



Earthrise: or, The Globalization of the World Picture Author(s): Benjamin Lazier Source: The American Historical Review, Vol. 116, No. 3 (June 2011), pp. 602-630 Published by: The University of Chicago Press on behalf of the American Historical Association Stable URL: <u>http://www.jstor.org/stable/10.1086/ahr.116.3.602</u> Accessed: 16/06/2011 14:24

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/action/showPublisher?publisherCode=ucpress.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



The University of Chicago Press and American Historical Association are collaborating with JSTOR to digitize, preserve and extend access to The American Historical Review.

Earthrise; or, The Globalization of the World Picture

BENJAMIN LAZIER

IN 1990, THE GERMAN ASTRONOMERS Freimut Börngen and Lutz Schmadel named an asteroid after one of the foremost political philosophers of the twentieth century, the German Jewish émigré Hannah Arendt.¹ Whether Arendt would have appreciated the gesture is uncertain.² After all, she opened her philosophical masterpiece *The Human Condition* (1958) by voicing grave concerns about a second satellite—*Sputnik*. In 1957, man had for the first time propelled his artifacts into the beyond, and he was likely to follow by propelling himself as well. But to desire to depart from the scene of the world, she felt, meant also to think of the world as something worth leaving. To emancipate ourselves from its physical limits—gravity—meant also to emancipate ourselves from the gravity of its existential claims upon us. *Sputnik* therefore embodied an impulse already much in evidence on Earth—to create an artificial planet. In *Sputnik* the ambitions of modern man lay revealed.³

These ambitions were ominous. They had also in part been realized. *The Human Condition* appeared not long after Arendt's famous study *The Origins of Totalitarianism* (1951), and she advanced through *Sputnik* some of the themes broached in that earlier effort. Totalitarianism, it turns out, shared something important with the Russian satellite. *Sputnik* embodied a desire to fabricate an artificial substitute for the living Earth. Totalitarianism, in turn, distinguished itself from every other form of rule in its ambition to create a new world fit to compete with this one, the nontotalitarian world, and its success was to be measured in the consistency of its artful fiction. Totalitarian regimes create an "artificially fabricated insanity," and "their art consists in using and at the same time transcending the elements of reality."⁴ To-

For their suggestions, I wish to thank Gerald Bruns, Simon Schaffer, Jim Clifford, Samuel Moyn, Martin Jay, Stefan Helmreich, Tim Ingold, Jennifer Roberts, Isabel Gabel, Daniel Liu, Alexander Geppert, Rüdiger Zill, Claudia Verhoeven, Jeremy Braddock, Paul Cheney, Allan Megill, David Nirenberg, David Biale, Robert Slifkin, Sean McEnroe, John Urang, Joel Franklin, and my inspirited students in the Reed Whole Earth Research Kollektiv (ReedWERK 1.0). For opportunities to present earlier versions of this article as a paper, I wish to thank the Zentrum für interdisziplinäre Forschung (Bielefeld), the Stanford Humanities Center, Brown University, the Committee on Social Thought (University of Chicago), and the Institute for Advanced Studies in Culture at the University of Virginia.

¹ She was not the only one upon whom they bestowed the honor. Together they had discovered hundreds of asteroids, and they could therefore afford to be catholic in their bequests (personal communication).

² After the launch of a second satellite, Arendt had this to ask of her friend and colleague Karl Jaspers: "Most honored friend—What do you think of our two new moons? And what would the [real] moon likely think? If I were the moon, I would take offense." Hannah Arendt and Karl Jaspers, *Briefwechsel*, 1926–1969, ed. Lotte Köhler and Hans Saner (Munich, 1993), 363. Thanks to Rüdiger Zill for the reference.

³ Hannah Arendt, The Human Condition (Chicago, 1958).

⁴ Hannah Arendt, The Origins of Totalitarianism (1951; repr., New York, 1968), 362.



FIGURE 1: "Earthrise." NASA.

talitarianism's artful fiction, however, had its all too real apotheosis in the concentration camp universe, a realm inhabited by a population of twilight creatures that Arendt called "the living dead." In her view, we did not need to depart from the surface of the Earth to create a death star. Western civilization had already managed it, right here.

All of this is curious. Only the morally maladroit would think to compare the death camps with a metal ball called "Companion." Notwithstanding the Cold War context in which it was launched or the shock it unleashed, *Sputnik* was for some just a harmless *piepende Kunstmond*, as the German philosopher Hans Blumenberg described it.⁵ It was a beeping, diminutive moon-manqué, a stimulus to reflection, but hardly to panic. Nonetheless, Arendt appealed to the same vocabulary to make sense of them both. For all their differences, *Sputnik* and totalitarianism, modern science and modern politics shared a common pathology. Each testified to the modern displacement of the grown by the made, of living organisms by technical artifacts.

Arendt's approach was idiosyncratic. Her concern was not. Anxiety about the triumph of the made over the grown was shared by a slew of twentieth-century figures across virtually every domain of thought and culture, and it has hardly abated since. It is the subtext for a host of pressing concerns, including the anthropogenic origins

⁵ Hans Blumenberg, Die Vollzähligkeit der Sterne (Frankfurt, 1997), 547.

of global warming, the engineering of transgenic organisms, the industrialization of agriculture, and the question of legal standing for natural objects.⁶ The field of environmental history is rooted in this anxiety, and it is a key issue in other fields as well. Historians of urbanism and the city, of industry, of regimes of labor (such as Taylorism or Fordism), of fashion and craft, of technology—in sum, anyone concerned with the history of what it has meant to make in the modern era—implicitly reflects on the issue. This holds for the making not only of things, but also of selves and of worlds. Blumenberg exaggerated when he declared the question of organism and artifact *the* theme of modern intellectual history—but perhaps not by all that much.⁷

To best grasp the importance of this theme, consider Earth, on some counts the largest organism of them all. Arendt and other mid-century intellectuals concocted powerful ideas about the transformation of the Earth into a man-made planet, ideas that crystallized in reflections on what it means when we look back upon Earth from beyond. In 1966, for example, Arendt's teacher Martin Heidegger, perhaps the most consequential philosopher of the twentieth century, spoke with consternation about photographs of the planet shot from space. "This is no longer the earth on which man lives," he complained.⁸ Blumenberg worked in the same influential tradition of thinking about technology and modernity that animated Heidegger and Arendt. Indeed, he may well have been that tradition's most superlative interpreter and his-

⁶ A few examples: Robert Bud, *The Uses of Life: A History of Biotechnology* (Cambridge, 1993); Jack Ralph Kloppenburg, Jr., *First the Seed: The Political Economy of Plant Biotechnology*, 2nd ed. (Madison, Wis., 2004); Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-Century America* (New York, 2002); Christopher D. Stone, *Should Trees Have Standing? Toward Legal Rights for Natural Objects* (Los Altos, Calif., 1974).

Of course, not all mid-century observers who were struck by the eclipse of the grown by the made expressed much anxiety about the development. Many embraced it with enthusiasm, or aimed to allay it by pushing our technical acumen still further. For example, the philosopher Herbert Marcuse, once a student of Martin Heidegger and later an inspiration to the New Left, inveighed against the technological character of the postwar welfare state ("one-dimensional society") only to call for still more techno-industrialization. Further advances, Marcuse held, would free mankind from the scourge of necessity. Marcuse advanced in Freudo-Marxist terms a critique of technocracy echoed in less rarefied language by groups such as Students for a Democratic Society (the "Port Huron Statement"), and in still less rarefied language by activist clowns such as Abbie Hoffmann. All sought to halt the technical colonization of society, but not by eliminating technology as such. Still others, especially those inspired by the new science of cybernetics (such as Norbert Wiener, Buckminster Fuller, and Stewart Brand), aimed to stake out a position beyond the terms of the anxiety altogether. By arguing that biological organisms and modern machines were two instances of the same phenomenon-self-organizing, selfregulating systems-they could declare the hoary threat posed by mechanism to organism over once and for all. Whether they did so only by redefining organisms as elaborate machines—a kind of systemstheory update to René Descartes's reduction of the bodily to the robotic three hundred years beforeremains open to question. See Herbert Marcuse, One-Dimensional Man (Boston, 1964); Tom Hayden, The Port Huron Statement: The Visionary Call of the 1960s Revolution (New York, 2005); Abbie Hoffman, Revolution for the Hell of It (New York, 1968); and Norbert Wiener, Cybernetics; or, Control and Communication in the Animal and the Machine (New York, 1948). See also Fred Turner's engaging study on the role of cybernetics in the thought and life experiments inspired by Stewart Brand: From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism (Chi-cago, 2006); and William Harold Bryant, "Whole System, Whole Earth: The Convergence of Technology and Ecology in Twentieth-Century American Culture" (Ph.D. diss., University of Iowa, 2006). ⁸ "Only a God Can Save Us': *Der Spiegel*'s Interview with Martin Heidegger," in Richard Wolin,

⁸ "Only a God Can Save Us': *Der Spiegel*'s Interview with Martin Heidegger," in Richard Wolin, ed., *The Heidegger Controversy: A Critical Reader* (Cambridge, Mass., 1992), 106. Günther Anders (Stern), Arendt's first husband and likewise a student of Heidegger, expressed similar sentiments, if in a different key; Anders, *Der Blick vom Mond: Reflexionen über Weltraumflüge* (Munich, 1970).

torian.⁹ But in 1975, Blumenberg decisively reversed their claims and declared their anxieties misplaced. He expected that the view of Earth from beyond would re-vindicate Earth—and the modern project itself—albeit by radicalizing the Copernican revolution that had undermined Earth's centrality in the first place.¹⁰ Within the span of a decade, something had changed—evident both in philosophical reflection and in Western culture writ large. The "Earthrise era" had begun. In some ways, it is also our own.

Broadly speaking, the Earthrise era comprises several important developments. The first is the rise of an "Earthly vision," or a pictorial imagination characterized by views of the Earth as a whole. Hear the word "Earth," and the images likely to flash through the mind are descendants of two views afforded by the Apollo missions. One shows the Earth half-cloaked in shadow as it floats over a lifeless moonscape. It arrived on Christmas 1968 and is called "Earthrise": hence, the "Earthrise era." (See Figure 1.) A second photograph, from December 1972, shows the disk of our

⁹ Although Germanophone in origin, this tradition has migrated across both national and disciplinary borders, with important afterlives in the United States, Europe, and Japan. It has also bequeathed several foundational stories about the modern relation of the natural to the artifactual, now spoken, often unwittingly, by technophobes and technophiles, philosophers and laymen alike. They include, first, a story about the early modern reversal of the ancient injunction that art is to imitate nature. This story narrates a momentous change: from an ancient understanding of human artifice as indebted to the rules nature gives to man, to a modern approach for which nature is an imitation of art, and artifice a means to dominate that to which it was in thrall. For a discussion, see especially Hans Blumenberg, "'Imitation of Nature': Toward a Prehistory of the Idea of Man as a Creative Being," trans. Anna Wertz, Qui Parle 12, no. 1 (2000): 17-54; originally published in German as "Nachahmung der Natur: Zur Vorgeschichte der Idee des schöpferischen Menschen," Studium generale 10, no. 5 (1957): 266-283, reprinted in Blumenberg, Wirklichkeiten in denen wir Leben (Stuttgart, 1985), 55-103. If this first story is a tale of human mastery, the second-the modern victory of "instrumental reason"-discovers a powerlessness at the heart of modern human self-assertion. Something about our attempts to master the world has gone awry, this story goes. Technical achievement has become compulsion. Freedom from a hostile or stingy nature comes at the price of a new form of servitude-to the "inexorable power" of the things we make, as Max Weber once put it, and still more to the technological impulse itself. Weber, The Protestant Ethic and the Spirit of Capitalism, trans. Talcott Parsons (New York, 1958), especially the introduction and chap. 5, "Asceticism and the Spirit of Capitalism" (citation from 184); and Weber, Economy and Society, ed. Guenther Roth and Claus Wittich, 2 vols. (Berkeley, Calif., 1978), esp. 1: 63-68, 85-86, 212-226. Other major signposts include Theodor Adorno and Max Horkheimer, Dialectic of Enlightenment, trans. John Cumming (New York, 1976); and Horkheimer, Zur Kritik der instrumentellen Vernunft: Aus den Vorträgen und Aufzeichnungen seit Kriegsende (Frankfurt, 1967). For a classic historical review of instrumental reason in action, see Charles S. Maier's essay on the interwar period "Between Taylorism and Technocracy: European Ideologies and the Vision of Industrial Productivity in the 1920s," Journal of Contemporary History 5, no. 2 (1970): 27-61. For a landmark review of the theme in intellectual history, see Langdon Winner, Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought (Cambridge, Mass., 1977).

¹⁰ In both his example and his thought, Blumenberg opens a way to thinking about the historical effects of these images that Heidegger especially would have us deny, and he is therefore an indispensable figure for the history recounted here. Although Heidegger (1899–1976) and Arendt (1906–1975) are well-known in this country, Blumenberg (1920–1996) is not. That is a shame, because he happened to be one of the most learned human beings of the twentieth century. By training, he was a philosopher and intellectual historian, with special interests in medieval and early modern theology and science. But his corpus ranged far and wide: from the eclectic and whimsical (lovely impressionistic books on lions, shipwrecks, stars, and caves) to the forbidding and profound (a trilogy on the origins of the modern age, a monumental treatise on the genesis of the Copernican world, extensive writings on the concept of myth, and the development of an entire historical-critical method in the history of ideas, called metaphorology). Of most salience here are his reflections on Copernicanism and cosmology: Hans Blumenberg, *The Genesis of the Copernican World*, trans. Robert M. Wallace (Cambridge, Mass., 1987; orig. German ed. 1975); and *Die Vollzähligkeit der Sterne*, published after his death. For a bibliography, see David Adams and Peter Behrenberg, "Bibliographie Hans Blumenberg," in Franz Josef Wetz and Hermann Timm, eds., *Die Kunst des Überlebens: Nachdenken über Hans Blumenberg* (Frankfurt, 1999), 426–470.

terraqueous planet suspended in the void. It is officially titled "Blue Marble" and is reputed to be the most widely disseminated photograph in human history. (See Figure 2.) Its "frameless" frame—the void—has left it especially open to appropriation. These two images and their progeny now grace T-shirts and tote bags, cartoons and coffee cups, stamps commemorating Earth Day and posters feting the exploits of suicide bombers. In other words, this pictorial imagination is not simply that. As a stand-in for the idea of the Whole Earth itself, it has acquired an iconic power that helps organize a myriad of political, moral, scientific, and commercial imaginations as well.¹¹

Views of Earth are now so ubiquitous as to go unremarked. But this makes them all the more important, and their effects historically novel. Our ideas and intuitions about inhabiting the world are now mediated through images that displace local, earthbound horizons with "horizons" that are planetary in scope—the distinction between earth and sky surmounted by that between Earth and void. These intuitions have dovetailed with new habits of speech, a vocabulary—and a second key development of the Earthrise era. But there is something peculiar about this vocabulary. It is just as "global" as "Earthly," if not more so, and it is peculiar because the Earth as seen from space is often perceived as the natural or organic antithesis of an artifactual globe. Still, there is no avoiding the fact that as common expressions, the word "globalization" and the phrases "global environment," "global economy," and "global humanity" simply did not exist before the Earthrise era, and this explosion of globe talk is part and parcel of changes in the Western pictorial imagination that at first glance seem unsuited to it.¹²

To make sense of these developments—the combination of Earthly vision with global vocabulary—we might think of the Earthrise era as a stage in a longer history, a "globalization of the world picture." "World picture" is the English equivalent of *Weltbild*, a philosophical term of art coined by Wilhelm Dilthey but now associated with Martin Heidegger. Heidegger did not use it to refer literally to images of the planet. Rather, he meant that the ways we comport ourselves vis-à-vis our natural and human-built worlds are pre-structured by a grasp of the world and everything in it as a picture, as something to survey and frame for our pleasure and use. Consider in this context the words of *Apollo 8* astronaut Frank Borman: "Look at that picture over there!" The first human to lay eyes on an Earthrise made intuitive appeal to a language that is the staple of tourists everywhere—to describe not the sight itself, but the conditions in which the sight could first be disclosed or come into view, its frame. It may be the most definitive confirmation possible of Heidegger's claim,

¹¹ Robert Poole has recently published an excellent and absorbing history of the photographs, with special attention to the bureaucratic arguments and technical processes behind the taking of the pictures themselves, and also to several of their foremost afterlives, the environmental movement above all. Poole, *Earthrise: How Man First Saw the Earth* (New Haven, Conn., 2008).

¹² On the relation of Earthly vision to new languages of cosmopolitanism, see Joshua J. Yates, "Mapping the Good World: The New Cosmopolitans and Our Changing World Picture," *The Hedgehog Review* 11, no. 3 (Fall 2009): 7–27. It is more difficult to assess the effects of these images in non-Western contexts or in the "developing world." For a few remarks on their reception in India, see Sheila Jasanoff, "Heaven and Earth: The Politics of Environmental Images," in Sheila Jasanoff and Marybeth Long Martello, eds., *Earthly Politics: Local and Global in Environmental Governance* (Cambridge, Mass., 2004), 31–52. For their mobilization by Islamic jihadism, see Faisal Devji, *The Terrorist in Search of Humanity: Militant Islam and Global Politics* (New York, 2008); and Combating Terrorism Center at West Point, the Islamic Imagery Project, http://www.ctc.usma.edu/imagery/imagery.asp.



FIGURE 2: "Blue Marble." NASA.

made thirty years before, that "the fundamental event of the modern age is the conquest of the world as picture."¹³ Thinkers in the phenomenological tradition, which attends to pre-cognitive ways of being in the world, help us see that this was

¹³ The full transcript is telling:

Borman: Oh my God! Look at that picture over there! Here's the Earth coming up. Wow, that is pretty!

Anders: Hey, don't take that, it's not scheduled. Borman: (Laughter). You got a color film, Jim? Anders: Hand me that roll of color quick, will you— Lovell: Oh man, that's great! Anders: Hurry. Quick . . . Lovell: Take several of them! Here, give it to me . . . Borman: Calm down, Lovell.

Cited in Poole, *Earthrise*, 1. Martin Heidegger, *The Question Concerning Technology: And Other Essays*, trans. William Lovitt (New York, 1977), 134.

no failure of imagination on Borman's part. His remark voiced something more like the condition for modern human experience in the first place—and if Heidegger was right, our condition in this alleged age of the world picture.¹⁴

So we are left with several questions about the Earthrise era: the scope of its vision, the peculiarity of its vocabulary, and the changes it inaugurated in the conditions for human experience, or what some philosophers call the "human condition." To address these questions, it helps, first, to situate the reactions of these philosophers to the view of Earth from space alongside those of their non-philosophical contemporaries, on the premise that philosophers and Grub Street pamphleteers alike reflect on the shared events of the day. They do so, of course, with different vocabularies, and at times philosophical discourse can come off as alien indeed. This is a difference to acknowledge. It is also a difference for historians to exploit. Arendt and company wrote with enormous depth, and so it can help, second, to think *with* them, on the premise that philosophers have something to say even to those of us who do not answer to the name. At the very least, they provide us with a repository of conceptual tools with which to reassess the era of which they were themselves a part.

This approach is openly eclectic. It swings between the registers of intellectual history, cultural history, environmental history, and the history of science. It also affords returns, above all in new kinds of stories about the Earthrise era. For example, we typically include the "Earthrise" photograph in a congratulatory story about the rise of environmentalism. There is something to this. Like globe talk, the language of environmentalism is an invention of the Earthrise era.¹⁵ But there is a more sober and wide-ranging story to be told. The examples of Heidegger, Arendt, and Blumenberg help us see how the history of the Whole Earth icon is part of a history of competing globalisms, and still more of technologically complicit onescommercial and environmental globalisms above all. Their example therefore prompts us to ask whether the visions and vocabularies of the Earthrise era have inadvertently accelerated our planetary emergency as much as they have inspired us to slow it down. They also help reveal the structural tensions between organism and artifact at the core of canonical environmental texts of the Earthrise era (such as Stewart Brand's Whole Earth Catalog and James Lovelock's Gaia) that destabilize the concept of a "global environment" itself.

If this approach supplements traditional contexts (the Cold War, environmen-

¹⁴ Heidegger worked out of a tradition in philosophy called phenomenology, largely invented by his teacher Edmund Husserl, who imagined it as a rigorous, systematic analysis of the structures of human consciousness and the phenomena that consciousness takes as its objects. Husserl's thought was taken in radically new directions by Heidegger, and refracted still further by those inspired to continue or contest his aims. These include Arendt and Blumenberg, who are addressed in this article, but more broadly a veritable who's who of twentieth-century philosophy. The literature on the topic is immense, but a useful historical starting point is Herbert Spiegelberg, *The Phenomenological Movement: A Historical Introduction*, 2 vols. (The Hague, 1960).

¹⁵ This is an important point to register. It is true that canonical texts such as Rachel Carson's *Silent Spring* appeared in the early 1960s. It is true also, as Adam Rome points out in an excellent article, that American environmentalism of the 1970s was prepared by diverse predecessors. On the other hand, the evidence that Rome and others (such as Michael Bess in the French case) adduce for a specifically "environmentalist" disposition comes mostly from the tail end of the 1960s and after—well into the Earthrise era. See Rome, "Give Earth a Chance': The Environmental Movement and the Sixties," *Journal of American History* 90, no. 2 (September 2003): 525–554; Bess, *The Light-Green Society: Ecology and Technological Modernity in France, 1960–2000* (Chicago, 2003).

talism) with new ones (the history of organisms and artifacts in the modern era), it also calls attention to categories often excluded from historical consideration in the first place, by subjecting to historical analysis what philosophers such as Arendt call the human condition or, in a different key, what Heidegger means by world picture. Here is where the expression "globalization of the world picture" can help. It opens Heidegger's totalizing view of the modern age to the swerve of historicity, so that we might speak of reversals, ruptures, and heterogeneous eras—an Earthrise era, for example, or a post-Earthrise condition in which the view of the whole Earth exerts its most subtle and wide-ranging effects precisely when its novelty fades. Stated a bit differently, the expression illuminates the historical predicament in the injunction to "Think globally, act locally!" The first half of this phrase is not so much a moral directive, which we may or may not opt to follow, as it is one description of the human condition in the Earthrise era. There now holds sway a world picture in which the condition of "earthliness" is conjured by way of a view from the most unearthly of places—the void; in which the horizons of earthbound experience compete with horizons that are planetary, or capital-E Earthly, in scope; and in which the vision of the naked Earth is also the view of a globe in disguise, the greatest of organisms: a man-made planet. Thinking globally is probably now less our choice than our lot. A history of the Earthrise era can help us understand what this means and how it came to be.

IN SEPTEMBER 1966, MARTIN HEIDEGGER agreed to an interview with the leading news magazine *Der Spiegel*. Ostensibly, the aim was to explain his collusion with the Nazi regime. The appeal of National Socialism, Heidegger had remarked in a 1935 lecture, had little to do with the justifications offered by most of its sympathizers. In parentheses, he added that "the inner truth and greatness" of the movement inhered instead in its willingness to confront a singular crisis: "the encounter between global technology and contemporary man."¹⁶ This crisis had abated not at all in the postwar years, he now explained. If anything, the achievements of the postwar welfare state testified still more to its currency:

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.¹⁷

A great deal of ink has been spilled over the meaning of Heidegger's remarks. Was Nazism great because it faced up to the problem of technology or because it was that problem's greatest exemplification or symptom?¹⁸ Usually overlooked in the brouhaha, however, is the phrase translated as "global technology." The German

¹⁶ Wolin, The Heidegger Controversy, 103.

¹⁷ Ibid., 105–106.

¹⁸ On these debates, see Gregory Fried and Richard Polt's useful introduction to their translation of Heidegger's *Introduction to Metaphysics* (New Haven, Conn., 2000).



FIGURE 3: Two images from Lunar Orbiter 1 (1966). NASA.

original, *planetarisch bestimmten Technik*, has a different point of emphasis. More literally, it means "planetarily determined technics." The translation suggests a concern with technology circumstantially endowed with a global reach, the German with the "planetary" itself. In the translation, the globalism of technology is a historical accident or effect; in the original, it is just as much a cause. The implication: modern technology, wherever it happens locally to be deployed, already presupposes a global or planetary scope. Phenomenologically—at least in the modern era—the planetary comes first.

Why would Heidegger react with such ill feeling? In part, the answer is prosaic. In 1966, Heidegger was not privy to the totemic shots of "Earthrise" and "Blue Marble." Indeed, it is easy to see how the photos he did have at his disposal (from *Lunar Orbiter 1*) might have been frightening in the extreme. (See Figure 3.) They are stark and austere. They are also vertiginous in a way that the iconic "Earthrise" is not. They confound one of the presuppositions of phenomenological analysis, that the body has a customary orientation in space: up and down, front and back, above and below, before and behind.¹⁹

The reflections of Heidegger's teacher Edmund Husserl attest to the importance of this point. Husserl, the founder of the phenomenological movement, did not live to see photographs of the Earth from space. He did, however, consider the possibility in a thought experiment broached in an unpublished essay left behind in his papers. Its title, "Foundational Investigations of the Phenomenological Origin of the Spatiality of Nature," is a bit misleading. A note scrawled on the envelope in which the manuscript was discovered revealed his true aim: "Overthrow of the Copernican theory

¹⁹ "According to the *modern System*," as one observer succinctly put it, "... there is no Upper nor Under, the Earth being *global*"; *The London Magazine; or, Gentleman's Monthly Intelligencer*, vol. 17 (London, 1848), 119, emphasis in the original.

in the usual interpretation of a world view." Why on earth would Husserl have wished to contest the Copernican turn? Why on earth: that, precisely, was the problem. Taken to its logical conclusion, he feared, the Copernican theory dislodged man from his earthly horizon. Notwithstanding our post-Copernican knowledge that the Earth revolves around the sun, Husserl insisted that our everyday experience is pre-Copernican through and through. This held as much for ancient cave dwellers as for his students at the university in Freiburg. Or as he had written on his envelope, "The original ark $[arch\bar{e}]$, earth, does not move."²⁰

Husserl therefore recommended that we recall an experience Copernicanism had suppressed: nature as it is intuitively felt and lived. Heidegger would consider something of the same. He would ask after the prospect of retreating from "mathematical formalism" in favor of an "immediate return to intuitively given nature" (if never wholly to embrace it). He would look with disfavor on the tendency of modern astronomical science to make obsolete the distinction between earthly and celestial bodies by reducing all natural bodies to specimens of a single kind. He would dispute the exclusive truth claims made by post-Copernican science: "Galileo," he once wrote, "is not more true than Aristotle."²¹ He too would insist that the planet as such could not be the proper scene for human being.

Or at least not the kind he had in mind. The planet was simply too big. Heidegger's word for human being, *Dasein*, means being-there. It presumes local, situated, and finite, not global or planetary, horizons. To enter into a relation with something of such size therefore demands a form of management and radical reduction, and a mode of being-human especially suited to the process: hence his talk in a later essay of the "planetary imperialism" of "technologically organized man."²² The rise of the planetary in the modern imagination was synonymous for Heidegger with the demise of the earthly and the worldly, and these images from space only consolidated a process—a globalization of the world picture—already long in the making.

In some respects, it is easy to see why. Take, for example, an important early lecture (November 13, 1935) that Heidegger delivered on the origins of the work of art. There he spoke at length about the categories of "earth" and "world." World-liness had been a prominent Heideggerian theme for some time, addressed (albeit differently) in his 1927 masterpiece *Being and Time*. In this lecture, however, he explored its relation to a new category in his vocabulary—earth. Here is how he defined it: earth is "that whence the arising brings back and shelters everything that arises as such." Earth is a "sheltering agent," he explained, for those things that

²¹ Martin Heidegger, "Modern Science, Metaphysics and Mathematics," in Heidegger, *Basic Writings*, ed. David Farrell Krell (New York, 1977), 262, 270.

611

²⁰ A more literal translation would read: "The original origin, earth, does not move." Its virtue is that it avoids association with the metaphor of "Spaceship Earth." The essay appears in translation in Edmund Husserl, *Shorter Works*, ed. Peter McCormick and Frederick A. Elliston (South Bend, Ind., 1981), 222–233. The German original appears in Marvin Farber, ed., *Philosophical Essays in Memory of Edmund Husserl* (Cambridge, Mass., 1940), 307–325. For commentary, see Pierre Kerszberg, "The Phenomenological Analysis of the Earth's Motion," *Philosophy and Phenomenological Research* 48, no. 2 (December 1987): 177–208; Juha Himanka, "Husserl's Argumentation for the Pre-Copernican View of the Earth," *Review of Metaphysics* 58, no. 4 (March 2005): 621–644; and Jacques Derrida's remarks in his book *Edmund Husserl's "Origin of Geometry": An Introduction*, ed. David B. Allison, trans. John P. Leavey, Jr. (Stony Brook, N.Y., 1978).

²² Heidegger, Basic Writings, 152.

"arise." The language is obscure to moderns. It might have made more sense, however, to some ancients. That is, Heidegger appealed openly (with some modifications) to an ancient Greek conception of teleological nature or *physis*. For Aristotle, *physis* referred to an autonomous source or principle of movement in a living organism; Heidegger referred to it as an "emerging and arising in itself and in all things." What some Greeks called *physis*, he explained, "we call earth," or in the German, *Erde*.²³

In this, Heidegger mirrored a number of twentieth-century thinkers anxious about modern technology who looked to ancient ideas about nature as antidotes. Their aim was to resist the impulse to reduce life to a set of mechanical, causal relationships. *Physis* and teleology, by contrast, entailed a causal principle embedded in the living body itself; organisms, in this view, are both their own cause and effect. Or as Heidegger put it, earth ought not be understood as a "mass of matter deposited somewhere." Heidegger wanted also to resist a second reduction. He worried about the displacement of earth by the "merely astronomical idea of a planet," of *Erde* by *Erdball*.²⁴ In the images of Earth from space, he saw earth undone.

These images occluded a second existential horizon also, the one with which earth was paired: world. Although the concept evolved over the course of Heidegger's career, in this lecture it referred to a realm for human being opened up by artifacts, by great works of art above all. "World" refers to a scene for human life, for "the destiny of a historical people" to play itself out. It is also in some ways active and independent of man: "the world worlds," Heidegger says. It is a "self-opening openness." The language is admittedly strange. As an illustration, consider what Heidegger had to say about Greek temples: "The temple, in its standing there, first gives to things their look and to men their outlook on themselves." In other words, the Greek could be (or become) Greek only in the space opened up by the templework. The temple also helps us see what Heidegger had in mind when he spoke of earth and world. The temple "roots itself" in the mountain; the stone of the mountain "juts through" the temple-work in turn. Stone and the space opened up by the temple, earth and world, are therefore joined, albeit in a productive struggle that makes each what it is. In "setting up a world," that is, the work of art also "lets the earth be an earth."25 But the view of Earth from space threatened both of these horizons for human being. If the view transformed earth into Earth, existential ground into planetary body, it did away with world by erasing evidence of artifice altogether. "Not a trace of human beings," Blumenberg later remarked about the sight, "as if there had never been men, his works, his refuse at all!"²⁶ Whatever Heidegger's anxieties about the character of modern making, and they were legion, a stubborn fact remains: without human artifice, there can be neither earth nor world, no scene for being-human.

Arendt voiced similar anxieties in The Human Condition. Like Heidegger, she

²³ Ibid., 169. On the concept of *physis*, see Fritz Heinemann, *Nomos und Physis* (Basel, 1945).

²⁴ Heidegger, *Basic Writings*, 169. Heidegger devoted more detailed consideration to *physis* in his *Einführung in die Metaphysik*, and also in an essay, "On the Essence and Concept of *Physis* in Aristotle's *Physics* B, 1" (1939), trans. Thomas Sheehan, in Martin Heidegger, *Pathmarks*, ed. William McNeill (Cambridge, 1998), 183–230.

²⁵ Heidegger, Basic Writings, 169–171.

²⁶ Blumenberg, Die Vollzähligkeit der Sterne, 440.



FIGURE 4: This progression of pictures illustrates the fate of Heidegger's earth/world distinction in his age of the world picture. In the first (above), we see what Heidegger may have had in mind when he spoke of the temple rooted in stone, and vice versa. In the second (top right), the first photo is disclosed as one among thousands, in which the temple-work has become a "cultural treasure" and commodity peddled by the vacation industry. In the third (the Pergamon museum, middle right), the temple-work no longer bears any relation to earth at all, and inhabits a different world as well—the original temple is enclosed in the modern temple of the museum, its "earth" replaced by floor, its sky by ceiling. In the fourth (bottom right), the temple-work and all its horizons are finally and fully revealed as picture, open to easy and infinite manipulation. Photos by Dennis Jarvis (CC BY-SA 2.0), Rachel Knickmeyer (CC BY-NC-ND 2.0), Le Grand Portage (Pseudonym) (CC BY 2.0), and Ann Wuyts with Antonio and Joseba Becerro Martinez (CC BY 2.0).

made recourse to the categories of "earth" and "world" to describe dimensions of the human condition.²⁷ And like Heidegger, she worried about the eclipse of the grown by the made.²⁸ Some of her most potent language, however, was reserved for a related, inverted fear: the reduction of the made to the grown. At a still-proximate reserve from the surface of the planet, for example, artifacts and the work required

²⁷ Echoes of the work of her teacher are unmistakable. Heidegger described earth as *physis*; Arendt called it the organic, metabolic process of life and death. Heidegger described world as a space opened up by artifacts; Arendt did too. Heidegger associated both categories with kinds of making: earth with *physis*, world with a "bringing-forth" he called *poiesis* and sometimes *techne*. Arendt also associated earth and world with kinds of making: earth with "labor" (the mindless activity of the human organism), world with "work" (the activity of man as artificer). Both told stories about the demise of earth and world that were also stories about the perversion of the sorts of making with which each was associated. Both told stories about a liberation from necessity that was in fact a liberation to a more pernicious form of bondage.

²⁸ Årendt's formulations have underwritten some recent arguments advanced by Jürgen Habermas in *The Future of Human Nature* (Malden, Mass., 2003; orig. German ed. 2001). Habermas inveighed against prenatal biomedical intervention by appeal to the idea that being born is the specific kind of background heteronomy (as opposed to the heteronomy of being designed) that we require in order to become autonomous human beings in the first place. This, not incidentally, creates an unusual rapprochement, as it yokes him together with the likes of neoconservative bioethicists such as Leon Kass. See, for example, Kass, *Toward a More Natural Science: Biology and Human Affairs* (New York, 1988). For a series of German commentaries, see Christian Geyer, ed., *Biopolitik: Die Positionen* (Frankfurt, 2001). And for the proximate stimulus to Habermas's argument, see the controversial essay by Peter Sloterdijk *Regeln für den Menschenpark: Ein Antwortschreiben zu Heideggers Brief über den Humanismus* [Rules for the Human Zoo: A Reply to Heidegger's Letter on Humanism] (Frankfurt, 1999). to produce them would appear as those of ants appear to human beings. Our cities would appear as hives, the act of making as the unconscious, unwilled activity of a species.²⁹ Even nuclear weapons, she hypothesized, could be understood in this way: as an unwilled strategy for holding population growth in check.³⁰ Arendt may have opposed the eclipse of the grown by the made for fear of doing away with one dimension of the background condition—the biological—out of which human beings emerge. But from a certain remove, that very process appeared as just the opposite: the eclipse of worldliness by earthliness, and the subsumption of human being into the metabolic sway of life and death. The perverse effect of modern technological acumen was to reduce the most artifactual of creatures to mere organisms. From space, the future of the human condition looked bleak.

There was something about a view of the planet as such that worried both Heidegger and Arendt. In part, their concern is exemplified by a lexical spill: from the word "earth" to the words "Earth," "planet," and "globe." We often see Earth when we hear "earth," and we refer to views of Earth almost indiscriminately as views of planet and globe. Heidegger and Arendt enjoin us to ask what prompts this slippage and what it implies. Should we do so, we are led to consider that for moderns to think of planets is already to think of globes, or that for moderns to marshal the intellectual resources required to think about planets implicitly means to relate to them in ways enabled by their intensive and extensive mapping. The naked Earth, in this view, is anything but. At least for moderns, it is "set up" or disclosed as a globe, as a map, clothed in an artifactual, if invisible, net. What appears as the Whole Earth is in fact just another instance of the technological globe—and still worse, a technological globe that masks its fact. We are fated to a globalization of the world picture, in this view, even when, strictly speaking, we see no globe at all.

THE GLOBALIZATION OF THE WORLD PICTURE is perhaps easier to discern when we consider a parallel slippage—from "environment" to "globe" as it is inscribed in the phrase "global environment." The term has become a platitude, even a ritual incantation. It is in truth a Frankenstein phrase that sutures together words referring to horizons of incompatible scale and experience. Environments surround us. We live within them. Globes stand before us. We observe and act upon them from without. Globes are things that we make. They are artifacts. Environments, at least in theory and in part, are not.³¹ In the Earthrise era, however, "environment" has gone

²⁹ Hannah Arendt, "The Conquest of Space and the Stature of Man," *The American Scholar* 32 (1963): 540.

³⁰ Arendt, "The Archimedian Point," Arendt Papers, Library of Congress, 031398. It is perhaps no accident that other of Arendt's formulations ("For whatever we do today in physics . . . we always handle nature from a point in the universe outside the Earth . . . And even at the risk of endangering the natural life process we expose the Earth to universal, cosmic forces alien to nature's household"; *The Human Condition*, 262–263) were put to great effect in a key manifesto for the anti-nuclear movement, Jonathan Schell's *The Fate of the Earth* (New York, 1982). It is worth noting, however, that Arendt collapsed a distinction between the cosmic (harmonious, well-ordered, bounded) and the universal (infinite, disordered) that we might do well to preserve. See Alexandre Koyré, *From the Closed World to the Infinite Universe* (Baltimore, 1957).

³¹ For some related and more extended reflections on this point, see Tim Ingold, "Globes and Spheres: The Topology of Environmentalism," in Kay Milton, ed., *Environmentalism: The View from Anthropology* (London, 1993), 31–42.



FIGURE 5: The signs affixed to the IFC/World Bank building in Washington, D.C., understandably make recourse to cartographic abstractions that evoke the smooth trade of labor, goods, and capital. A design used by the World Bank, for example, discloses the Earth as a simulacrum of graticule. Photo by Addy Cameron-Huff (CC BY 2.0).

global (along with "economy" and "humanity"), and it is worth pausing to reflect upon what has been lost and gained in the process. Are all globalisms the same in the end, instances of a single kind of comportment, as Heidegger appears to suggest? If the globalization of the world picture began long ago or if it is coeval with the advent of modernity, as both Heidegger and Arendt imply, how are we to understand the globalisms of the Earthrise era? Do they represent something new? Or are they just another episode in the same old story?

These are the kinds of questions that Heidegger and Arendt help us pose. To get at them, let us shift gears for a moment and consider by way of cultural history two prominent forms of contemporary globe talk (the economic and environmental) and ask further after their shared origins in the years around 1970. The first is the globe of globalization theory. It is the globe of "globalization and its discontents." It is the globe of Joseph Stiglitz and Thomas Friedman, of Seattle, the World Bank, and the end of Bretton Woods. Sometimes it is called the neoliberal globe, even if most of those who study it think the processes to which the term refers long preceded the post-Earthrise popularization of the name. Some discover its origins in the eighteenth century, others in the nineteenth, still others in the late twentieth. It was born of European exploration, or colonization, or missionizing, or new state forms, or the world wars, or postwar finance. But whatever we call it, whenever and wherever we discern its origins, it is safe to say that the globe described by globalization theory antedated the appearance of Earthrise by far.³²

Heidegger would have been happy to concede the point. The complaints voiced by globalization malcontents, on the one hand, and by the champions of alterglobalism (sometimes *autre-mondialisation*), on the other, were voiced also—and vociferously—by Heidegger and his Weimar contemporaries.³³ But Heidegger would have insisted on something else: that we register the commercial globe as just one specimen of a more invasive species. Here, for example, is what he had to say in 1935:

When the farthest corner of the globe has been conquered technologically and can be exploited economically; when any incident you like, in any place you like, at any time you like, becomes accessible as fast as you like; when you can simultaneously "experience" an assassination attempt against a king in France and a symphony concert in Tokyo; when time is nothing but speed, instantaneity, and simultaneity... there still looms like a specter over all this uproar the question: what for?—where to?—and what then?³⁴

Heidegger's answer, or one of them, Nazism, made the problems to which it appeared as a response look like the sorts of problems we should feel lucky to have. Still, he at least provides us with a working hypothesis: that the commercial globe is also—even first—a technological one. He also helps raise an important counterfactual query. Given that the critique of what is now called globalization long preceded the invention of the name, how are we to account for the lexical delay? Why did the vocabulary of "globalization" and "globalism" not flourish until the Earthrise era?³⁵

The same questions arise when we consider the globe so often held up as an alternative to the commercially and technologically ordered planet. The "environmental globe" was born of the first photographs from space, or so the story often goes. In 1966, a young activist and LSD enthusiast named Stewart Brand peddled buttons inscribed with the question "Why haven't we seen a photograph of the whole Earth yet?" He hoped the view would work as a hit of cultural acid, a trip he helped abet with the cover of his *Whole Earth Catalog*. Brand's expectations were vindicated. The Whole Earth eclipsed the mushroom cloud as the galvanizing icon of the age, for a nascent environmental movement above all. Blumenberg thought it no coincidence, for example, that the German word *Umweltschutz* (environmental protec-

³² Michael Lang offers an excellent review of these arguments in "Globalization and Its History," *Journal of Modern History* 78, no. 4 (December 2006): 899–931.

³³ Contemporary complaints about the global homogenization of everything from fashion to food all had adumbrations in the Weimar era. Two points are worth making here. First, only against this cultural, social, and economic background does Heidegger's anxiety about globalism make historical sense. And second, much of the theoretical literature on their contemporary analogues has evolved in conversation with Weimar-era statements. For several useful source documents in English, see Anton Kaes, Martin Jay, and Edward Dimenberg, eds., *The Weimar Republic Sourcebook* (Berkeley, Calif., 1995).

³⁴ Heidegger, Introduction to Metaphysics, 40.

³⁵ The word "globalize" seems to have been coined only in the second half of the twentieth century, indeed, just after *Sputnik* (according to the *Oxford English Dictionary*). And as full-blown vocabularies, "globalization" and "neoliberalism" are post-Earthrise phenomena. See Manfred Steger, *Globalisms: The Great Ideological Struggle of the Twenty-First Century*, 3rd ed. (Lanham, Md., 2009).

tion) was coined shortly after "Earthrise."³⁶ James Lovelock's Gaia hypothesis—that Earth is a self-regulating superorganism—may have been formulated as early as 1967, but it flourished only in the late 1970s and 1980s.³⁷ And in the intervening years, the environmental globe has been held up as an organic alternative to the runaway artifactualism of its technological competitor. In other words, the organic globe is arguably no globe at all. Its latitude is the mountains, its longitude the rivers and seas, its graticule the contours of the Earth.

In this series of readings, the commercial and environmental globes map neatly onto the distinction between organism and artifact. In this series of readings, Heidegger and Arendt were wrong. But there is more to this world picture than meets the eye. Many of those credited with inventing (or reviving) the idea of an organic Earth imagined it as a technologically ordered globe as well. Brand's catalog, for example, was subtitled "Access to Tools." His embrace of cybernetic technoscience was sometimes expressed in a rhetoric that would have made the most assiduous of Earth-exploiters proud. "We are as gods," he wrote in the initial lines of his catalog's first issue, "and might as well get used to it."³⁸ His injunction also bears out Marshall McLuhan's assessment, at first glance puzzling, that ecological thought was enabled—not contested—by a grasp of the planet as a work of art. With Sputnik, that is, "the natural world was completely enclosed in a man-made container. At the moment that the Earth went inside this new artifact, Nature ended and Ecology was born."39

McLuhan exaggerated. The artifactual envelope in which Earth is now clothed and it is clothed, as any map of satellite paths and space junk can attest—took time to develop.⁴⁰ (See Figure 6.) But McLuhan was right to suggest that ecology could constitute Earth as an object of technical decree.⁴¹ Take again the case of one-time NASA engineer Lovelock. In one breath, he could speak of the return of an ancient belief (Gaia) and an ancient understanding of nature (akin to physis). In the next, he could invoke that belief on behalf of some wild ideas for planetary management. For example, he hypothesized that future generations—recognizing themselves as Gaia come to consciousness of itself, their technological powers as Gaia's own-

³⁶ Blumenberg bridled at the translation of Umwelt as "environment." The latter smacked of a "trivial art object," given its resonance with the language of the contemporary arts scene ("assemblage, environments, happenings"). By contrast, *Umwelt* and later coinages such as *Waldsterben* (forest-death) and *Schöpfungsbewahrung* (the stewardship of God's creation) were thought to accord to the natural world a degree of autonomy from man. Blumenberg, Die Vollzähligkeit der Sterne, 439.

³⁷ For a discussion, see Michael Jäger, "Der Begleiter," *Der Freitag: Die Ost-West-Wochenzeitung* 37 (September 14, 2007), http://www.freitag.de/2007/37/07372101.php.

³⁸ What Brand meant by this is open to some dispute. That he did not write "We are as God" is important. It does not suggest the total creative power associated with the tradition of a God who creates out of nothing. It suggests instead a reference to the gods of Greek mythology. Whatever their power, these gods often come off as bumbling, unthinking idiots: not dependent on the material world, they need not worry about the consequences of their interventions within it. Bryant makes this point very

need not worry about the consequences of their interventions within it. Bryant makes this point very nicely in "Whole System, Whole Earth," 130. ³⁹ Marshall McLuhan, "At the Moment of Sputnik the Planet Became a Global Theater in Which There Are No Spectators but Only Actors," *Journal of Communication* 24, no. 1 (1974): 48–58. ⁴⁰ See the remarkable visualization at http://www.esa.int/esaCP/SEMHDJXJD1E_Feature Week_0.html. Thanks to Hannah Moshontz for the reference.

⁴¹ Although the term "ecology" was coined as early as the late nineteenth century, as a common expression it is better dated to the origins of the Earthrise era. As one observer noted in November 1969, "The newest word among social activists is ecology—a word most people hadn't heard of a year ago." Rasa Gustaitis, "We Have Met the Enemy and He Is Us!" Los Angeles Times, November 30, 1969, 16. Thanks to Ahmed Kabil for the reference.



FIGURE 6: Low Earth Orbiting Satellite Trajectories, as visualized from a standpoint on Earth in the Los Angeles Area. From "Celestial Mechanics," by Scott Hessels and Gabriel Dunne. Copyright 2005. Used by permission.

might stave off runaway glaciation by loading the atmosphere with chlorofluorocarbons, thereby instigating a greenhouse effect. The Gaia hypothesis may have been for those "who like to walk or simply stand and stare," he explained. It was for people like Heidegger, who compared his version of thinking to wandering, "planetary" in the original sense of the word.⁴² But Gaia was in fact just another name for a scientific discipline, which aimed at the technical control of the planet. Sometimes it went by the name earth systems science, sometimes by geophysiology.⁴³

In the years since, Lovelock's example has proliferated. We now picture Antarctica, for example, much the way we look at an ailing brain.⁴⁴ The neo-vitalist

⁴² "Planet" derives from the Greek infinitive *planasthai*, "to wander."

⁴³ James Lovelock, *Gaia: A New Look at Life on Earth* (Oxford, 2000), xiii, xv, 11, 139. The German equivalent—*System Erde* or "System Earth"—takes the sensibility still further.

⁴⁴ Kathryn Yusoff, "Visualizing Antarctica as a Place in Time: From the Geological Sublime to 'Real

language of planetary ailment ("the Earth has a fever") is often coupled with a technical language of medical diagnosis and cure.⁴⁵ Meanwhile, both Lovelock and Brand have become leading prophets in this, our age of global warning. Both have transformed the Whole Earth icon into its apocalyptic twin, an update to the mushroom cloud it once displaced. Gaia, they say, is now more liable to visit death upon humankind than life. She will have her revenge, Lovelock warns, unless forestalled, as Brand urges, by the "Whole Earth Discipline" of planetary engineering under corporate sponsorship.⁴⁶ In sum, the organic globe may be as much a technologically ordered globe as the commercial globe that so many environmentalists decry—and in many instances, it no doubt is.

Still, there is something unsatisfying about the story with which we are left should we take Heidegger and Arendt as our guides. Does the complicity of organic Earth with technological globe truly indicate that Whole Earth and mushroom cloud, Gaia and globalization, are just two sides of a coin? In some ways, yes: our stories about the Earthrise era ought to accept that it represents a chapter in the globalization of the world picture. Still, we ought to countenance alternatives. There are stories to be told about the Earthrise era that accept the insights of Heidegger and Arendt while remaining wary of both their dystopian diagnoses of modernity and the technocybernetic religion they aimed to defeat. Still more, there are stories open to the possibility that the Earthrise era transformed the "world picture" itself, that it introduced new ways in which our pre-cognitive experiences of earth and world are organized—and the example of Hans Blumenberg can help to point the way.

ONE OF THE MORE CURIOUS EPISODES in the history of space exploration was the disbelief expressed by so many at the photographic shots of man on the moon. How could the American flag appear to flutter on a moon without the atmospheric preconditions for a breeze? Why did the lunar landscape not look more alien, and less like the Arizona desert by night? Didn't these and other oddities show that the entire thing was staged? Were the photos of footprints in the dust just the less accomplished hoax of an American Cold War update to Descartes's "deceiving demon"?

Blumenberg mulled over these questions in his monumental book on the genesis of the Copernican world, and he came to the following conclusion:

During this decade of astronautics only one single picture could not have been invented, but simply went beyond anything the imagination could have anticipated: the picture of the Earth from space. If one tries to relate the centuries of imaginative effort and cosmic curiosity to the event, then the both unexpected and heart-stopping peripety of the gigantic departure from the Earth was this one thing, that in the sky above the Moon one sees the Earth.⁴⁷

Time," Space and Culture 8, no. 4 (2005): 381–398. See also Wolfgang Sachs, Planet Dialectics: Explorations in Environment and Development (London, 1999), 110–128.

⁴⁵ For a leading recent example, see James Gustave Speth, *Red Sky at Morning: America and the Crisis of the Global Environment* (New Haven, Conn., 2004).

⁴⁶ See, most recently, James Lovelock, *The Revenge of Gaia: Earth's Climate Crisis and the Fate of Humanity* (New York, 2007); Lovelock, *The Vanishing Face of Gaia: A Final Warning* (New York, 2009); and Stewart Brand, *Whole Earth Discipline: An Ecopragmatist Manifesto* (New York, 2009).

⁴⁷ Blumenberg, The Genesis of the Copernican World, 607–608.

Plato and Cicero may have described the sight in advance; Fontenelle and Voltaire, too. Archimedes and all those who worked in his spirit, all those who had imaginatively projected themselves into the beyond that they might better work upon the Earth—all these preparatory moments, Blumenberg insisted, could not have prepared us for the effect of the view itself. The Earth, it turns out, is lovely, and to see it is to wish also to return.

Blumenberg's ruminations were an instance of "astronoetics," a word he coined to name the age-old tradition of contemplative reflection upon the cosmos, for which astronautics has been a recent aid. The word derives from *noesis*, thought or intellection, and among the ancients was contrasted with *aisthesis*, sensation. Blumenberg aimed to recall just this opposition. In 1958, when he invented the term, he was a thirty-eight-year-old professor at the Christian-Albrecht University in Kiel. The meager resources at the smallish school had led many of its professors to pursue research by thought experiment, without the help of costly instruments. This put them at a disadvantage vis-à-vis their wealthier peers, especially when the launch of Sputnik unleashed concerns about a "research gap." Blumenberg therefore proposed to do what Sputnik could not: he would explore the dark side of the moon by "pure thought" alone. Astronoetics would hardly fill the lecture halls, he reasoned. Nor would it compete for monies devoted to the physical exploration of space. It was best suited for those consigned to the group of Daheimgebliebenen, those whom astronautics had left behind at home. It was suited for those more content to contemplate and dream than to do, those who preferred noesis to nautes, reflection to travel, who preferred to sail the seas of the stars by means of the seas of the mind.⁴⁸

Blumenberg's proposal was made partly in jest—in addition to his courses, he proposed to found a journal with a "correspondingly modernist name." But his jest has since been vindicated. The age of astronautics seems destined to be an interlude of several decades in a history of astronoetics thousands of years in the making. Only twenty-four human beings have departed Earth's orbit and seen the Earth whole, and not one since 1972. Still, astronautics has bequeathed to astronoetics a legacy that cannot be ignored, in the form of photographs of the Earth. After "Earthrise," the story sometimes goes, astronoetics would never be the same. But was this in fact the case? Given the tradition of looking back on Earth by means of thought alone, what, if anything, makes the photographic sight of Earth any different?

It is difficult to say. For every claim to novelty, there is a competing claim for precedent.⁴⁹ But Blumenberg thought it had to do with its effect—the centripetal

⁴⁸ Blumenberg, Die Vollzähligkeit der Sterne, 548.

⁴⁹ The Apollonian perspective, for example, figured in Ptolemaic cartography, which imagined an observer with a view of the spherical Earth. Cicero did the same when he had his Scipio look back in a dream: at Carthage, at the Roman Empire, and finally at Earth itself. Scipio's dream prompted commentaries, appropriations, even a short opera. And Blumenberg's proposal recalls a tradition of speculative literature running from Fontenelle's conversations on the plurality of worlds to Voltaire's Saturnian space aliens to the aviator St.-Exupery's little prince as much as it does Aristotle's disquisitions on the sublunar world or Galileo's Sidereal Messenger or Kant's theory of the heavens. The list of such efforts goes on and on, all of which grants some credence to a claim by the foremost student of the subject: that "the meanings of the photographed earth were anticipated long before the photographs themselves were taken." Denis Cosgrove, *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore, 2001), ix. See also Aaron Parrett, *The Translunar Narrative in the Western Tradition* (Burlington, Vt., 2004); and Ronald Weber, *Seeing Earth: Literary Responses to Space Exploration* (Athens, Ohio, 1985).

pull of the photographed Earth on the hearts of those who looked back. Heidegger was wrong, Blumenberg held. The sight was alienating, but only through that alienation could a new kind of rootedness ensue—not at the expense of a planetary consciousness, but in its name. "It is only as an experience of turning back," as he concluded his book, "that we shall accept that for man there are no alternatives to the Earth, just as for reason there are no alternatives to human reason."⁵⁰ Only after we have escaped the physical and existential confines of our Earthly "prison" do we recognize the prison for that which it is—all we have.

In some respects, Blumenberg's reaction was typical, epitomized in the bumper sticker that informs tailgaters across America that "good planets are hard to find." Still, one dimension of his conclusion is cryptic. Why the parallelism? What does looking back upon Earth have to do with reason? Why speak of "human reason" in particular? And why is an experience of turning back the necessary condition for it all? The line and the questions it raises tell us something important about what Blumenberg hoped to accomplish: to vindicate the modern age against the critiques levied by those (such as Heidegger) who had discovered in modern technology a form of reason run amok.

Blumenberg's classic statement on this count arrived in 1966, in a book titled *The Legitimacy of the Modern Age*. It is one of the most ambitious revisions of Western intellectual history ever ventured. The modern project, he conceded, suffered from an illegitimacy complex, and its technological excesses were unfortunate but understandable reactions to this felt deficiency. But Blumenberg wanted to go one step further. He aimed to save the modern age from its felt compulsion to rebel against the premodern sources of authority it sought to overcome. These were two above all: teleological nature and the biblical God. Each in its way belittled human artifice. The first was associated with the ancient injunction that art was to imitate nature, the second with ancient and medieval ideas about divine creativity. In turn, overcoming these traditions entailed the invention of a new science that sought the artful domination of nature by vesting in man the creative capacity of a God. Blumenberg hoped to rein in the radicalism of this overcoming by emancipating us from its felt need.⁵¹

His astronoetic enterprise proceeded along similar lines. He aimed to save the Copernican insight, but to temper some of the baleful, if unintended, effects of its associated science. He wanted to give the Copernican turn a final twist. This meant, above all, to put Earth in its place. It meant to yoke Earth back to the center of our attention by insisting on an Earthly eccentricity that not even Copernicus had countenanced. "A decade of intensive attention to astronautics has produced a surprise that is, in an insidious way, pre-Copernican," Blumenberg observed. "The Earth has turned out to be a cosmic exception."⁵² The radical eccentricity of the Earth made it paradoxically all-important. Only by being humbled still further could it be ennobled in post-Copernican eyes.

Blumenberg appealed to a similar line of thought with respect to reason. It, too,

⁵⁰ Blumenberg, The Genesis of the Copernican World, 685.

⁵¹ Hans Blumenberg, *The Legitimacy of the Modern Age*, trans. Robert M. Wallace (Cambridge, Mass., 1983; orig. German ed. 1966).

⁵² Blumenberg, The Genesis of the Copernican World, 679.

had its place. Like Earth, reason was eccentric, and it was eccentric, in part, because it was Earth-bound. This ran contrary to the expectations of many Enlightenment thinkers, who proceeded as if the universality of reason meant just that—that it was a property in the universe at large. Kant, for example, was careful to speak of rational beings, not specifically human beings, when he outlined his metaphysics of morals. Fontenelle had conjectured that reason might be better exercised by the inhabitants of the moon than on Earth and by men.⁵³

All of this Blumenberg rejected. It was, in fact, Enlightenment unease about the "terrestrial contingency" of reason, he held, that had led to the postulate of inhabited, otherworldly worlds in the first place. Reason was neither "the summit of nature's accomplishments" nor "a logical continuation of them." It was instead an accident of evolution, a deviation in the animal man, and to call it universal was in truth to seek a false, if powerful, anthropocentric consolation for the original Copernican trauma. A "true Copernicanism" would have no need for such solace, would insist instead on a thoroughgoing anthropo-*eccentrism*—in the form of human reason understood as merely human, as all too human, with both the promise and the deficiency the locution implies. True Copernicanism entailed modesty about what man, with his reason, might accomplish, but also an acceptance that reason, like Earth, is all man has. True Copernicanism was therefore the astronoetic expression of the cure Blumenberg proposed for the felt illegitimacy of the modern age writ large.⁵⁴

Astronautics was unlikely to confirm or falsify these positions in the abstract. It could, however, generate a visual experience that made the questions of exobiology and exorationality a practical dead letter. This experience was in part a matter of aesthetic pleasure. In the age of astronautics, the view out had proved disappointing. The cosmos was simply "too deserted, too monotone, too poor," Blumenberg decided, to satisfy us for long. By contrast, the Earth was a sight to marvel. Only this could account for the alacrity with which the manned exploration of extra-orbital space was brought to an end. Only as a "purely sensory phenomenon" could it have prompted the geotropism it did.⁵⁵ This, in part, is what made photographs of the Earth different from their astronoetic predecessors.

Blumenberg also had philosophical reasons for insisting on the priority of a visual encounter with Earth. To consider the point, he looked to a thought experiment broached early in the twentieth century by the mathematician-philosopher Jules Henri Poincaré. Poincaré asked about the conditions of possibility for a Copernicus. He wondered whether an Earth forever shrouded in clouds, or the melancholy circumstance of human beings who had never seen sun or stars, trapped in an "atmospheric cave," would have precluded the Copernican conclusion. Poincaré's answer was no. The Copernican discovery, he reasoned, was "blind." It relied not on sense impressions but on dispelling the optical illusion that most readily presents

⁵³ Bernard le Bovier de Fontenelle, *Conversations on the Plurality of Worlds*, trans. H. A. Hargreaves (Berkeley, Calif., 1990). For a discussion, see Hans Blumenberg, *Shipwreck with Spectator: Paradigm of a Metaphor for Existence*, trans. Steven Rendall (Cambridge, Mass., 1997), 32. See also Michael J. Crowe, *The Extraterrestrial Life Debate*, *1750–1900* (Cambridge, 1986); Steven J. Dick, *Plurality of Worlds: The Extraterrestrial Life Debate from Democritus to Kant* (Cambridge 1984); and Karl S. Guthke, *Der Mythos der Neuzeit: Das Thema der Mehrheit der Welten in der Literatur- und Geistesgeschichte von der kopernikanischen Wende bis zur Science Fiction* (Bern, 1983).

⁵⁴ Blumenberg, The Genesis of the Copernican World, 681-683.

⁵⁵ Blumenberg, Die Vollzähligkeit der Sterne, 482.

itself to the pre-critical mind: that the sun revolves around the Earth. It was in the end as a physicist, not an astronomer, as a mathematician, not a spectator, that Copernicus had achieved his breakthrough. Still, Blumenberg had his doubts. The radicalism of the Copernican revolution, after all, was intelligible only against its historical background—the millennia-old tradition of sensory observation. Copernicus could opt for physics only because he was first an astronomer; he could opt for blind science only because he first could see.⁵⁶

Enter "Earthrise." There was something about the view of Earth adrift in a cosmic desert that allowed for a pre-Copernican experience joined to a post-Copernican science. Somehow, images of the Earth from space made the problems of magnitude and eccentricity irrelevant—the fact that Earth is tiny, man still smaller, and at the center of absolutely nothing. Seeing the planet from afar did not produce new scientific knowledge to blunt that trauma's force. The sight of an incomparably lonely living Earth, however, did produce a felt experience of a planet so eccentric, so exceptional, that it became the only thing worth attending to in the first place. The decisive thing about the view from space, that is, was "a revision that brought to an end the Copernican trauma of the Earth's having the status of a mere point—of the annihilation of its importance by the enormity of the universe. Something that we do not yet fully understand has run its course: The successive increases in the disproportion between the Earth and the universe, between man and totality, have lost their significance—without its having been necessary to retract the theoretical effort."57 Heidegger worried that thinking globally precluded being locally. The Earthrise era, Blumenberg thought, would enable us to do both at once.

"EARTHRISE" AND ITS KIN HAD THIS EFFECT insofar as they "reterrestrialized" the globe. They turned the globe back into Earth. On this count, Blumenberg spoke from experience. "When the first photos from space . . . showed the Earth glimmering blue in the universe, there were perhaps others like me," he supposed, "who were momentarily astonished to see nothing of the net of latitude and longitude, nothing of the line of the equator, as every globe had impressed it in photographic memory [*eidetische Erinnerung*]."⁵⁸

At first glance, Blumenberg's recollection only confirms Heidegger's suspicions. His astonishment was born of dashed expectations, internalized since childhood, that made it difficult to imagine Earth in anything but the form of a globe, the planet as anything other than a map. But Blumenberg was hardly a child by the time he encountered these photos. He was well into his fifth decade. His surprise cannot be chalked up to the experience of a knowledge suddenly undone, and this makes his

⁵⁶ Blumenberg, The Genesis of the Copernican World, 7.

⁵⁷ Ibid., 678, emphasis added.

⁵⁸ Blumenberg, *Die Vollzähligkeit der Sterne*, 384. Blumenberg's phrase—*eidetische Erinnerung* (visual or "photographic" memory)—is interesting. The word *eidetisch* derives from *eidos*, or the pure Platonic form against which its material copies are measured. It invokes, that is, the tradition of art as imitation of something prior to human design. The word also refers to an image of an impossible, hallucinatory clarity—a "psychological abortion," as one early-twentieth-century observer put it, to which those incapable of distinguishing real images from illusions are prone; Charles Fox, *Educational Psychology: Its Problems and Methods* (1925; repr., London, 1999), 81. Last, it is a phenomenological term of art used by Husserl.



FIGURE 7: Spaceship Earth. Photo by Katie Harbath (CC BY-NC-SA 2.0).

observation all the more interesting. The experience of seeing the Earth from afar provided something that prior knowledge could not. For one, it reawakened an ancient prejudice about the priority of nature to art. Blumenberg had once imagined Earth as an imitation of the globe. But its sight disclosed the globe as an imitation of Earth, the artificial planet as an imitation of the natural one, and a poor imitation at that. Set next to one another, the planet-organism quite simply made the globe look ugly. "Every globe," Blumenberg remarked, even the most artful of globes illuminated from within, would forevermore appear with a "hitherto unremarked wretchedness," for the simple reason that "a star can't look like that—only a construct."⁵⁹

The point, once recognized, was self-evident, he thought. But for those in need of proof, Blumenberg recommended an excursion to Disney World. The Experimental Prototype Community of Tomorrow, or EPCOT, had a dubious distinction. It housed the most wretched globe of them all: a gigantic sphere, clad in aluminum, constructed as an imitation of Earth. (See Figure 7.) Visitors spiral through its bowels. In the span of fifteen minutes, they pass a series of displays encompassing the entirety of human history, its proximate prehistory and future. Blumenberg described the show as just the latest update to a type. It is characteristic of a certain fantasy, he observed, "that what began in the caverns of the Earth should find its alleged completion in the colossal artificial cave of a technodrome."⁶⁰

Disney's attraction added a new twist. It was not just an imitation of Earth. It was an imitation of Earth as a spaceship—that is, an imitation of an imitation, and an imitation of a prior displacement of earth by artifact at that. Suffice it to say that

⁶⁰ Ibid., 538–539.

⁵⁹ Blumenberg, Die Vollzähligkeit der Sterne, 384.

Blumenberg was not pleased. Spaceship Earth: "That is a defamation," he cried. "Earth means precisely that to which all spaceships return. The Earth is the opposite of a spaceship . . . The pitiful sensation in Florida, to see the Earth, as it were, from beyond, for oneself "—all this came at an exorbitant price. The spectacle was bought at the cost of Earth's very "function as ground [*Boden*]."⁶¹

Arendt had despaired over the impulse to manufacture a planet, and to look back upon the Earth from its artificial ground. Heidegger did, too. Blumenberg's worry was a bit different. He fretted over those whose Disney adventure would supplant the true meaning of the sight that Arendt and Heidegger decried. Would EPCOT lead its visitors to conclude that for man "the name 'Earth' has nothing to do with spaceships and planetary wandering, but with firm ground under the feet as the condition for every coming-to-rest"? Probably not. The sight was more likely to confound than to confirm Husserl's dictum that the original origin, earth, does not move. The experience of "Earthrise" was supposed to reverse the globalization of the world picture, or to initiate a new one altogether. It was the saccharine crime of Disney, in a small way, to preclude it.⁶²

Still, there is a deep irony in all this. The sight Blumenberg thought was transformative, the one no imaginative exercise could have anticipated, the one that "could not have been invented," that "in the sky above the moon one sees the Earth"—the irony is that this view *was* invented. It was made available only by a reorientation of the frame so that the lunar horizon appears below, as our everyday experience of our earthbound condition would lead us to expect. (See Figure 8.) If the sight dispelled Blumenberg's photographic memory of Earth in the form of a globe, it could do so only after it had been reframed to conform to a pre-critical expectation—the geospatial intuition that there is indeed earth, whether terrestrial or lunar, beneath our feet. Blumenberg's experience was born in part of reality, but not the one he thought captured in "Earthrise." It was born of the pre-cognitive recalcitrance of his earthbound condition. His experience was born also of desire the desire for a frame beyond the technological ordering that Heidegger had identified, a counter-enframing perhaps, but an enframing nonetheless. It replaced one photographic memory with another, one hallucination with a second.

Were Blumenberg still with us, he might well point out that this enduring uncertainty only reaffirms the need for astronoetics in the first place. It is an exercise, after all, meant to pitch to and fro between the competing attractions of "pastoral idyll," on the one hand, and "the plain preparation of precise knowledge," on the other—or, put a bit differently, between Heidegger's errant wandering and the techno-scientific project of planetary management.⁶³ Astronoetics, he might say, helps us see how in looking back at the Earth we escape some entanglements, but with a newfound sense for others we would like to affirm. Even if Earthrise was picture first,

61 Ibid.

⁶² Ibid., 539. Or, as Blumenberg wrote elsewhere, "Part of the euphoria of the astronautic departure and race is the metaphor of the 'mothership Earth'... Only half of this is a metaphor of intimacy and security; the other half is one of mobility and transiency. The centrifugal impetus of astronautics is like a remnant of the special value assigned to the stellar reality by metaphysics, and of its corresponding degradation of the Earth as the dregs of the universe ... A sufficient reason why the Earth is not the mothership of astronautics is that it is the solidity of its ground to which the spaceships so speedily return." Blumenberg, *The Genesis of the Copernican World*, 684–685.

⁶³ Blumenberg, Die Vollzähligkeit der Sterne, 548.



FIGURE 8: "Earthrise" (left, original orientation), as captured by astronauts as they rounded the moon in Earth-equatorial orbit, and as exemplified also in the "geometrical perspective" of the first Earthrise (which was in fact an "Earthset") captured on film in 1966 (right). NASA.

experience second, it could still prompt a transformation: a return *to* Earth by way of the rise *of* Earth in the pictorial imagination.

WHETHER THIS HOPE WILL COME to pass remains to be seen. Blumenberg's oversight, after all, alerts us in miniature to an important point. The story of the Earthrise era is not just about Cold War origins and the space race, let alone a feel-good tale about ecological awareness. Resituated in a new context (the history of organisms and artifacts in the modern era), Earthrise and its afterlives become just as much a story of error, blindness, and forgetting. Of error: Blumenberg's mistake shows that to look at the Earth in the sky above the moon is in fact to gaze upon the Earth-organism as pictorial artifact, Whole Earth as world picture. Of blindness: many have espied in Whole Earth an organic icon, but if we follow the lead of Heidegger and Arendt, we must ask whether Whole Earth has always been a globe in disguise, and "global environment" just one of several competing but also complicit globalisms in the Earthrise era. Last, Earthrise is a story of forgetting. To focus on how the view of Earth from space was overtly mobilized is to miss some of the more subtle effects of this sight after we ceased to register its novelty—after we ceased, in a fashion, to see it.

This last is the most difficult to address. How are we to write a history of something that "disappears" in its ubiquity? How are we to write a history of an imagination that becomes all the more important as it disseminates and fades, as it seeps into the mental architecture that conditions our most basic, everyday experience? It is one thing to trace the spread and use of the images themselves—their visible appropriations, whether by environmentalists, oil executives, humanitarians, cold warriors, or jihadis. It is one thing to account for the uneasy convergence of Earthly vision with global vocabulary by resituating the history of these photos in a broader story about what has happened to organisms and artifacts in the modern age. But it is something else to track how the planetary horizons afforded by photographs of the whole Earth have surmounted, inflected, complemented, or corrupted the earthbound horizons of everyday experience. To do so would be to trace the effects of that dissonance described by Husserl, produced by living locally while thinking globally, and to address the question: How did the experience of this split between life as lived and life as known change once we came to see in pictures what Husserl could only imagine? Doing so would provide a window on what it means to live in a world in which "Earthrise" has risen, and in which it has more recently set—or settled, in the seat of human perception, where it acts upon us in ways we often do not notice. The term "Earthrise era" does not quite capture this development, since it foregrounds what in this instance is more important as background. As homage to Arendt, let's call it a "post-Earthrise condition" instead.

The term entails fealty, but also sedition, because as a historical development the phenomenon poses a challenge to Arendt's ideas about the "human condition." With some exceptions, most historians are not accustomed to making use of categories such as the human condition. And for good reason: It smacks of a place anterior to culture or society or meaning. It seems better left to paleoanthropologists willing to venture into the distant past ("prehistory") or to philosophers like Heidegger and Arendt willing to broach ideas about the deep present—in this case, that we are earthbound creatures, that we inhabit man-made worlds, and that residues of this earthliness and worldliness are embedded in everything that we are and do.⁶⁴ But the concept is not totally foreign. Their vocabulary of earthliness recalls a category to which historians are accustomed: "environment," understood broadly as that which surrounds and conditions us. And their vocabulary of worldliness echoes in a second category: "space of experience," which historians use to speak of urban cityscapes, changing skylines, and the new sorts of sensory and mental lives they afford or inflict.

Still, we would be remiss to disregard how the post-Earthrise condition stretches these categories to their limits. The sedimentation of Whole Earth iconography into the mental architecture of the West means that for the foreseeable future, environment will be inflected by planet, cityscape by globe, and skyline by space—not the "space of experience" but the void. The lived experiences of earthliness and worldliness, at least as Heidegger and Arendt imagined them, are available, if they are available, only against the background of this new dispensation. What they pursued as a philosophical inquiry is therefore best continued as a historical one.

What is to be gained by such a history? And how are we to write it? To the first question, the answer is a rich, textured account of what it has meant to live, feel, and know in an age when human beings finally came to see what they for millennia could

⁶⁴ For one recent exception, see Daniel Lord Smail's attempt to dismantle the category of the "prehistoric" in *On Deep History and the Brain* (Berkeley, Calif., 2008).



FIGURE 9: From Stella Vosniadou and William F. Brewer, "Mental Models of the Earth: A Study of Conceptual Change in Childhood," *Cognitive Psychology* 24, no. 4 (1992): 535–585. Copyright 1992. Reprinted with permission from Elsevier.

only imagine—the whole Earth. Regarding the second, if we take seriously the proposition that photographs like "Earthrise" have abetted the globalization of the world picture by supplementing one set of horizons with another, we need first to think more creatively about where to look for the relevant evidence.

Consider, as one example, a series of diverse instances in which the recalcitrance of our earthbound condition has asserted itself against an imagination gone global. We have just read of this recalcitrance in Blumenberg's recollections. We hear it in a remark by William Anders, the astronaut who captured the iconic "Earthrise" on film, when he observed that "all of us subconsciously think that the Earth is flat."⁶⁵ We find it in the art of Robert Smithson, a pivotal figure in the movement of the late 1960s and early 1970s called "Earthworks." His famed *Spiral Jetty* (1970) in Utah's Great Salt Lake is a sustained reflection on the incompatibility of planetary and cosmic scale with the earthbound fragility of human life.⁶⁶ We (or our psychologists) also watch it at play in children. When asked to draw earth, sea, sky, and beyond, they reveal the partial truth of Husserl's axiom by producing a circular planet floating against a background of clouds and stars mixed indiscriminately together. They combine the Apollonian perspective that affords the form of the circular Earth with two earthbound experiential horizons—the ones marked by earth and sky at night and by day.⁶⁷ (See Figure 9, esp. b, d, and f.) And a final example: we find it

⁶⁵ Cited in Oran W. Nicks, ed., This Island Earth (Washington, D.C., 1970), 14.

⁶⁶ This becomes especially obvious when considered together with his film of the same name. See Robert Smithson, *The Collected Writings*, ed. Jack Flam (Berkeley, Calif., 1996); and Smithson, *Spiral Jetty* (videorecording, 1970; rerelease on DVD, New York, 2000).

⁶⁷ How children first come to a "scientifically correct" view of the Earth is a matter of fascinating discussion. Most recently, see Georgia Panagiotaki, Gavin Nobes, and Robin Banerjee, "Children's Representations of the Earth: A Methodological Comparison," *British Journal of Developmental Psy-*



FIGURE 10: "The Greens: Schleswig-Holstein." Poster courtesy of the Archiv Grünes Gedächtnis der Heinrich-Böll-Stiftung, Berlin.

encoded in a series of posters disseminated by the Green Party of Germany that assert the claims of the earth-sky horizon against the Earthly vision and global vocabulary of the Earthrise era. (See Figure 10.) They indicate that the most everyday of experiences—looking up—has acquired political significance. They indicate that the meaning of sky has changed.

All these examples point to the combination, and also the clash, of the earthly with the Earthly that now conditions human experience. And the diversity of those whom it affects (philosophers, artists, astronauts, politicians, and children subjected to psycho-scientific machinations) says something about its scope. It is wide, and it is deep. In this light, the statement that "thinking globally" is now less our choice than our lot ought to be emended, to allow for a post-Earthrise condition in which the global is sometimes coeval with, not posterior to, the thinking, and in which the thinking is entwined with feeling and sensing.

There is reason for ambivalence about this development. To be sure, there is environmental awareness, concern for the planet, even feelings of mystical communion with the Earth. But for every impulse to care, there are injunctions to manage and control. For every encounter with wholeness, there are by definition moments of terrific alienation. In the testimony of Apollo astronauts, these moments tend to come when the Earth has shriveled to the size at which the brain can cognize it as a distinct object—not when the Earth is first visually surveyed, but farther out, when the eyes absorb it in its entirety in direct line of sight, grasped all at once as a whole.⁶⁸ But what of the rest of us, those for whom the Earthrise era is no astronautic adventure but an astronoetic one, launched by the pictures the astronauts brought back? Have we shared in these doubled-up moments of plenitude and estrangement also? Almost certainly, albeit in a different key. A full account of this trip must wait for now. But to begin, just reflect on the vertigo that can well up when Whole Earth comes to mind and we register that, yes, somewhere down there on that great blue ball is us.

Benjamin Lazier is Associate Professor of History and Humanities at Reed College. He has written a history of religion and European thought called *God Interrupted: Heresy and the European Imagination between the World Wars* (Princeton University Press, 2008), which won best first book awards in the history of religion from the American Academy of Religion and the Templeton Foundation. His current work is on the history of the Whole Earth.

chology 24, no. 2 (2006): 353–372; and John G. Sharp and Jane C. Sharp, "Beyond Shape and Gravity: Children's Ideas about the Earth in Space Reconsidered," *Research Papers in Education* 22, no. 3 (2007): 363–401. For a brilliant commentary calling into question the presuppositions of these experiments, see Tim Ingold, "Earth, Sky, Wind, and Weather," *Journal of the Royal Anthropological Institute*, n.s. 13, suppl. S1 (2007): S19–S38.

⁶⁸ The technical term is "foveal vision," as distinguished from peripheral vision. Thanks to Hannah Moshontz on this point.