience on his two voyages to the Moon seem to echo Plato’s allegory of the cave, certainly as others do. He says in Reinert’s 1989 documentary, *For All Mankind*, “I know where I am when I look up at the Moon; it’s not just some abstract romantic idea, it’s something very real to me.”<sup>17</sup> In the model of Plato’s allegory, he has seen the cave from a different perspective, and now knows where he is. Frank White, philosopher and founder of the Overview Institute, compares humankind’s venturing into space to the first amphibian that crawled out of the ocean all those millions of years ago, beginning land-based evolution for that species, eventually

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<sup>14</sup> Frank White, *The Overview Effect: Space Exploration and Human Evolution*, (New York, Houghton Mifflin Company, 1987), 204.

<sup>15</sup> Sington, 2007.

<sup>16</sup> White, *The Overview Effect*, 206.

<sup>17</sup> Reinert, 1989.

becoming much of the animal life we see on Earth today.<sup>18</sup> Apollo 15 LMP James Irwin described viewing Earth from the surface of the Moon in his book, saying that “when you lean far back and look up, you can see the Earth like a beautiful, fragile Christmas tree ornament hanging against the blackness of space. It’s as if you could reach out and hold it in your hand.”<sup>19</sup> Apollo 16 LMP Charles Duke spoke of the blackness of Space, saying “it was a texture. The blackness was so intense.”<sup>20</sup> Charles Duke and Alfred Worden have both spoken in-person about the blackness of space, agreeing that space appears velvety and deep in an insulting way.<sup>21</sup> Yet through it all, there was the jewel of Earth, which, from cislunar space, looked to Worden like “an enormous sphere. It looked *phenomenal*. I could see oceans, clouds . . . and the oceans were a seemingly bottomless blue. The brightness and intensity is something photos cannot capture . . . the horizon was paper thin . . . Earth looked very vulnerable, in a way I had never understood before.”<sup>22</sup> Alfred Worden, CMP of Apollo 15, stayed in Lunar orbit for three days alone while his crewmates explored the plain beneath the towering Mount Hadley. He was enthralled by the understanding that the Moon truly is a sphere, not just a disk floating in the sky. However, throughout his six days altogether out at the Moon, “no matter what I was doing, I stopped to look at the earthrise. Our planet was the only place with color. Ethereal and small, it shone in the blackness of Space, much brighter than the Moon appears from Earth.”<sup>23</sup> Worden also spoke of how time was kept on a lunar flight, seeing as the 24-hour day and night cycle only exists on Earth: “We created our own time. . . the

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<sup>18</sup> White, 6-7.

<sup>19</sup> James Irwin, *To Rule the Night: The Discovery Voyage of Astronaut Jim Irwin*, (Philadelphia, A.J. Holman, 1973), 11.

<sup>20</sup> New Mexico Museum of Space History

<sup>21</sup> Conversation with Charles Duke; Conversation with Alfred Worden.

<sup>22</sup> Al Worden, *Falling to Earth: An Apollo 15 Astronaut's Journey*, (Washington, Smithsonian Books, 2011), 171.

<sup>23</sup> Worden, *Falling to Earth*, 192.

shades in the windows while we dozed helped to maintain the illusion, while the sun beat relentlessly on the spacecraft.”<sup>24</sup> So far, these are all experiences the astronauts had during their flights; but how did going to the Moon change life on this planet, on Earth? Eugene Cernan said, rather beautifully:

“One result of space travel was that I had become much more philosophical, at times unable even to focus on minor problems back on Earth because they just seemed too small . . . My fellow astronauts who went to the Moon encountered varying degrees of the same disease; we broke the familiar matrix of life.”<sup>25</sup>

“I knew that I had changed,” he said, “I no longer belonged solely to Earth. I belong to the universe.”<sup>26</sup> Cernan’s granddaughter once asked him: “Poppie,” she said, “I didn’t know you went to Heaven.” He replied, “Yes, Punk. Your Poppie went to Heaven. He really did.”<sup>27</sup>

*Earthrise* is part of a larger moment in human history, not just an iconic photograph of the 20th century. It signifies the beginning of humankind’s newest, greatest adventure: space, the next frontier. Our time has seen the end of humans belonging to one planet—the true beginning of the Copernican age. There are now people who know not just philosophically, but personally, from their own life experience, that Earth is but a single place in a vast universe. With that in mind, the true effect of *Earthrise* and its story have yet to become personal to all but 24 human beings, 12 of those 24 still with us, in their 80s. Alfred Worden concludes his book with these thoughts:

*“Sometimes, while I sit and enjoy the good company of my family, the Moon will slowly rise above the trees. I generally don’t pay it much thought. But occasionally, I am reminded of my brief glimpse into infinity on the back side. I still have lingering questions about what I experienced. The answers won’t come in my lifetime. That will be your job.”*

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<sup>24</sup> Worden, 175.

<sup>25</sup> Eugene Cernan, *The Last Man on the Moon: Astronaut Eugene Cernan and America's Race in Space*, (New York: St. Martin's Press, 1999), 208.

<sup>26</sup> Cernan, *The Last Man on the Moon*, 337.

<sup>27</sup> Cernan, 347-348.

*Try it sometime. Some day, all of us who journeyed to the Moon will be gone. Take a walk on a summer night, look up at the Moon, and think of us. A part of us is still there, and always will be.*"<sup>28</sup>

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<sup>28</sup> Worden, 279.



## GLOSSARY OF TERMS

CDR: Commander

CMP: Command Module Pilot

CSM: Apollo Command/Service Module

LMP: Lunar Module Pilot

LRO: Lunar Reconnaissance Orbiter

NASA: National Aeronautics and Space Administration

## IMAGE



(Courtesy of NASA)

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