

Whole Earth or No Earth: The Origin of the Whole Earth Icon in the Ashes of Hiroshima and Nagasaki 地球全体か地球全滅か—ヒロシマ・ナガサキの灰燼より浮上した地球の全体図

Robert Jacobs

Whole Earth or No Earth: The Origin of the Whole Earth Icon in the Ashes of Hiroshima and Nagasaki

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"Once a photograph of the Earth, taken from outside, is available - once the sheer isolation of the Earth becomes known - a new idea as powerful as any in history will be let loose."

--Fred Hoyle, 1950¹



The Whole Earth, taken by Apollo 17, Dec. 7, 1972²

Introduction

The image of the Whole Earth is one of the most ubiquitous visual icons of the late twentieth century. It is everywhere, on books,

posters, advertisements, packaging, and all over the world-wide-web. It is the descendent of such essential early tools of human imagining as the map and the globe, but the Whole Earth is a radical reformulation of those older tools. It is a tool that opens humans to a new perspective about the relationship of the individual to the planet, and to the other creatures living on the planet, especially the other people.

The history of the modern visual image of the Whole Earth derives from photographs taken of the Earth from space. Much as the ability to see deeply into space has completely revised our ideas about the nature of the universe around us, the ability to see our home planet from space, has fundamentally revised our concepts of the nature of the planet on which we live.

Photographs of the Whole Earth entered culture in the late 1960s as a result of the development of satellites and manned space travel. But in this article I will argue that the visual content of the icon of the Whole Earth actually emerged several decades earlier. Before there were color photographs of the Earth from space, the visual image of the Earth as whole was first expressed in a manner we would come to associate with this icon by editorial cartoonists in direct and immediate response to the use of atomic bombs on the Japanese cities of Hiroshima and Nagasaki in 1945.

These cartoonists grasped, as did others, that the threat posed to human civilization by the

invention and manufacture of nuclear weapons threatened the people of the Earth in a *holistic* way-it threatened the very existence of life on Earth.

It was instantly clear to people who heard the news of the nuclear destruction of Hiroshima and Nagasaki that something fundamental had changed in human warfare.³ Wars had long taken the lives of the soldiers that fought them, and over time the tactics and weaponry of war had evolved leading to the destruction of cities and various scorched earth tactics. Throughout World War Two, people had fled cities to avoid the destruction being wrought by aerial bombing and crude rockets. But in the atomic age, there was nowhere to flee to; as David Bradley put it, there was "no place to hide."⁴ International law had established a distinction between combatants and noncombatants. Often that line had blurred as cities were attacked by invading armies, and as technology made cities themselves targets. In the atomic age no one was away from the battlefield: the battlefield was the Earth itself. The Cold War threat of a global thermonuclear war involving thousands of weapons detonating in a brief window of time was envisioned as the mechanism that could bring "the end of the world." Nuclear weapons were imagined to hold the collective fate of the world in their hands.

Against this backdrop a new vision of the Earth emerged: the Earth as target, the Earth as victim. In imaginings of a nuclear war, what would be killed was the planet as a whole, and all of its living creatures. While apocalyptic mythologies worldwide had spoken of the potential for global species death, this was hitherto at the discretion of divine forces. With the advent of nuclear weaponry, this power was now in the hands of mundane and flawed human leaders. The future not only looked grim, it looked apocalyptic.

Many people immediately grasped this narrative after the news from Hiroshima and

Nagasaki. This study will examine the work of Western editorial cartoonists who not only grasped this idea, but were able to put it into visual form and communicate it to a wide audience, amazingly even in the first week of the atomic age. Their work depicted this Target Earth and examined its dilemma at the hands of the new nuclear weaponry. I would argue that the work of these cartoonists was the very first place where we can begin to see the emergence of the visual icon that would be called the Whole Earth once it was rendered into photographic form. The image of the Whole Earth is the photographic opposite of the image of Target Earth: Target Earth depicted what would die-the Whole Earth depicted what was alive. They are negative images of each other, and in that way, in the dark imaginings of the days, weeks and months after the news from Hiroshima and Nagasaki, we discern primal awareness of the threat of nuclear war that gave birth to the most life affirming visual icon of the twentieth century. While the image of the Whole Earth had to wait for cameras to be sent up into space on rockets, the content of the icon blew in on the wind along with the fallout from Hiroshima and Nagasaki.

Whole Earth Image Content

As a visual icon, the image of the Whole Earth as seen from space communicates a very complicated set of ideas in a very simple image. This iconography centers on the way in which the image simplifies many of the complexities of human society through the idea of wholeness. Let's examine the most important of these iconographic statements.

The image of the Whole Earth presents a world without the political borders that have for so long defined the way most people envision the world. This old model is of a world of divisions: divisions between countries, religions, races and ethnicity, economic philosophies, and political systems. In the image of the Whole Earth there are no visible borders on the

landmasses. The only real division visible on the Earth's surface is between land and sea. It reinforces the idea that the borders we have envisioned between our societies are largely artificial and of human construction. It tells a story about us all being from the same place and living in a common space.

The other border that comes into sharp relief in this image is the separation between the beautiful blue planet and the cold darkness of space. This aspect of the image emphasizes the fragility of life on Earth. The Earth is seen as a small outpost, a delicate planet enveloped by a thin atmosphere in which all of life exists; this is cast against the immensity and emptiness of space. It almost seems as if the iciness of space could swallow the Earth up if we are not lucky, and careful. Rather than an eternal sense of timelessness, the Earth appears to be precarious when cast against such emptiness, giving it a sense of vulnerability. The maintenance of life on this planet would appear to take constant vigilance against powerful forces. It suggests the need for the careful balancing of complex factors to assure continued life here.



A long view of the Earth against the emptiness of space

What these other values combine to ultimately suggest is that all of the creatures alive on Earth share a single common destiny. Apart from our individual destinies, when one considers the long-term welfare of this fragile planet in the darkness of space, either the planet will survive, along with its inhabitants, or it will perish. This is perhaps the most powerful and profound aspect of the iconography of the Whole Earth. If a nuclear war were to break out, the borders so important to humans, between the conflicting parties, and between combatant and non-combatants, would be illusory. The contamination of radioactive fallout would not stop at the borders that humans draw on maps: the planet as a whole would be affected. And in this sense, the victims of nuclear war would be all of the inhabitants of Earth. The *victim* of a nuclear war would be the Earth itself and all its inhabitants.

Another significant thing to emerge out of such a perspective is the sense of the Earth as a single ecosystem. Whereas previously people may have thought of themselves as living in the mountains, or on an island, or on the plains, consideration of the Whole Earth makes one realize that the problems that affect one segment of the ecosystem may affect all the others. An enlargement of the sense of self accompanies this realization-whereas previously one might identify as a citizen of a certain country, tribe or religion, looking at the image of the Whole Earth can work to change one's social calibration to a more global perspective. Such a perspective is at the root of the debate about global warming. People are aware that their efforts to make changes will not succeed if some countries work against those changes. The solutions must be holistic, systemic, and not restricted by the artificial borders of human map making, war making or voting.

History of the Whole Earth as a Visual Icon

The image of the Whole Earth is taken from photographs of the Earth as seen from space. Before that, our depictions of the Earth were in the form of globes and maps. Topographical globes would show the world without political borders, but much more common have always been the political globes which emphasized the divisions between nations, and presumably, people. These globes have different colors for nations that border each other so that the borders stand more dramatically. There were always bold black lines to define those borders, and in the case of globes made in the United States, thinner lines to divide the nation into states, so that even minor political boundaries are highlighted.

This model of the Earth began to change with the advent of rocket technology in the late 1950s (the first crude rockets were created by the Nazis in the mid-1940s). Not long after humans launched rockets into space, they began to attach cameras to them in order to photograph the Earth. This was done primarily to study weather patterns on Earth, and assist weather prediction and military reconnaissance.

Some of the earlier manned and unmanned space rockets took photographs of the Earth that were published in popular magazines. Typically these were taken too close to the Earth to show the whole blue ball that is familiar to us now. Often these early pictures would show the curvature of the Earth in grainy black and white photographs. The image below shows a still photograph from the very first television pictures taken in space on April 1, 1960 by a satellite for TIROS-1 (Television Infrared Observation Satellite Program), an early NASA effort to gauge the usefulness of satellite observations of the Earth.



TIROS-1 (April 1, 1960)⁵

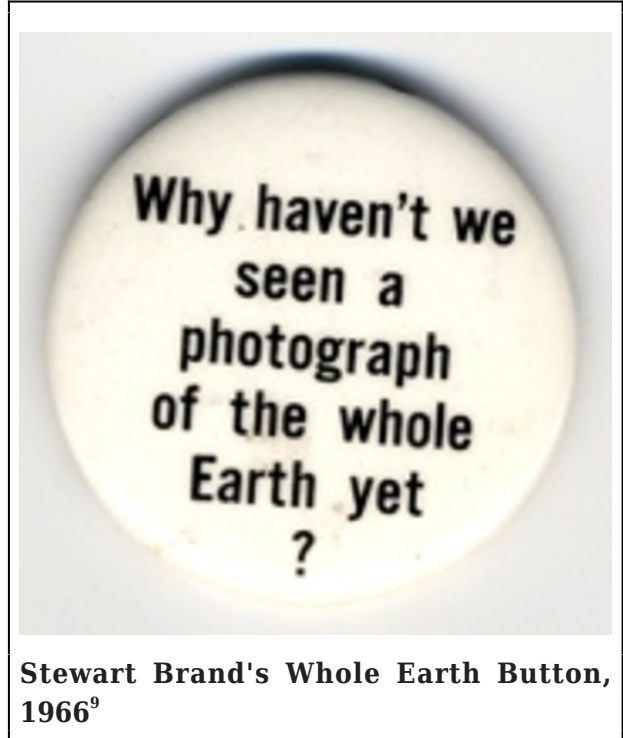
Photography was an afterthought on the early manned space missions. John Glenn was the first American astronaut to bring a camera into space on his historic first orbit of the Earth on Mercury-6 (February 20, 1962). This was an Ansco Autoset 35mm camera (made by Minolta) that was purchased at a drug store near the launch site at Cape Canaveral in Florida not long before take off.⁶

Subsequent to this, photos of the Earth from space became more common, yet tended to focus on showing familiar landmasses from space. Such photographs might show the horn of Africa, or the Florida peninsula; features familiar to readers from a lifetime of seeing maps and globes, now seen as actual photographs from above. This perspective tended to reinforce previously held images about the nature of the Earth rather than to challenge them, as Fred Hoyle's 1950 statement in the opening quote encouraged.

Hoyle's idea sprouted one day in the mind of a

counterculture visionary (though the Hoyle quote was unknown to him at the time). Stewart Brand had been a member of the legendary sixties crew the Merry Pranksters led by Ken Kesey and Ken Babbs. An organizer of the Trips Festivals, held in 1965-6. Brand recounts that in February of 1966, he was doing LSD sitting on the roof of his apartment building in San Francisco's North Beach and looking at the San Francisco skyline. Dwelling on a point made at a Buckminster Fuller lecture that he had recently attended in Santa Fe, New Mexico, Brand noticed that the buildings were not parallel, because the Earth beneath them was curved. Brand remembered that Fuller claimed that, "people perceived the Earth as flat and infinite, and that that was the root of all their misbehavior. Now, from my altitude of three stories and one hundred mikes I could see that it was curved, think it, and finally feel it."⁷ Brand expanded his initial vision from that seed-point, realizing that "the more altitude I got, the more I would see that curvature until the curvature closed and you saw the whole thing."⁸

Still tripping, Brand conceived of making buttons to promote this vision. At first he phrased his statement, "Take a photograph of the entire Earth." But this didn't feel right. He didn't like the word "entire." Then the phrase came to him, "Why haven't we seen a photograph of the whole Earth yet?" Thus coining the term that would have almost as much cultural clout as the image it described. Brand had several hundred of the buttons manufactured and he put them on a sandwich board and began to sell them at Sather Gate of the University of California at Berkeley. He sent them to NASA administrators, members of Congress, Soviet scientists and diplomats, Buckminster Fuller, Marshall McLuhan and UN officials. He eventually brought his sandwich board to other college campuses, selling his buttons at Stanford, Harvard, Columbia and MIT.



Stewart Brand's Whole Earth Button, 1966⁹

The very first photographs that show the Whole Earth as we now recognize it were taken during the historic Apollo 8 mission in December of 1968. This was the first rocket that circled the Moon and returned to Earth. When it passed behind the Moon, it was cut off from radio contact with the Earth for four minutes, a tense time for NASA scientists and for the huge television audience watching at home.

After the third revolution, a historic moment occurred. It was early evening on Christmas Eve. The astronauts showed the television audience what they could see from their window, a half Earth rising above the lunar surface. Then the three astronauts offered a memorable reading. "For all the people on Earth," stated astronaut William A. Anders, "the crew of Apollo 8 has a message we would like to send you." The three astronauts then took turns reading the first eight verses of the book of Genesis, and when they had finished, crew commander Frank Borman concluded, "And from the crew of Apollo 8, we close with good night, good luck, a Merry Christmas, and

God bless all of you - all of you on the good Earth."¹⁰

Poet Archibald MacLeish wrote about the color images coming back from Apollo 8 on the front page of the *New York Times* the next day, Christmas 1968, "To see the earth as it truly is: small and blue and beautiful in that eternal silence where it floats, is to see ourselves as riders on the earth together, brothers on that bright loveliness in the eternal cold. Brothers who know they are truly brothers."¹¹

Among the most widely reprinted photographs from that historic space mission was one known as the "Earthrise" photograph taken with the Moon in the foreground. This was important, according to Brand, because it showed the "clearly living Earth over the edge of a clearly dead planet."¹²



"Earthrise" photo from Apollo 8, December 1969

This image was virtually omnipresent for Americans in the next few years as it was reprinted on a US postage stamp, and for several years CBS news anchor Walter Cronkite used it as the backdrop to his show.

Among the first artists to use the image of the Whole Earth as a powerful visual iconic tool was Stanley Kubrick in his 1968 masterpiece,

2001: A Space Odyssey.¹³ This film, among the most philosophically speculative and visually striking movies ever made, has several scenes that feature the partial images of the Whole Earth that were available to Kubrick at the time of production. For many of the viewers who saw *2001* in the theaters, this was their first exposure to this powerful visual icon.

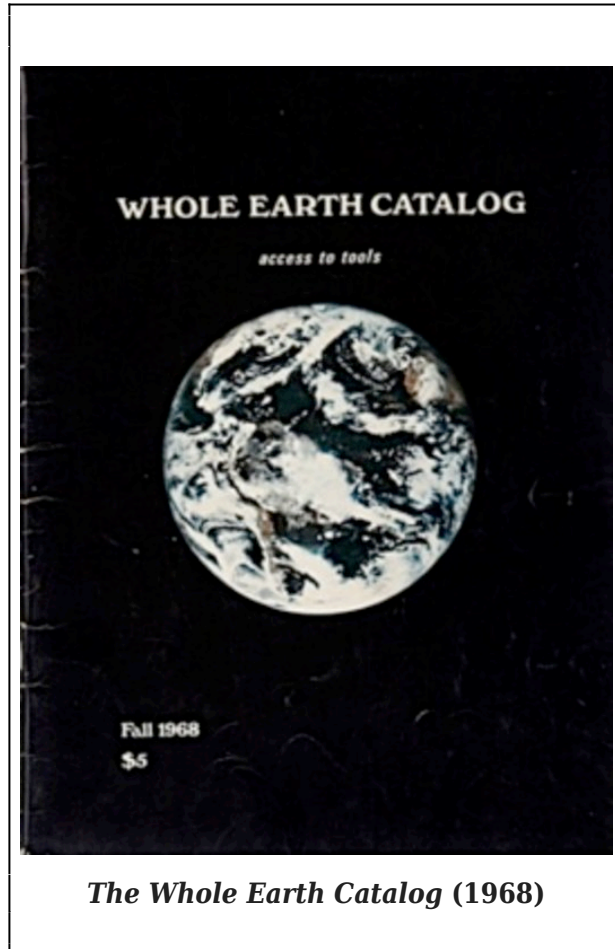


The Star Child encounters the Whole Earth in *2001: A Space Odyssey*

Kubrick uses the image of the Whole Earth as a backdrop to scenes set on the Moon early in the movie, but the most dramatic use of the icon was in the film's conclusion.¹⁴ In this scene, astronaut Dave Bowman has gone through the abstract series of moments that follow his attempts to land on the "monolith" which is orbiting Jupiter, and sending radio signals to some unknown distant destination. Bowman's journey into the monolith takes him through a series of time and space distorting changes, including a journey through his own life from infancy to old age and death. Bowman is then reborn as the Star Child, which appears to be the next step in the evolution of human consciousness. The Star Child is depicted as a fetus floating in space in an amniotic sack. The Star Child turns to consider the Whole Earth floating in front of it, both glowing a bright blue-white. The two appear as newborn versions of Man and Earth, face-to-face, ready to be born into a future of unthinkable possibilities.¹⁵

2001 was widely heralded as a film about "the

future of humanity," and among the visual tools that informed viewers that they were looking at the future was the image of the Whole Earth as seen from space.



The Whole Earth Catalog (1968)

Also in 1968, Stewart Brand would publish his counterculture classic, *The Whole Earth Catalog*.¹⁶ This virtual guide to the counterculture lifestyle of the 1960s would go through several editions (eventually selling 2.5 million copies), and win the National Book Award for its 1972 edition. In his 2005 commencement speech at Stanford University, Apple Computer co-founder Steve Jobs said of the *Whole Earth Catalog*, "It was sort of like Google in paperback form, 35 years before Google came along."¹⁷ The *Whole Earth Catalog* put a photograph taken by a satellite in 1967 on its cover, and also put the phrase "Whole Earth" into public discourse. It began with the statement, "We are as gods and might as well

get used to it."¹⁸

One of the immediate impacts of the entry of the image and concept of the Whole Earth into popular culture was Earth Day. The first Earth Day was celebrated on April 22, 1970 in many different cities in the United States and several other countries. This was a day intended to heighten awareness of environmental issues in the public mind, and also to "celebrate the Earth." Twenty million Americans took part in the first Earth Day, on hundreds of college campuses, high schools and in city parks.¹⁹

Stewart Brand had gotten many of his ideas, and much of his inspiration for the *Whole Earth Catalog* from the work of Buckminster Fuller. Fuller was a technologist, and a visionary who held many patents, had invented the geodesic dome, and had a knack for reframing traditional concepts. Fuller had spoken for years of what he called "Spaceship Earth." British economist Barbara Ward paraphrased Fuller's ideas in her presentation at the sixth series of the George B. Pegram Lectures at Columbia University in 1965. Ward titled her lecture series "Spaceship Earth," after Fuller's phrase, and explained his perspective that:

The most rational way of considering the whole human race today is to see it as a ship's crew of a single spaceship on which all of us, with a remarkable combination of security and vulnerability, are making our pilgrimage through infinity. Our planet is not much more than the capsule within which we have to live as human beings if we are to survive the vast space voyage upon which we have been engaged for hundreds of millennia - but without yet noticing our condition.²⁰

Fuller added another critical perspective to the

spaceship concept, "Spaceship Earth was so extraordinarily well invented and designed that to our knowledge humans have been on board it for two million years not even knowing that they were on board a ship. And our spaceship is so superbly designed as to be able to keep life regenerating on board despite the phenomenon, entropy, by which all local physical systems lose energy."²¹

Here Fuller was foreshadowing the theory that would come to provide much of the intellectual framework for the ideas encoded in the content of the Whole Earth icon; the "Gaia hypothesis" of James Lovelock. A consultant at the Jet Propulsion Laboratories of the California Institute of Technology in Pasadena during the early and mid 1960s, Lovelock was working on the problem of formulating methods to determine if there was life on Mars. The method that Lovelock and others designed involved the use of atmospheric analysis as a means of life-detection. This theory was based on the idea that a key outward sign of the presence of life on a planet would be a local reduction of entropy:

The design of a universal life-detection experiment based on entropy reduction seemed at this time to be a somewhat unpromising exercise. However, assuming that life on any planet would be bound to use fluid media - oceans, atmosphere, or both - as conveyor belts for raw materials and waste products, it occurred to me that some of the activity associated with concentrated entropy reduction within a living system might spill over into the conveyor belt regions and alter their composition. The atmosphere of a life-bearing planet would thus become recognizably different from that of a dead planet.²²

Lovelock and his colleague Dian Hitchcock then proceeded to use the Earth as a model to test the theory. "Our results convinced us that the only feasible explanation of the Earth's highly improbable atmosphere was that it was being manipulated on a day-to-day basis from the surface, and the manipulator was life itself."²³

Turning this technique to an analysis of Mars, it was easy to conclude from a simple atmospheric analysis performed from Earth, that there was no life currently on Mars. But what interested Lovelock was no longer Mars, but the Earth. Lovelock began to focus on this problem in 1966 while on a grant from Shell Research Limited. Lovelock's work led him to the:

development of the hypothesis that the entire range of living matter on Earth, from whales to viruses, and from oaks to algae, could be regarded as constituting a single living entity, capable of manipulating the Earth's atmosphere to suit its overall needs and endowed with faculties and powers far beyond those of its constituent parts....that the Earth's atmosphere is actively maintained and regulated by life on the surface, that is, by the biosphere.²⁴

Lovelock felt that this single entity (life, the biosphere) needed a name. His neighbor in Wiltshire the Nobel Prize winning novelist William Golding, "recommended that the creature be called Gaia, after the Greek Earth goddess also known as Ge, from which root the sciences of geography and geology derive their names....By now a planet-sized entity, albeit hypothetical, had been born."²⁵

Lovelock's Gaia hypothesis caught the fascination of the public during the 1980s, and by the 1990s it had become a common name in

the American environmental movement for the Earth. While few could cite the basis for the theory, many could sum up its implications as describing "mother Earth," or the "Earth goddess." The implications of the Gaia hypothesis gave seeming scientific grounding to the wholeness many had perceived in looking at the image of the Whole Earth. Certainly, of the many books published each year with the word "Gaia" in the title, few do not have the image of the Whole Earth on their cover (although Lovelock's book did not).

The Cartoons

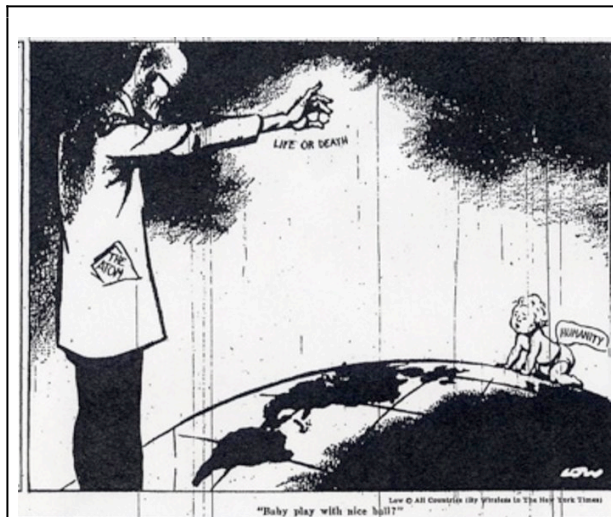
On Sunday August 12, 1945, the *New York Times* published the following three editorial cartoons together, just as they are reprinted below.



All three cartoons, by three different cartoonists, offer visions of the impact of the new atomic bomb on human civilization. The first is by Lute Pease, who would win the Pulitzer Prize for editorial cartoons in 1949. Showing a devilish character named "Future Threat of War" being restrained from hammering the Earth by a hand named "Control of Atomic Power," the caption reads, "For a perfect earth." The point is that the future of war in the atomic era threatens the Earth as a whole, and only control of atomic power can keep that threat in check.

The second is by Sir David Cecil Low, originally of New Zealand, who worked in England. His cartoons were reprinted in the *New York Times* for almost a decade during the 1940s. This cartoon shows a man dressed as a scientist standing astride the Earth. A paper in his pocket is titled "The Atom," and he is addressing a baby named "Humanity," and offering the baby a ball named "Life or Death." He tempts the baby with the question, "Baby

play with nice ball?" The implication of this cartoon is clear; playing with "the atom" is a life or death game for immature humanity.



New York Times, Sunday August 12, 1945²⁸

In the third cartoon, a heavenly hand is striking the Earth with a lightning bolt named "Atomic Power." The caption reads, "A new era in man's understanding." The cartoonist, Daniel Fitzpatrick had won the Pulitzer Prize for editorial cartoons in 1926 and would win it again the year that this cartoon was printed, 1945.



New York Times, Sunday August 12, 1945²⁹



New York Times, August 12, 1945³¹

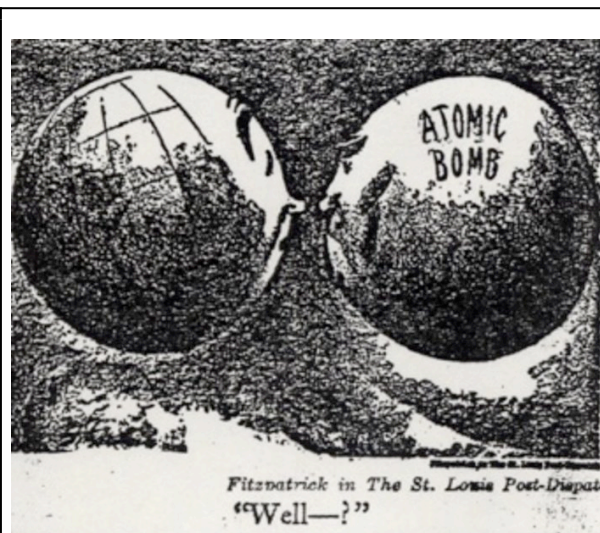
Two pages further into that Sunday's *New York*

Times, the first Sunday issue after the bombings of Hiroshima and Nagasaki, is another cartoon reprinted from *The Philadelphia Record*, drawn by cartoonist Jerry Doyle, among the most prolific cartoonists of the New Deal era. Here we see the giant hand named "Science" holding the Earth, which is named "The Future of Civilization." The caption reads, "In the palm of his hand." Much as in the iconography of the Whole Earth, the fate of human civilization appears to be a collective one and here, science is the God that will determine the future of humanity.

While the specific focus of the cartoons differs, a striking common feature is their depiction of the Earth in all four cartoons. All of the cartoons show the Earth exhibiting visual content that perfectly foreshadows, albeit in black and white, the later icon of the Whole Earth. The emphasis on the Earth as a place of separate nations is gone. In each cartoon, the Earth is present as a single entity that is forced to deal with the advent of atomic weapons. It is clear that in each, the destiny of all the people in the world is a common destiny. Even in the one cartoon in which landforms are depicted, "Baby play with nice ball," the baby is not located in one specific country and there are no political borders, only the division between land and sea. In all of the cartoons, the Earth is a whole planet with a grid, a traditional means of establishing three-dimensionality in a two-dimensional image, but one that also emphasizes the continuity and equality of the different locations.

In early October of 1945 the *St. Louis Post-Dispatch* printed another cartoon by Daniel Fitzpatrick, in which the Earth hangs in space facing an equally large, and menacing sphere named "Atomic Bomb," each in the form of a human face. The worried Earth looks at the Atomic Bomb and asks, "Well—?" The Earth is seeking to determine its destiny at the hands of this new threat, which is as large and powerful as the whole planet itself. Again the planet is

shown as having a grid, no individual nations, and in this case, it is depicted as a single being.



St. Louis Post-Dispatch, October 10, 1945³²

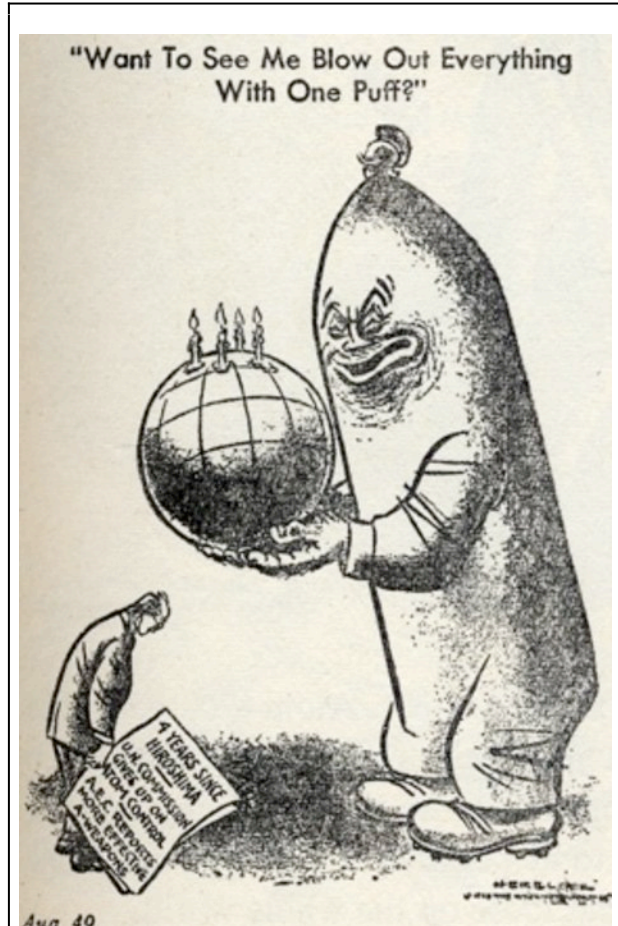


The Saturday Review of Literature, March 30, 1946³³

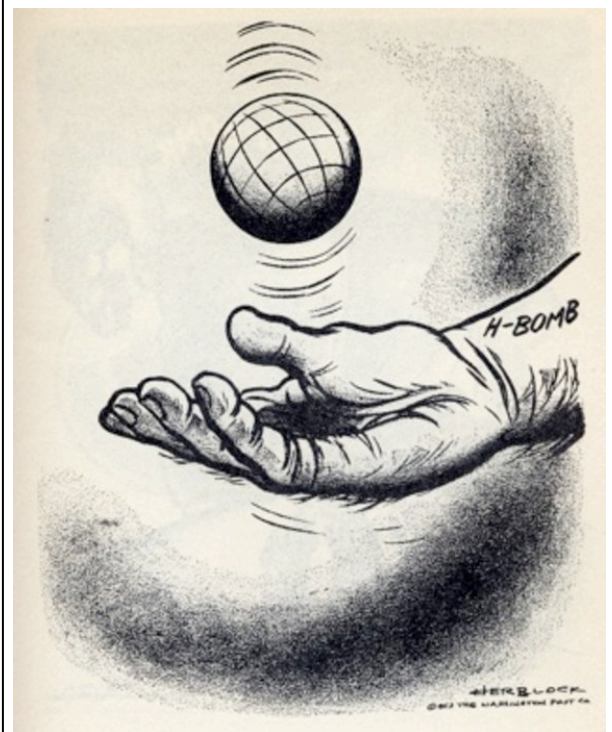
As the world moved into the Atomic Age, such depictions became more common. This cartoon by Roy Justus, originally printed in the *Minneapolis Star Journal*, and reprinted here from a March 1946 review of the booklet *One World or None* in *The Saturday Review of Literature*, depicts the world as a dog under stress. This dog/world is named "World Politics" and seems helplessly under the control of its tail, named "Atomic Bomb." The caption advises that, "The tail does wag the dog."

Again the world has a grid and no borders between nations. It is a single being and the fate of world politics is clearly a collective one.

Perhaps no Cold War cartoonist went further with this new visual construct of the world than did Herbert Block, better known as Herblock of the *Washington Post*. In a cartoon from 1949, a bomb-shaped character that Block would use repeatedly (*Atom*), is seen as far bigger and more powerful than the puny Earth. Atom is holding the Earth, which has four birthday candles on it to symbolize the number of years since the bombing of Hiroshima and is speaking to an Everyman who hangs his head while holding a newspaper that reports that the UN has given up on atomic control. Atom has a downright menacing look on his face as he asks the human, "Want to see me blow out everything with one puff?"³⁴



Washington Post, August 1949³⁵



***Washington Post*, August 11, 1953**

The theme of nuclear weapons holding the world's collective fate in its hands was a continual theme in Herblock's work. A 1953 cartoon shows a hand, far bigger than the Earth, and far bigger than Atom's hands, named "H-bomb." This hand is tossing the world up and down in its hand like a ball. Again, the Earth is a globe with a grid rather than nations, and it would be hard to imagine that the fate of any part of it would be different than the fate of any other part in the face of such a threat.³⁶

There were political movements contemporary to these cartoons that helped to inform and give substance to their iconography. Not long after the bombing of Hiroshima and Nagasaki, the World Government movement emerged as a direct response to the new weapons. Many social leaders, and especially scientific leaders believed that a single world government was the only way to avoid an arms race and eventual nuclear war between two or more competing nations. The United Nations Atomic Energy Commission began its first session ever being lectured that its mission was to choose between "the quick and the dead."

An example of this advocacy can be seen in the 1946 booklet, *One World or None*. This booklet, published through the Federation of American Scientists, includes contributions from Harold Shapley, Einstein, Leo Szilard and many others who had become well known following the atomic bombing of Hiroshima and Nagasaki. Part of the piece written by the "Father of the Atomic Bomb," J. Robert Oppenheimer, amply illustrates the arguments of the book:

The vastly increased powers of destruction that atomic weapons give us have brought with them a profound change in the balance between national and international interests. The common interest of all in the prevention of atomic warfare would seem immensely to overshadow any purely national interest, whether of welfare or of security. At the same time it would seem of most doubtful value in any long term to rely on purely national methods of defense for insuring security,...The true security of this nation, as of any other will be found, if at all, only in the collective efforts of all.³⁷

However, having completed their work on the atomic bomb, the US government was not particularly interested in the political opinions of Oppenheimer and the other Manhattan Project scientists. The United States pursued a security policy of national rather than international welfare and embraced nuclear weaponry as a key to American empire and dominance. They adhered to the traditional globe-based view of the world as divided by thick black lines drawn along national borders. The only scientists who were to be continually welcomed into the world of political advising were those (like Lawrence and Teller) who advocated conceptions of national security based in the Cold War logic of increased armaments and an expansive military rather than one based in considering the welfare of the "collective" planet and global society.

Conclusions: Target Earth

I have collected dozens of such editorial cartoons printed between August of 1945 and 1963, all of them predating even the oldest of the photographs of the Earth from space. In these cartoons, the Earth is depicted, not as the Whole Earth we would recognize, with all of its

attributes of life: the "blue bubble of air" that Archibald MacLeish spoke of on the front page of the *New York Times* on Christmas Day of 1968, the mythical goddess Gaia that would come to be associated with the stunning photographs of the Whole Earth from space. What we see in these political cartoons is *Target Earth*, the Earth as the target of nuclear war. Here lies the true origin of the icon we have come to know as the Whole Earth as the feared victim of nuclear weapons. The threat of nuclear war created a narrative of global death, of collective death, of a death that would encircle the globe, oblivious to the political borders we humans had imagined as so real, indeed, for which we had fought and died.

Considering the challenges of the new Atomic Age, Albert Einstein advised in 1945 that, "The situation calls for a courageous effort, for a radical change in our whole attitude, in the entire political concept...Otherwise human civilization will be doomed."³⁸ The second half of the twentieth century, dominated by the logics and funding demands of the Cold War seemed to reinforce Einstein's warning that only doom lay ahead. But a counter-narrative also was born in 1945—a narrative of the Earth as a single being, whose destiny was inseparable from those of all its inhabitants. This icon, soon to be seen in photographs and given a name, articulated the idea of one world in a visual image that could be embraced by people of any culture.

This icon had no strength by itself to counter the brutal destructiveness of nationalist-driven war, only people do. Relocating our sense of identity from that of members of a nation to that of beings of a single planet, however, is a necessary step that can empower us to continue to take more steps.

This is a revised, expanded and fully illustrated version of a chapter that appeared in, Robert Jacobs, ed. [Filling the Hole in the Nuclear Future: Art and Popular Culture Respond to the](#)

[Bomb](#) (Lanham, MD: Lexington Books, 2010).

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Notes

¹ Fred Hoyle, *The Nature of the Universe* (Oxford: Blackwell, 1950).

² [Nasa website](#).

³ See, Robert Jacobs, "Dodging Dystopia: The Role of Nuclear Narratives in Averting Global Thermonuclear Warfare," in, Antony Adolf, ed., [Nonkilling History: Shaping Policy with Lessons from the Past](#) (Honolulu: The Center for Global Nonviolence, 2010) 219-236.

⁴ David Bradley, *No Place to Hide* (Boston: Little, Brown and Company, 1948).

⁵ [Nasa website](#).

⁶ Gary H. Kitmacher, "Astronaut Still Photography During Apollo," August 2004. See also, Neil Maher, "Shooting the Moon," *Environmental History* 9:3 (July 2004): 526-31.

⁷ Stewart Brand, "'Why Haven't We Seen the Whole Earth Yet?'" in, Lynda Obst, ed., *The Sixties: The Decade Remembered Now, By the People Who Lived It Then* (New York: Random House/Rolling Stone Press, 1977), 168.

⁸ Author interview, Stewart Brand, Sausalito, California, March 2006.

- ⁹ From "Whole Earth Button," on Stewart Brand's website.
- ¹⁰ "Orbiting the Moon Christmas Eve," *Apollo Expeditions to the Moon*.
- ¹¹ Archibald MacLeish, "Bubble of Blue Air," *New York Times*, December 25, 1968, 1.
- ¹² Author interview, Stewart Brand, Sausalito, California, March 2006.
- ¹³ Stanley Kubrick, director, 2001: *A Space Odyssey*, 1968 (MGM). The film premiered in Washington D.C. on April 2, 1968, two days before the assassination of Martin Luther King, Jr.
- ¹⁴ Kubrick obtained photographs of the partial Earth from the Air Force Cambridge Research Laboratories. See, Jerome Agel, ed., *The Making of Kubrick's 2001* (New York: New American Library, 1970), 321.
- ¹⁵ In the novelized version of the film, Arthur Clarke includes a sequence at this point in which nuclear weapons are launched from the Earth, but the Star Child simply eliminates them, thus presenting the new human as able to transcend the nuclear dilemma. See, *Arthur C. Clarke, 2001: A Space Odyssey* (New York: New American Library, 1968).
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- ²⁴ *Ibid.*, 9.
- ²⁵ *Ibid.*, 10. Golding would win the Nobel Prize in 1983.
- ²⁶ *New York Times*, August 12, 1945, Sec. 4, 4E. They are reprinted by the *Times* from three different newspapers, the first from *The Newark Evening News*, the second from the *New York Times* itself, and the third from the *St. Louis Post-Dispatch*.
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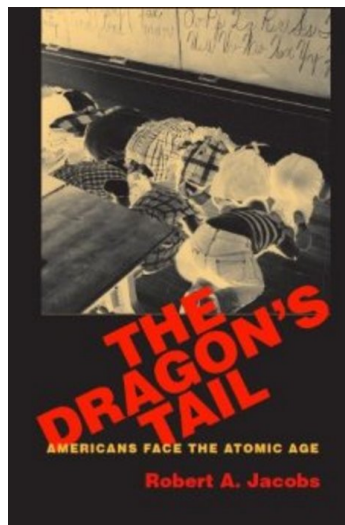
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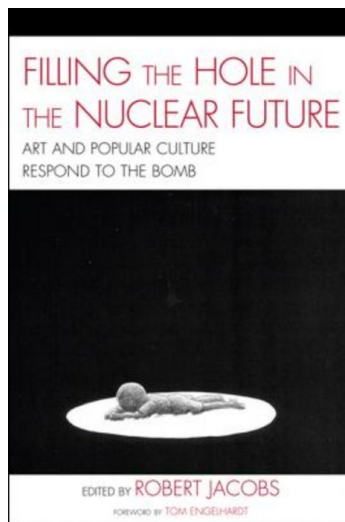
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World or None (New York: Whittlesey House/McGraw Hill Book Co., 1946), 25.

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