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Earthrise: A Commentary on Planetary Emancipation and Freedom

Tory Schendel-Vyvoda

Institute for Doctoral Studies in the Visual Arts, Portland, UNITED STATES

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Abstract

Since the invention of mass communication, humans have developed technological advancements that have created non-human elements, enabling humans to physically leave the planet. With these new technological mediums, can one say that humans are experiencing a new level of planetary freedom? While technology allows for virtual engagement, it does not provide true planetary freedom. Therefore, I argue that acts of human defiance in technological environments are essential to challenge Earth-centric perspectives to achieve planetary freedom. To support this argument, I will examine the biblical exodus pattern to highlight the differences between planetary emancipation and freedom, emphasizing the role of defiance- or the refusal to obey a specific command or a chain of command- in driving the possibilities of emancipation. I will analyze significant techno-cosmic events, such as Sputnik, Lunar Orbiter 1, Apollo 8, and the photographic image of Earthrise, to illustrate how acts of human technological defiance have challenged previous Earth-centric views and the exodus pattern. Finally, I will examine the presence of human defiance within global interconnectivity—the noosphere. This investigation explores engagement with global human and non-human agents to reorganize life systems that foster new ways of thinking and shaping identity for humans in the twenty-first century.

Keywords: global consciousness, freedom, Apollo 8, Earthrise, noosphere.

Since the invention of mass communication in the twentieth century, humans have developed technological advancements that have not only created non-human elements but have also enabled humans to physically leave the planet. With these new technological mediums, can one say that humans are experiencing a new level of planetary freedom? While one can virtually engage with images, videos, and various forms of communication at the click of a mouse or explore foreign lands using VR goggles from the comfort of one's couch, simply utilizing technology does not grant individuals or communities true planetary freedom. Instead, relying on technology for its functional capabilities merely adds to the evolution of what it means to be human in a connected world. Therefore, I argue that acts of human defiance in technological environments are essential to challenge Earth-centric perspectives to achieve planetary freedom. To support this argument, I will examine the biblical exodus pattern to highlight the differences between planetary emancipation and freedom, emphasizing the role of defiance – or the refusal to obey a specific command or a chain of command – in driving the possibilities of emancipation. I will analyze significant techno-cosmic events, such as Sputnik, Lunar Orbiter 1, Apollo 8, and the photographic image of *Earthrise,* to illustrate how acts of human technological defiance have challenged

Correspondence: Tory Schendel-Vyvoda, Institute for Doctoral Studies in the Visual Arts, Portland, UNITED STATES.

previous Earth-centric views and the exodus pattern. Finally, I will examine the presence of human defiance within global interconnectivity—the noosphere.

The purpose of this investigation is to explore new areas of discovery by engaging with both human and non-human agents on a global scale. Humans can reorganize existing life systems to explore new ways of thinking, acquiring knowledge, and shaping identity. By embracing human defiance in technological environments, humans are empowered to challenge and revise the philosophical discourse of the twentieth century while redefining individual or community life systems to meet the needs of the twenty-first century.

The Cambridge Dictionary defines freedom as "the condition or right of being able to do, say, think, etc., whatever you want, without being controlled or limited," and emancipation as "the process of giving people social or political freedom and rights." Based on these definitions, the difference between freedom and emancipation lies in the notion of *from* versus *for*. Freedom, or being *for* something, is associated with oppression, while emancipation, or freedom *for* something, refers to the process through which what is oppressed is restored to those who sought the action. Highlighting this difference addresses a critical distinction in the usage of two words that are typically understood to mean the same thing. In the context of this article, when discussing planetary emancipation and freedom through the *Earthrise* image, it is necessary to define the differences between emancipation and freedom. Despite human advancements in technology, are humans trapped in a cyclical pattern of emancipation *from* and freedom *for* something, also known as an exodus pattern?

Scholar of ancient law David Daube explains in his book, *The Exodus Pattern in the Bible,* that the exodus symbolizes the act of freeing a slave according to social legislation and practice (Daube, 1963: 14). The account of the exodus is recorded in the *Tanakh*, the Hebrew Bible, specifically in the "Book of Exodus," which states: "A new king arose over Egypt who did not know Joseph. And he said to his people, 'Look, the Israelite people are much too numerous for us. Let us deal shrewdly with them, so that they may not increase'… So, they set taskmasters over them to oppress them with forced labor; and they built garrison cities for Pharaoh" (Exodus 1:8-12). As the Jewish people cry out to God, the Exodus model is revealed, demonstrating how God is moved to free the oppressed Israelites (Daube, 1963: 12). By the end of "Exodus 12," it is recorded, "That very day the LORD freed the Israelites from the land of Egypt" (Exodus 12:51), and later in the "Book of Deuteronomy," it is noted in the *Tanakh*, "Remember that you were a slave in the land of Egypt and the LORD your God freed you from there with a mighty hand and an outstretched arm" (Deuteronomy 5:15).

While the Jewish people were emancipated *from* the Egyptians, what did their freedom *for* mean? Instead of serving Pharaoh, the Israelites' allegiance shifted to God, as the *Tanakh* claims, "for they are my servants, whom I freed from Egypt" (Leviticus 25:42). In this paradox, service and freedom intertwine into a realm (Daube, 1963: 45), where the exodus is lifted out of the sphere of the "accidental" and linked to successors of eternal validity through God as not only a divine indicator in a biblical sense but "that he would vindicate them again and again, unto the last" (Daube, 1963: 14). However, if service is the fundamental requirement for God's vindication, perhaps defiance is necessary not only to achieve emancipation but also to attain freedom. While the exodus pattern represents a form of salvation, demonstrating how deliverance showcases the certain, eternal relationship between God and His people, human evolution through historical and cultural paradigms has led to a significant shift in allegiance—from God to technology.

Launched on October 17, 1957, Sputnik became the first artificial satellite to orbit Earth, marking one of the most significant revolutions in information during the twentieth century by creating a new environment for the planet (McLuhan, 1974: 49). Its successful launch by the Soviet Union ushered in a new era of political, military, technological, and scientific competition,

particularly as Sputnik heightened tensions between the United States and the Soviet Union. America feared that the Soviets could transport nuclear weapons from Europe to the United States, which ultimately led to the establishment of the National Aeronautics and Space Administration, or NASA, in July 1958 (Garber, 2007). With Sputnik enabling mass communication worldwide, alongside the invention of television and radio and the beginning of the Space Age, as "America did not want to be left in the dust by the Soviets' technological advances" (NASA, n.d.), the twentieth century set out on the mission for human planetary emancipation.

While several philosophers, including Plato, Cicero, Archimedes, and Hildegard von Bingen, speculated about life beyond the confines of planet Earth, the Space Race era transformed perceptions of Earth in incomprehensible ways. Media theorist Marshall McLuhan argued that Earth was viewed as a human-made container and academic circles were eager to explore their universal qualities, or human nature, as assessed by Immanuel Kant (McLuhan, 1974: 49). In the *Critique of Judgment,* Kant explains that human beings occupy a unique position in nature (Caygill, 1996: 141-2) and his philosophy of essential morality suggests that humans possess a "proper way of being in the world" (Caygill, 1996: 165). The launch of Sputnik began to challenge conventional ideas about the universal because, as Sputnik departed from the planet, philosopher Gianni Vattimo argues in his book *The Transparent Society*, "the dissolution of the idea of history and the end of modernity is the advent of the society of communication" (Caygill, 1996: 165).

Vattimo illustrates that every human experiences a plurality of lived experiences, and due to the modern era, there is a conscious awareness of this multiplicity of experience (Vattimo 1992: 70). Amplified by mass media, the continuous exposure to information further dissolves any claim of a universal history, and raising awareness of plurality causes a fundamental shift from previous philosophical thought. Machines like Sputnik usher in new possibilities to challenge strict traditional narratives that have dominated geographical landscapes. Additionally, due to Sputnik, McLuhan observes, "Nature ended, and Ecology was born" (McLuhan, 1974: 49). Ecological thinking became unavoidable as Earth took on the status of a work of art, altering human perception of the world, as people "sought to maintain equilibrium among components of [their] environment in order to ensure survival" (McLuhan, 1974: 49). This idea is further supported by critical philosopher Hans Blumenberg, who stated that with the emergence of ecological thinking, "Thinking globally is probably now less our choice than our lot" (Lazier, 2011: 609). With Sputnik and now additional satellites orbiting Earth, "all data influence other data," people in the electric age exist in a realm of simultaneous information (McLuhan, 1974: 49). With human-made creations in space facilitating mass communication, Sputnik revolutionized global communication; however, on August 10, 1966, the visual perception of Earth underwent a significant transformation.

Pressured by the Soviet Union, the United States launched the spacecraft, Lunar Orbiter 1. This craft was tasked with orbiting the moon and surveying potential human landing sites on its surface for the forthcoming Apollo missions (Byers, 2010: 106). With its deployment on August 10, by August 14, controllers from NASA began sending a series of commands to Lunar Orbiter 1 at 15:22:56 GMT (Byers, 2010: 106), and it started the first operation of the spacecraft's photographic mission (Byers, 2010: 107). The photographic subsystem on Lunar Orbiter 1 was built by Eastman Kodak and was put together with the precision of a Swiss watch. Every component was tightly placed in an aluminum "bathtub," which was the size of a watermelon and operated like a thrashing machine. NASA technical manual writer Bruce Byers illustrates the photographic process of Lunar Orbiter 1 in his manual, *Destination Moon: A History of the Lunar Orbiter Program*:

> the photo subsystem operated like a thrashing machine. The film, which had to go through three plane changes, was drawn from the supply spool, clamped in a

> movable platen, moved and exposed simultaneously, and advanced farther to make room for a new film-all in a matter of a few seconds (Byers, 2010: 107).

By August 29, Lunar Orbiter 1 had completed its photographic acquisition, with 205 exposed frames and photographs of all nine potential Apollo landing sites. While the spacecraft experienced some malfunctions, the mission was considered a success. Nonetheless, with Sputnik and now the Lunar Orbiter 1, human liberation from planetary confinement was becoming increasingly tangible. As human-made machines entered the atmosphere and orbited other celestial bodies, such as the Moon, the exodus pattern reemphasized itself. However, the fundamental validation of the allegiance between humans and technology is achieved through the information from Lunar Orbiter 1 returning to Earth. Nonetheless, Lunar Orbiter 1 marked the beginning of humans challenging and altering the exodus pattern as it ushered in the *Earthrise* era.

The tremor of human disruption occurred on August 23, 1966 (NASA, 2008), when top NASA officials Dr. Floyd Thompson, Clifford Nelson, and Lee Scherer challenged Robert Helberg, Program Manager for the Lunar Orbiter, to purposefully maneuver the Lunar Orbiter 1 from its flight plan and mission objective (Byers, 2010: 110-111). The aim was to reposition the photographic subsystem away from the lunar surface during orbits 16 and 26 to capture images of the Earth (Byers, 2010: 111). This proposal was viewed as a hazardous and unnecessary risk by Helberg, as moving Lunar Orbiter 1 off its mission course could result in its disappearance behind the moon, cutting off communication with ground control. If communication could not be re-established, "the Apollo-oriented mission photography would probably be undone" (Byers, 2010: 110). Fortunately, Lunar Orbiter 1 reconnected with ground control and captured two unprecedented images (Figure 1). The *Earth-Moon* images were the first to depict the Earth at a distance from its nearest neighbor (Byers, 2010: 151). The photograph showcases nearly half of the Earth along with a significant portion of the Moon and its craters (Byers, 2010: 151).

These *Earth-Moon* images were released to the public, accompanied by captions such as "Earth rising above the lunar horizon, the first image ever of the Earth from lunar orbit, a detail of our sixth image, taken Aug. 23, 1966, by Lunar Orbiter 1" (Ashworth & William, 2023). The term *Earthrise* was beginning to enter the global lexicon alongside the Lunar Orbiter 1 images. However, while the human disruption of the exodus pattern was challenged by Lunar Orbiter 1, NASA took the relationship a step further by altering the *Earth-Moon* photographs. The *Earth-Moon* image was rotated 90 degrees to create the visual effect of the Earth rising over the Moon, mimicking familiar views of the sun rising above the Earth's horizon. Additionally, the Earth was enlarged and cropped within the photographic frame to give it a more prominent presence. While NASA has been transparent about the digital manipulation of the *Earth-Moon* images made by Lunar Orbiter 1, it has not commented on why a horizon was included in these images (NASA, 2008). While Sputnik propelled global mass communication and Lunar Orbiter 1 the visual perception of Earth, the most critical advancement in technology regarding mass communication and visual perception of planetary drama and the exodus pattern unfolded in 1968.

On December 21, 1968, the United States launched the Apollo 8 spacecraft. Aboard Apollo 8 was a crew of three astronauts whose mission was to be the first humans to leave Earth and orbit the Moon. The crew consisted of Commander Frank Borman, who had previously commanded the Gemini VII mission in 1965; Command Module Pilot James A. Lovell, Jr., who had flown with Borman on Gemini VII and also commanded the Gemini XII mission; and Lunar Module Pilot William "Bill" Anders, whose only flight with NASA was Apollo 8. Together, they played a crucial role in this historic journey (NASA, 2020). While their successful mission transformed the world, no one could have predicted the overall impact these individuals would have on the people back home.

Similar to Lunar Orbiter 1, Apollo 8's objective was to photograph the lunar surface through human intervention. This aligned with President John F. Kennedy's aspiration to land humans on the Moon by the end of the 1960s (Bowker et al., 1971). The Apollo 8 astronauts were the first humans to view the far side of the Moon, and with remarkable timing and luck, one of the most significant photographs in human history was captured during the Apollo 8 mission. The photograph *Earthrise* was taken by astronaut Bill Anders from the Apollo spacecraft on Christmas Eve in 1968 (Figure 2). At approximately 10:30 AM Huston Time, Apollo 8 was coming around from the far side of the Moon for the fourth time. Bill Anders was in the right-hand seat, observing the Moon through his side window. He was taking pictures with his Hasselblad still camera fitted with a 250mm Zeiss Sonnar telephoto lens. Mission commander Frank Borman was in the left-hand seat of the Apollo spacecraft, preparing to turn the spacecraft to a new orientation according to the flight plan.

The timing of the rotation and the appearance of the Earth allowed astronaut Bill Anders to capture *Earthrise* as the planet came into view from his window. Before the fourth orbit of the Moon, the astronauts were unable to see Earth. Once released to the public, the image adorned the cover of *LIFE Magazine's* January 10, 1969, issue, titled "The Incredible Year '68 Special Issue." While the title acknowledges the remarkable achievement of humans traveling to space and returning safely, one might question whether the title truly reflects the image on the cover. When analyzing the *Earthrise* photograph, particularly in conjunction with the images from Lunar Orbiter 1, discussions about technology and art reveal how images meant to expand global awareness can be used to evoke critical questions regarding emancipation and freedom within a cosmological framework.

In the book *The Obsolescence of Man, Volume II*, philosopher Guenther Anders creates a Socratic dialogue between himself and an artist in chapter twenty, titled "The Obsolescence of Fantasy." In this section, the philosopher visits the artist at his studio, and they engage in a debate when the artist declares his intention to paint the atomic bomb over one of his landscapes (Anders, 2015: 223). While the philosopher attempts to persuade the artist that painting the atomic bomb is "too insignificant," his main argument is to illustrate that the bomb itself is too fantastic in that no depiction can capture its reality (Anders, 2015: 223).

As the philosopher and artist exchange ideas about the depiction of the atomic bomb in a landscape, one critical point raised by the philosopher concerns the painting's horizon (Anders, 2015: 232). The philosopher argues that if the atomic bomb is to be painted, it should be represented through the perspective of a cartographic aerial photograph. He supports this proposition by illustrating how, when viewed from above, this method of perception liberates images from their constraints imposed by horizons. In doing so, the artwork, enabled by the ability to soar in the air, dialectically transcends the viewpoint found on the surface of the Earth. Rather than merely presenting the perspective of a tree, as seen in the artist's landscape pictures, cartographic aerial images resonate with "the fact that today our world has become *without a here into a sensory event*" (Anders, 2015: 235).

After astronaut Bill Anders had photographed what would later be known as *Earthrise*, five days had passed before the astronauts returned to Earth. The film was retrieved and developed by Richard Underwood, the Apollo director of photography. In Robert Poole's book *Earthrise: How Man First Saw the Earth*, he carefully articulates the development of the Apollo 8 photographs. The images were processed at NASA's Manned Spaceflight Center in Houston — home of Mission Control — by Underwood. Since these images were of critical importance, Underwood decided to manually process the rolls of film instead of using automatic machinery. This method took him five hours, and after the negatives were developed and prints made, Underwood recalled, "I had a pretty good idea of what it [*Earthrise*] was going to look like…but when I actually saw the picture, after they returned, it was even better than I had anticipated" (Poole, 2008: 28). As articulated by British English Professor Joe Moran in his article *Earthrise:*

The Story Behind Our Planet's Most Famous Photo, Underwood took the liberty of editing the *Earthrise* photo by flipping it so that Earth would give the perception that it was rising over the Moon's horizon. He cropped the image to make the Earth look bigger and more focal. Underwood manipulated *Earthrise* to conform to an Earth-centric point of view (Figure 3).

As Poole reinforces, "there was something not quite right about the picture" (Poole 2008, 28). He continues to describe how Apollo 8 was in an equatorial orbit with respect to the Moon and the Earth. The spaceship then orbited around the Moon in the same plane, going clockwise. The astronauts would not have seen a "rising Earth," but an Earth appearing around the left side of the Moon, which would make the image's orientation vertical (Poole, 2008: 28). Poole also critiques *Earthrise* by stating:

> In the original photo, too, the Earth had been a much smaller part of the dark sky; this was cropped in the version released to the public, making the Earth seem larger. Instinctively, the photograph had been altered from a Moon to an Earth perspective (Poole, 2008: 28).

Moran then proceeds, "*Earthrise* was edited for anthropocentric ends." The Apollo 8 crew saw Earth to the side of the Moon, not above it, and the astronauts described Earth as tiny. Astronaut Anders compared the Earth to being "in a darkened room with only one visible object, a small blue-green sphere about the size of a Christmas-tree ornament" (Moran, 2018).

When a *here* is placed in an artwork, such as the addition of a horizon, the philosopher Anders describes these "amateurs with their images," trying to convince themselves that the world has a normal aspect. Even those who practice cartographic aerial images try to subscribe to the elements of normalcy by extending horizon narratives into faraway photographs. By manipulating images that should enhance global consciousness, adding a *here*, or a horizon, restricts the advancement of reality because "today's world, without a horizon, has become a world *without a here*" (Anders, 2015: 233). Additionally, the philosopher concludes by stating:

> In short: *the optical detail as such*, which simulates a world that is too constrained, is not real, insofar as today every point on the Earth can be reached and threatened—and is in fact in danger—from any other point. And this applies to the photo and the painted image: the peaceful character of your landscape, which is simply there by *itself*, painted in the impressionist manner, results in pure falsification (Anders, 2015: 233).

If Guenther Anders is correct in asserting that *Earthrise* is pure falsification, then Underwood's manipulation of *Earthrise* undermined one of the most critical images by giving it an Earth-centric perspective.

Despite being in a pre-digital age during the Apollo 8 mission, the instruments used—such as Anders' Hasselblad still camera and Underwood's equipment for developing the film rolls and creating prints for mass consumption—serve as intermediaries between the Earth and the human eye. Images of reality, like the atomic bomb and *Earthrise*, become something fantastical when the artist adheres to an Earth-centered ideology. Specifically, when choosing to superimpose a horizon on the atomic bomb or *Earthrise*, philosopher Anders asks, "So, you call[ed] upon your fantasy for help. Do you think that this will help you represent the real object?" (Anders, 2015: 229). When fantasy is imposed, the image becomes implausible. *Earthrise*, an image that could have contributed to global consciousness, was reduced to a *shock effect*, soon overshadowed by Apollo 17's image of the *Blue Marble* (Anders, 2015: 237) (Figure 4).

In addition to Underwood's manipulation of the photographs, the Public Affairs Office contributed to his fantastical idea. In crafting the image caption for the *Earthrise* photos, the Public Affairs Office released the following text to the public: "This view of the rising Earth greeted the Apollo 8 astronauts as they came from behind the Moon after the lunar orbit insertion burn" (Poole, 2008: 29). According to Poole, the term *Earthrise* had not yet been coined when the

caption was revised; therefore, as Anders articulates, the image has "a double falsehood, a double appearance" (Anders, 2015: 228). Not only was the term *Earthrise* fabricated, but almost the entire narrative surrounding the image was recreated.

In Anders' final remarks about the conversation with the artist and the atomic bomb, the artist "stubbornly introduced his atomic bomb into his impressionist landscape, anyway" (Anders, 2015: 238). While Anders appreciated the artist's stubbornness, it is worth reflecting on astronaut Anders' comments about Underwood's altered image of *Earthrise*:

> My favorite picture was not *Earthrise*. It's one where the Earth is sort of blurry and small. The smaller the Earth gets, the more it substantiates my new view that here we are, a kind of physically inconsequential planet, going around a not-particularly-significant star, going around a galaxy of billions of stars, that's not a particularly significant galaxy, in a universe where there's billions and billions of galaxies. And so, I mean, are we really that special? I don't think so. And yet, we act like it (Seattle Times Staff, 2012).

After the fantastical image of *Earthrise* was released to the public, twenty million people took to the streets across the United States to protest environmental destruction. This moment led to the creation of Earth Day, which now boasts more than one billion participants (Gerretsen, 2023). Despite astronaut Anders' preference for the unaltered image of *Earthrise*, the exodus pattern thus reemerges. The Apollo 8 astronauts were emancipated *from* Earth; however, what was their freedom *for*? Not only was *Earthrise* altered through Underwood's imaginative lens, but the image was also an act of defiance, reminiscent of Lunar Orbiter 1.

Before the monumental photograph was taken, Apollo 8's onboard tape recorder captured the astronauts' voices right before *Earthrise*. As the Earth peeks into Ander's' window, he exclaims, "Oh my God, look at that picture over there! There's the Earth comin' up. Wow, is that pretty?" (NASA, 2018). The following audio clip features Commander Borman, in a demanding tone, stating, "Hey don't take that, it's not scheduled" (NASA, 2018). However, while watching the "*Earthrise* in 4K" video produced by NASA and released on December 21, 2018, one can see the image of *Earthrise* appear on the screen, indicating that Anders snapped the picture with his Hasselblad still camera. Anders then calls on astronaut Lovell to load color film into his camera for another shot. Although the sequence of events that led to the famous image seems systematic, the tape recording provides further insights into whether Apollo 8 and the taking of *Earthrise* represented the first human planetary acts of freedom.

In his landmark essay, *The Work of Art in the Age of Mechanical Reproduction*, Walter Benjamin explored "how the age of mass media means audiences can listen or see a work of art repeatedly and access new meanings each time (McLuhan, 2014, p. *lii*). After listening to the audio recording from Apollo 8 of *Earthrise* multiple times, I overlooked the most subtle and human aspect of defiance that philosopher Howard Caygill, my advisor, initially highlighted. Whether Commander Borman responded instinctively or physically observed astronaut Anders raising his camera to capture the Earth after noting its beauty, he barked the order, "Hey, don't take that, it's not scheduled." Nonetheless, as demonstrated by Benjamin's essay, upon careful listening to the audio recording, one will undoubtedly hear astronaut Anders let out a grunt-like laugh before disobeying Commander Borman and capturing the *Earthrise* image. Anders further disobeys by pulling astronaut Lovell in and asking, "You got a color film, Jim?" While some sources suggest Borman was "joking," I completely disagree (Chaikin, 2018). Having served in the United States Army National Guard, I can confirm that astronaut Anders, as a subordinate to Commander Borman, indeed disobeyed a direct order from his superior, which is codified in the Uniform Code of Military Justice (UCMJ) as *Article 92*, or insubordination ("Article 92 Failure to Obey an Order," 2025). Astronaut Anders was aware that images were to be taken according to the mission log, and he was certainly instructed not to take the picture by his commander. Although Richard Underwood made trips to Cape Canaveral to brief the astronauts on how to photograph the Earth

to recreate the Lunar Orbiter 1 image with humans instead of a machine, the official photographic operations plan states that taking pictures of "the Moon and Earth from various translunar/transearth distances…[was] among the lowest priority" (Poole, 2008: 23-4).

While one might say I am speculating about astronaut Anders's planetary act of freedom from earthly constraints, military hierarchy strengthens my perspective, especially since it took until 2013 for Anders to receive proper credit for taking *Earthrise* instead of Borman (Chaikin, 2018). This moment, set against the backdrop of the iconic *Earthrise* image, is crucial because Apollo 8 not only liberated humans from Earth but also highlighted Anders's act of defiance as an integral part of this newfound freedom. It challenges society's outdated perceptions that cannot accommodate the realities of non-planetary confinement, a concept previously examined with Sputnik and Lunar Orbiter 1 but fully realized with Apollo 8. However, as the astronauts returned to Earth and the *Earthrise* images were altered, this upholds an Earth-centered viewpoint. Therefore, the question arises: What is the significance of this episode of emancipation and freedom? Is it merely to wander the metaphorical desert for forty years, or does it demonstrate that humanity is beginning to transcend a repetitive exodus pattern?

NASA still circulates the fantastical images of *Earthrise*. Before researching *Earthrise* for this article, the only image I had encountered was the iconic manipulated version. If you were to Google *Earthrise* and click on the "Apollo 8: *Earthrise*" hyperlink from NASA, the manipulated photo would appear on your screen. Below the image, the caption states, "This iconic picture shows Earth peeking out from beyond the lunar surface as the first crewed spacecraft circumnavigated the Moon" (Wright & Gallagher, 2018). While it is toned down compared to the earlier mentioned caption, it does not indicate that the image has been altered in any way, which is misleading for general audiences like me, especially given the description reads, "Taken aboard Apollo 8 by Bill Anders, this iconic picture shows Earth peeking out from beyond the lunar surface as the first crewed spacecraft circumnavigated the Moon, with astronauts Anders, Frank Borman, and Jim Lovell aboard" (Wright & Gallagher, 2018).

Furthering the misconception, the "*Earthrise* in 4K" video produced by NASA's Scientific Visualization Studio initially shows Earth appearing vertically to the spacecraft in the first video. However, digital artists incorporate Underwood by adding a horizon to what is intended to be astronaut Anders's view from his window (Wright & Gallagher, 2018). To see a video with the correct vertical view, one must scroll to at least the third video on NASA's website. With this "double falsehood, a double appearance" (Anders, 2015: 228), still prominent in the twenty-first century, fifty-seven years after astronaut Anders captured *Earthrise*, what do acts of defiance mean, even when removed from the planet?

As observed through space exploration, reliance on technology alone is insufficient to overcome the pattern of exodus. Something more is needed—something that embodies both human spirit and technological innovation, allowing for constant defiance. This requirement is characterized by interconnectivity that transcends a Cartesian binary. It is not a separate entity but rather exists harmoniously alongside existing systems. It is not an apex of achievement but something that operates in tandem with other elements. This concept is known as the noosphere.

The term "noosphere" refers to the "sphere of the mind or intellect" (Samson & Pitt, 1999) and provides a broad framework for understanding information-based realms (Ronfeldt & Arquilla, 2020: 7). The noosphere has deep etymological roots, coming from the Greek word "noos," which means "mind," and the Latin word "sphoera," meaning "sphere." The pre-Socratic philosopher Anaxagoras was one of the first to recognize that mind and intelligence (nous) are distinct forces separate from matter. The term "noetic," which pertains to matters of the mind, has been in use since the seventeenth century. In 1834, French scientist André-Marie Ampère referred to "sciences noologiques," distinguishing these fields from cosmological sciences that focus on physical laws. The concept of the "noosphere" emerged in the 1920s and is credited to Pierre

Teilhard de Chardin, Edouard Le Roy, and Vladimir Vernadsky. Teilhard de Chardin considered it his invention, while Le Roy promoted the idea. This concept arose during discussions among these thinkers following the devastation of World War I, reflecting a strong belief in human potential and science despite the surrounding horrors (Samson & Pitt, 1999: 4). While the term, particularly in the United States, has been applied to cyberspace, the noosphere, if anything, encompasses the cybersphere while maintaining "its own technological, organizational, and ideational levels" (Ronfeldt & Arquilla, 2020: 13). The noosphere is the thinking envelope that surrounds the Earth, where new social technologies empower individuals to think critically and explore their identities within institutions, non-institutions, or hybrids.

While Teilhard de Chardin conceptualized the noosphere as a way to connect the divine with the evolving technological world, it does not relate to sacred or sublime nature. Instead, the noosphere represents a medium characterized by cosmic pluralities where no universals exist, allowing individuals to express their uniqueness in a global context. Although Teilhard de Chardin asserted that personal identity and individualism would not be lost within the noosphere, this claim is contradictory because he advocates for a form of planetary "mono-culturalism" (Ronfeldt & Arquilla, 2020: 8). Due to the global scale of mass communication, "an electronic membrane cover[s] the earth…[wiring] all humanity together in a single nervous system" (Ronfeldt & Arquilla, 2020: 13). While one may oversimplify the idea of a single technological nervous system, this interconnectedness is achievable only through disruptions in the exodus pattern. Unlike the infosphere, which encompasses the fusion of all the world's communications networks, databases, and information sources (Ronfeldt & Arquilla, 2020: 11), and the cybersphere, or the domain of the Net (Ronfeldt & Arquilla, 2020: 10), the noosphere is built on a spirit of human defiance that emerged during the space race era.

When revisiting the exodos pattern in relationship with the planetary emancipation and freedom, the exodus pattern was successful in maintaining a "service for freedom" (Daube, 1963: 45) relationship because the globe adopted universals, grand narratives, and metaphysical thinking where emancipation and freedom were interlocked in a cyclical motion throughout humanity. With the launch of Sputnik, humans began to shake the establishment of the human hierarchy, and society began to shift on a global level. However, this shift became catastrophic as more satellites entered the atmosphere and started to redefine how the Earth was conceptualized, especially with the creation of new technologies such as radio and television.

As humans proceeded to further move towards planetary emancipation, it became a reality due to Apollo 8. Not only were humans unbound from the Earth, but while in orbit, Borman also tried to impose earthly societal concepts on Anders, who laughed at him and literally redefined how all humans conceptualized Earth through the capture of *Earthrise*. However, when he returned to Earth, Anders and his *Earthrise* image, despite its fame, were shoved into the Earth-centric confines when Underwood placed a horizon on his image, similar to NASA's manipulation of Lunar Orbiter 1's image. As long as human plurality could be snuffed on a global scale, the infosphere and cybersphere could maintain the status quo because there was a layer of human dominant superiority controlling and hardwiring these two spheres. However, as technology and space exploration increased, the balance shifted when the thinking sphere, or noosphere, emerged.

The noosphere represents the fusion of technology, science, and spirituality through a global network where defiance is unstoppable. Thus, the noosphere can continuously disrupt the exodus pattern and address the question: what is planetary freedom *for*? It exists to facilitate the emergence of the noosphere—a planetary society where the global village thrives, allowing individuals to connect with other humans as well as non-human entities or extraterrestrials (Ronfeldt & Arquilla, 2020: 14). In this space, the limits imposed by our planet are overcome, and new ideas and creativity flourish, leading to innovative systems of life. Despite the singularity of the nervous system, it is not a place of confinement. Instead, it embodies a holistic, life-affirming

philosophy in which planetary freedom is in harmony with the universe. In the twenty-first century, planetary emancipation is only a mouse click away. The ability to surf the internet and explore various hyperlinks and websites creates a sense of emancipation. However, true planetary freedom comes from sharing ideas, which disrupts the "web of living thought" due to the noosphere (Ronfeldt & Arquilla, 2020: 7).

In conclusion, in Martin Heidegger's essay, *The Question of Technology*, the invention of the radio, television, and the emergence of satellites due to Sputnik caused him to speculate and question the free relationship between human existence and the essence of technology (Heidegger, 1997: 311). Throughout his discourse, Heidegger states, "Technology is the mode of revealing…it expedites in that it unlocks and exposes," and from this revealing, the realm of truth is exposed (Heidegger, 1997: 318-21). Contemplating Sputnik caused uneasiness for Heidegger, but nothing prepared him for when Lunar Orbiter 1's *Earth-Moon* image surfaced. In September 1966, Heidegger reflects on Lunar Orbiter 1's images of the Earth in an interview for *Das Spiegel*:

> Everything is functioning. This is exactly what is so uncanny, that everything is functioning and that the functioning drives us more and more to even further functioning, and that technology tears men loose from the Earth and uproots them. I do not know whether you were frightened, but I at any rate was frightened when I saw pictures coming from the moon to the Earth. We don't need any atom bomb. The uprooting of man has already taken place. The only thing we have left is purely technological relationships. This is no longer the Earth on which man lives (Lazier, 2011: 609).

A terrified Heidegger, who was alive to see the *Earthrise* and *Blue Marble* images but did not comment on them publicly, viewed Lunar Orbiter 1's images as an undoing of phenomenology (Lazier, 2011: 610). One of the presuppositions of phenomenological analysis is that the body has a customary orientation in space: up and down, front and back, above and below, before and behind (Lazier, 2011: 610). As he stated in *The Question of Technology*, the technological revolution allowing pictures like *Earth-Moon* revealed the truth about Heidegger's ontological philosophy- that his *Dasein* does not work on a planetary level since it presumes a local, situated, and finite *being-there* (Lazier, 2011: 611).

Heidegger believed that planetary emancipation was synonymous with earthly demise. While this view is not entirely incorrect, it is essential to disrupt how humans are tethered to the Earth through concepts like *Dasein*. This disruption is vital for understanding how other social constructs, such as the exodus pattern, require liberation if humans are to move beyond life systems that have plagued humankind, as documented in human writings throughout space and time. Here, space refers to the geography of Earth, and time equates to recorded human history. Emancipation *from* the Earth, to achieve freedom *for* humankind, involves moving past the "old man who refuses to believe that the great world outside his village is any different from the one which he has always known" (Rovelli, 2016: 61). This realization was evident during the Apollo 8 mission and in the capturing of the *Earthrise* photograph.

The manipulation of *Moon-Earth* and, more critically, *Earthrise* by adding a horizon to the images represented an attempt to revert to Earth-centric philosophies that align with Heidegger's *Dasein*. However, with the rise of global mass communication, the emergence of the noosphere collaborates with technology and humanity to foster a thinking sphere where Earth-centric perspectives are scrutinized, challenging the Enlightenment universals encountered in modernity. While government agencies like NASA still circulate images of the manipulated *Earthrise*, global villages within the noosphere provide spaces where human defiance can share the pictures in their proper context, as astronaut Bill Anders observed. This ongoing movement of disruption shatters the exodus pattern and defines the purpose of planetary freedom. As emphasized by physicist Carlo Rovelli:

> Communication between ourselves and the world is not what distinguishes us from the rest of nature. All things are continually interacting with one another, and in doing so each bears the traces of that with which it has interacted: and in this sense all things continuously exchange information about one another (Rovelli, 2016: 70).

Due to this continual exchange of information, the noosphere—a global village enveloped by a web of living thought—reveals the cosmic pluralities to Earth and beyond.

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Appendix

List of Images

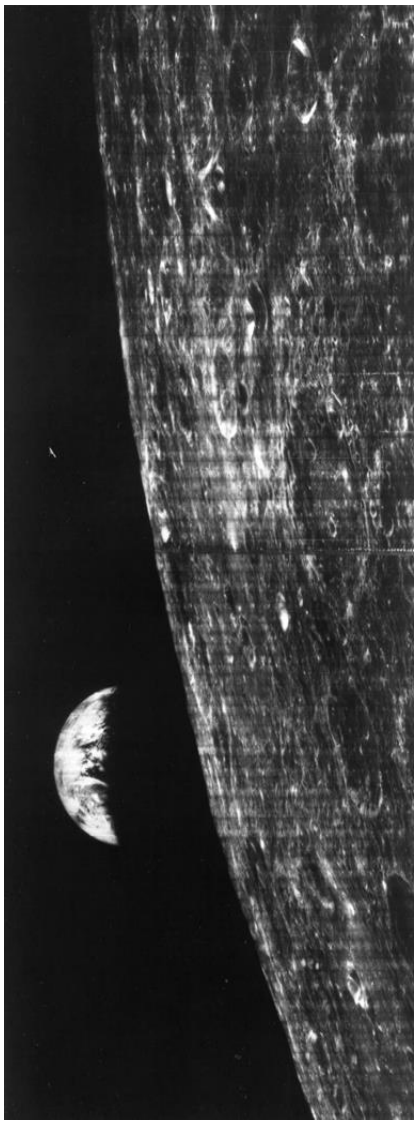

Image Source: NASA via Wiki Commons

Figure 1. Lunar Orbiter 1's image of the Earth and Moon taken in 1966

Image Source: Apollo Image Atlas

Figure 2. Earthrise by Astronaut Bill Anders

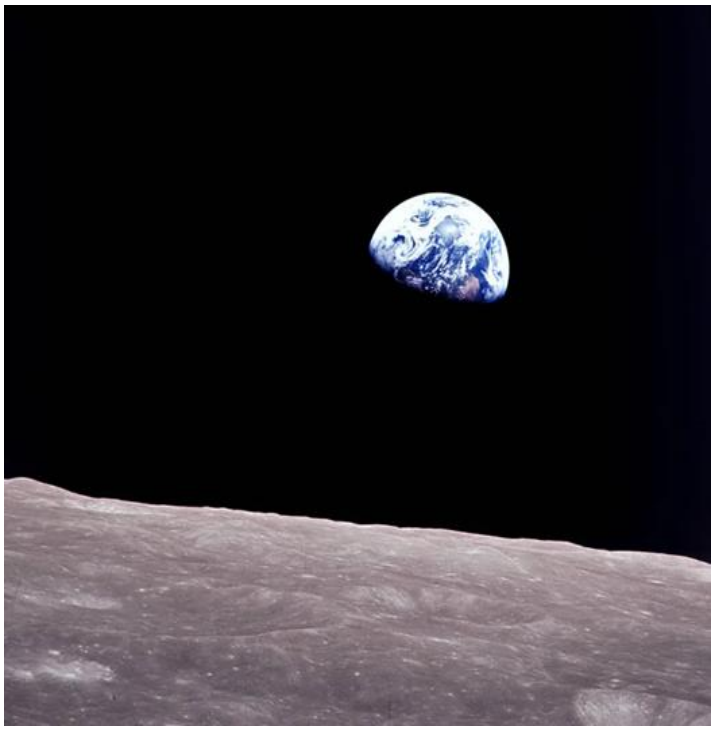

Image Source: NASA

Figure 3. Earthrise by Astronaut Bill Anders, edited by Richard Underwood and published by NASA as the official Earthrise image to the general public

Image Source: NASA

Figure 4. Blue Marble by Apollo 17


C O A S