

The Wicked Problem of Climate Change

with Karl E. Peters, "Living with the Wicked Problem of Climate Change"; Paul H. Carr, "What Is Climate Change Doing to Us and for Us?"; James Clement van Pelt, "Climate Change in Context: Stress, Shock, and the Crucible of Livingkind"; Robert S. Pickart, "Climate Change at High Latitudes: An Illuminating Example"; Emily E. Austin, "Soil Carbon Transformations"; David A. Larrabee, "Climate Change and Conflicting Future Visions"; Panu Pihkala, "Eco-Anxiety, Tragedy, and Hope: Psychological and Spiritual Dimensions of Climate Change"; Carol Wayne White, "Re-Envisioning Hope: Anthropogenic Climate Change, Learned Ignorance, and Religious Naturalism"; Matthew Fox, "Climate Change, Laudato Si, Creation Spirituality, and the Nobility of the Scientist's Vocation"; Christopher Volpe, "Art and Climate Change: Contemporary Artists Respond to Global Crisis"; Jim Rubens, "The Wicked Problem of Our Failing Social Compact"; and Peter L. Kelley, "Crossing the Divide: Lessons from Developing Wind Energy in Post-Fact America."

ART AND CLIMATE CHANGE: CONTEMPORARY ARTISTS RESPOND TO GLOBAL CRISIS

by Christopher Volpe

Abstract. This essay examines various contemporary artistic responses to climate change. These responses encompass multiple media and diverse philosophical and emotional forms, from grief and resignation to resistance, hope, and poignant celebration of spiritual value and natural beauty. Rejecting much of the terminology of current theory, the author considers the artworks in relation to interrelated and arguably unjustly discredited aesthetic and theological categories, namely, the sublime and the beautiful as well as the *via negativa*, the latter adapted from Thomas Aquinas by theologian Matthew Fox. Art's power is seen largely as the ability to "humanize" the science by rendering it emotionally, psychologically, and spiritually relatable to individuals. The broken relationship between humanity and nature seems related to the need for a renewed religious sense of integration with, and belonging to, the cosmos. Art might play a pivotal role in bringing this about.

Keywords: Anthropocene; art; beauty; climate change; nature; oceanic feeling; religion; science; spirituality; the sublime; technology; truth

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The dark periods of history are the creative periods, for these are the times when new ideas, arts, and institutions can be brought into being at the most basic level.

Thomas Berry (1999, 9)

A dozen years ago environmental essayist Bill McKibben wrote that although we knew about climate change, we didn't really *know* about it; it wasn't yet part of the culture. "Where are the books? The plays? The goddamn operas?" he asked (McKibben 2005). It took some time, perhaps because the problem was too big, too ubiquitous, or too political, but the obstacles have lifted. What climate scientists are saying is slowly seeping into general knowledge, and artists, religious and secular, have begun to heed the call *en masse*. Deeply engaged, artistically savvy, and spiritually aware responses abound. Finally, the data, no longer so easily contested, are being related to human aspirations and emotions. It's now possible to review a spectrum of informed, thought-provoking responses to the crisis of climate change at the juncture of science, the human, and the sacred. The following review will lift up performance art, music, painting, and photography that brings about emotional involvement from elegiac to hopeful, from frozen-in-death to spring-like rebirth, from nihilistically resigned to committed to change. In between, less explicit approaches produce subtler but no less powerful work insistent upon resonant lyrical readings of the human predicament in light of the shortcomings of modern civilization.

FROM SERENE HARMONY TO DEATH AND REBIRTH

Longstanding relationships between science, art, and nature are shifting. The classic landscape painting, epitomized by the many serene and beautiful depictions of nature produced during the eighteenth and nineteenth centuries, assumed that the Creation was beautiful because it was a manifestation of divinity. Much of the harmony between man and nature that radiates from the oil paintings of John Constable or his American cousins, such as Asher Durand, Albert Bierstadt, and Frederick Church, rested on the assumption that, as then contemporary poet Robert Browning wrote, "God's in His heaven—All's right with the world!" For quite some time since, this has not been an easy supposition for many artists to make.

Daily the news brings evidence that civilized humanity no longer enjoys a harmonious relationship with nature (to say the least), if indeed it ever did (the story of the first couple's fall from Eden expresses as much). In the absence of what Mircea Eliade in *The Sacred and the Profane* called an "orientation in the chaos" via a sense of sacred space (1957, 23), humanity is evidently sabotaging itself. Driven by, as Eliade put it, "the obligations of an existence incorporated into an industrial society," we are blindly

destroying individual lives, local populations, and entire species in great numbers, threatening the fundamental social, biological, and ecological systems that make possible existence of life on Earth (Eliade 1957, 24). Many scientists concur that we have entered a new, human-dominated geological era, the Anthropocene, and that we are now accelerating the planet's sixth mass extinction, virtually eliminating the prospect of human survival as the planet's environmental changes outpace scores of species' ability to adapt. The world's climate scientists seem always to be correcting the data upwards, toward "more severe than originally thought" and "faster than expected." "It is already too late," says essayist Charles Eisenstein, "however bad you think it is, it is probably worse" (2007, 434). Eisenstein is one of a growing number of writers, artists, and others who choose to see the prospect of collapse not as the last gasp of *Homo sapiens* but as the birth pangs of a "planetary renewal." Eisenstein foresees a necessary transition through a sort of dark ages akin to the religious "dark night of the soul," a period of suffering and collapse that clears the way for rebirth and a "more beautiful world our hearts know is possible." Eisenstein writes:

While it is true that no effort at renewable energy, wastewater recycling, local currency, wetlands preservation, or reform of any aspect of society is going to avert catastrophe, these efforts are sowing seeds for the planetary renewal that can happen after the present regime collapses, after the addict has hit bottom upon the exhaustion of his very last technological fix. (2007, 435–36)

As Eliade put it, "access to spiritual life always entails death to the profane condition, followed by a new birth" (1957, 201). Art is one of the ways humanity can manifest auguries of renewal.

New forms of climate-conscious art abound. "ARTISTS NEED TO CREATE ON THE SAME SCALE THAT SOCIETY HAS THE CAPACITY TO DESTROY," read the neon letters of a text-based artwork by Los Angeles artist Lauren Bon. Under the aegis of her Metabolic Studios, Bon's projects cross performance art with environmental activism. Metabolic's "performative actions" intervene directly with negative climate impacts in ways that include altering architecture and replacing urban lots with harvestable food crops. The group's latest project, *Bending the River Back into the City* (Bon 2017), diverts water from the Los Angeles River through a wetland and filtration facility and into downtown studio space. According to Bon, "Once the water meets regulatory requirements for cleanliness, it will be distributed through subterranean irrigation to Los Angeles State Historic Park and the future Albion River Park" (Bon 2017).

Art that is bonded to science by the need to know and be present to the Anthropocene may yet prove our best, because most relatable, tool for understanding our predicament. Toward the conclusion of his seminal essay, *The Question Concerning Technology*, Martin Heidegger writes, "Because

the essence of technology is nothing technological, essential reflection upon technology and decisive confrontation with it must happen in a realm that is, on the one hand, akin to the essence of technology and, on the other, fundamentally different from it. Such a realm is art” (1977, 317).

MUSIC: DESTRUCTION-CREATION AND COSMIC RELIGIOUS EXPERIENCE

Become Ocean is an immersive musical sound-scape by musician and environmental activist John Luther Adams. Through a dramatic series of rolling and crashing rhythms the composition seeks in a visceral way to convey the awe, mystery, power, and even violence of the Earth’s seas while calling attention to escalating sea levels and melting glaciers. When *Become Ocean* won a Pulitzer Prize in 2014, the committee called the composition “a haunting orchestral work that suggests a relentless tidal surge, evoking thoughts of melting polar ice and rising sea levels.” As the Seattle Symphony’s program notes states, the work “takes the form of waves of sound, both large and small” (Adams 2014a). “The orchestra is divided into three smaller ensembles that perform at independent tempos to create separate crests and troughs that occasionally come together into crashing climaxes. The result is an immersive sonic environment that, like so much of Adams’s music, powerfully reflects the unrelenting, awe-inspiring and savage power of Nature” (Adams 2014a). The immersive nature of Adams’s work might well evoke the “oceanic feeling,” a term introduced to Sigmund Freud in a letter from Romain Rolland. The oceanic feeling posits the source of religiosity in the universally accessible sense of boundlessness and oneness with all of humanity and the universe (Roberts 2016). Extending this idea from religion to the realms of both art and science, Albert Einstein remarked, “the most important function of art and science is to awaken the cosmic religious feeling and keep it alive” ([1930] 1954). A prime function of artworks such as *Become Ocean* is to be a source of this “cosmic religious experience,” defined by William James as “that curious sense of the whole residual cosmos as an everlasting presence, intimate or alien, terrible or amusing, lovable or odious, which in some degree everyone possesses” (1916).

Not unlike Adams, contemporary Italian composer Ludovico Einaudi took up the strands of religion, art, and climate science related to melting polar ice as a theme in his composition for piano titled *Elegy for the Arctic*. Greenpeace commissioned Einaudi’s premiere performance of the piece and streamed it live over the internet to Oslo, Norway, during the opening of the fourth Nordic Conference on Climate Change in 2016. Videographers filmed while Einaudi, dressed in a monkish black coat with a collar resembling a surplice, played a grand piano atop a floating barge shaped like an artificial iceberg adrift. The constant drip and occasional crash of melting glacial ice cascading from the massive walls of fractured glacial ice

punctuated the performance as Einaudi's pensive melodies, at once "intimate" and "alien," threaded the icy air. Acknowledging the science of a melting Arctic with a feeling of awe and a sensibility deeply reminiscent of spiritual devotion, *Elegy for the Arctic* movingly combined art, technology, and an intense sense of Earth-awareness with practical eco-activism intended to promote change.

Again like *Become Ocean*, Einaudi's music marries the "cosmic religious experience" and what Adams calls "the inherent power and mystery, the imperative, for music in our lives" with "this image [which he "had in his heart"] of the melting of polar ice and the rising of the seas. "All life on this Earth emerged from the ocean. If we don't wake up and pay attention here pretty soon, we human animals may find ourselves once again becoming ocean sooner than we imagine" (Adams 2014b). The work has been called possibly "the loveliest apocalypse in musical history" (Ross 2013).

It's notable that Adams and Einaudi, like many artists of the Anthropocene, embrace, if only implicitly, the darker forebodings of climate change. Theologian Matthew Fox would call this an instance in art of *via negativa*, a mode of spirituality that does not reject uncertainty, darkness, tragedy, or suffering (2017, 2018). Austrian writer Ernst Fischer decades earlier spelled out what such an orientation would mean for artists addressing the crises of the Anthropocene: "In a decaying society, art, if it is truthful, must also reflect decay. And unless it wants to break faith with its social function, art must show the world as changeable. And help to change it" (Fischer 1963). Adams's description of his work and Fox's *via negativa* both recall Edmund Burke's concept of the sublime, a mode of experience shot through with foreboding and tinged with danger. "My hope," Adams has said, "is that the music creates a strange, beautiful, overwhelming—sometimes even frightening—landscape, and invites you to get lost in it" (Adams 2014a).

Einstein's "cosmic religious feeling" means being struck by the insignificance of human desires and aims given "the sublimity and marvelous order which reveal themselves both in nature and in the world of thought" ([1930] 1954). *Kosmos* for the ancient Greeks meant at various times order, as in the harmonious, divinely ordained order of the world and the universe, and beauty, as in that which pleases the eye and mind—appealing nomenclature for the intertwined aims of art, science, and religion (Casevitz 1989). Eisenstein identified this religious sense of the cosmos shared by the rational mind and by art as "the strongest and noblest motive for scientific research" (2007).

VISUAL ARTS—TRAGIC BEAUTY

Another fruitful integration of art and arctic science, the Extreme Ice Survey (EIS), is a long-term photography program under the aegis of the Earth Vision Institute. Since 2007, this team of researchers has been giving

a “visual voice” to the changing ecosystem. Twenty-seven Nikon cameras brood over thousands of miles of glaciers in Antarctica, Greenland, Iceland, Alaska, Austria, and the Rocky Mountains. The cameras record changes in the glaciers every daylight hour, year-round, yielding approximately eight thousand frames per camera per year. Selected photographs and time-lapse videos posted online reveal how quickly climate change is transforming large regions of our planet. Scientist and EIS project founder James Balog has published a series of books highlighting exquisitely beautiful photographs from the million-strong EIS photo archive. One such volume, *Ice: Portraits of Vanishing Glaciers*, “celebrates the art and architecture of ice,” according to the publisher: “We see stupendous ice sheets transformed by the Sun, seawater, and time, until they become small, glittering diamonds melting into the ever-rising global ocean” (Balog 2012).

Balog’s fusion of science and beauty immediately underscores a frightening reality even as it celebrates a striking and ephemeral sublimity. “Where lobbyists and pundits seek confusion and controversy,” writes Terry Tempest Williams in the forward to *ICE*, “science and art seek clarity and vision” (Balog 2012). The project exemplifies art’s ability to cut through obfuscation and bring experiential relevance to potentially dry scientific material. In Balog’s words, “the creative integration of art and science can shape public perception and inspire action more effectively than either art or science can do alone” (2017).

Independent photographer Camille Seaman has also been taking “portraits” of icebergs in destabilized areas of the Arctic and Antarctica. She has said she hopes her crisply detailed and lushly colored images can help to articulate that humans are connected to, and not separate from, nature. Similarly, artist Zaria Forman creates giant, stunningly beautiful pastel images of Arctic oceanscapes and icebergs in a mode of hyperrealism developed from her onsite photography intended to capture the beauty and fragility of melting sea ice. Both artists accompany scientists to remote corners of the world, and both convey the reality of climate change in classically composed visual expressions of striking beauty. Forman has described creating her work as a meditative, devotional act; she draws her large-scale works using her fingertips to render marks in pastel chalk, one touch at a time. “The work invites visitors to explore the roles that science, technology, and human ingenuity can play in stabilizing our environment,” she has said. “My drawings celebrate the beauty of what we all stand to lose. I hope they can serve as records of sublime landscapes in flux” (Forman 2015).

To premodern thinkers and artists, beauty was an essential theological category (Fox 1991). Homer, one of our earliest artistic creators on record, tells us beauty is sacred (Scarry 1999), and Thomas Aquinas in *De Divinis Nominibus* put it this way: *God, manifesting beauty itself, beautifies all things*. Aquinas tells us also that beauty is “life-saving,” describing it as “a plank amid the waves of the sea.” Indeed, as physicist Paul H.

Carr succinctly affirms, “Religion regards nature’s beauty as evidence of divine creativity,” and thus “creativity can be a link between science and spirituality” (2007).

Artist and Ohio University professor John Sabraw uses toxic runoff from the Ohio River region to produce vibrantly beautiful works of art. He works with a lab team to extract the polluted water’s heavy metals from abandoned coal mines and convert them into safe, brilliant pigments. He uses these to craft lyrical paintings that at times resemble aerial photography of the river, and at other times suggest mandalas or simultaneously micro- and macroscopic organic forms such as planets imaged with near-infrared spectra or cellular life viewed through an electron microscope. “Art is the mechanism through which I explore the fundamental metaphysical dilemmas we face as a conscious species,” he says (Sabraw 2017). Art such as Sabraw’s or Bon’s embodies a prime role for art in the Anthropocene; it literally, in Matthew Fox’s phrase, “cleanses and recycles the toxins in a culture” (Fox 2004).

It would seem that beauty in art addressing climate change must almost by definition be alloyed with “truth,” if not in the sense of an outright marriage of the conceptual and the material realm, then surely in the sense of (scientific) knowledge and (human/ecological) complexity. “And this is when I realized that beauty mattered deeply—not only as a salve from ugliness, but as an introduction to a deeper conversation with ourselves, the world around us, and the vast uncertainty within and beyond those borders,” writes oil painter Elsa Muñoz in her website (2007). Muñoz brings classical realism to bear upon a sense of cosmic mystery and poetic complexity. Her series *Controlled Burn* offers delicately rendered depictions of lush forests being ravaged by fire, while her series of *Nightshore* paintings present billows of brightly (artificially?) illuminated surf in unnatural contrast with an impenetrable pitch-black darkness that veils both ocean and sky. “I think,” Muñoz has said, “of the famous last lines in the poem ‘Ode on a Grecian Urn’ by John Keats: ‘Beauty is truth, truth beauty, that is all Ye know on earth, and all ye need to know.’ I believe that. Beauty propels us towards seeking deeper things.” Anthropocenic beauty is often a “tragic beauty,” as Alfred North Whitehead puts it: “The Adventure of the Universe starts with a dream and reaps tragic beauty” (Carr 2007).

We encounter the same sense of tragic beauty in Chinese artist Cai Guo-Qiang’s *The Ninth Wave* (2014). This work consists of a life-sized fishing boat covered in what appears to be dozens of sickly animals, all not without a wild beauty. The work is reminiscent of both Noah’s Ark and a 2013 incident when about sixteen thousand dead pigs floated down Shanghai’s Huangpu River, inciting public discussion of China’s serious environmental issues. It remains unclear exactly why the incident occurred, but climate change figures as an accomplice: the region has a problem with illegally dense and unregulated pig farming. With an onslaught of

unusually large amounts of rain and snow that winter and spring, the seasonal brood of younger pigs was unable to survive. Guo-Qiang's earlier *Head On* addresses similar issues. Permanently installed at the Deutsche Guggenheim in Berlin, the installation consists of ninety-nine life-sized wolves, fabricated from painted sheepskins and stuffed with hay and metal wires, barreling in a continuous stream towards—and into—a clear glass wall. Only the first animals crash into the wall, but the pack chases after the leader just the same. An eerie beauty invests the graceful arc of the dozens of sleek, coursing animals.

THE CONFERENCE OF PARTIES (COP)—CREATIVITY OVER CONSUMPTION

Encouraging creativity over consumption, these and many other works are fostering new relationships with nature, encouraging empathy, telling new “Earth Stories,” and offering concrete solutions to the problem of responding, emotionally, intellectually, and spiritually, to what may well prove humanity's most formidable existential challenge. On a global scale, each year a nonprofit organization based in Australia called CLIMARTE (“arts for a safe climate”) organizes dozens of artists who display relevant work in many diverse mediums during the Conference of the Parties (COP), in which the signatories of the United Nations Framework Convention on Climate Change convene in one of the world's great cities.

One artist who participated in the COP21 (Paris Accord) art events in 2015 was David Buckland, who is at the forefront of a new conception of sculpture as interaction with organic elements. Buckland works with climate scientists to digitally project texts such as “Burning Ice,” “The Cold Library of Ice,” and “Sadness Melts” on a glacier wall actively crumbling and crashing into the sea. “The Arctic is an extraordinary place to visit,” he says. “It is a place in which to be inspired, a place which urges us to face up to what it is we stand to lose.” He intends his example to demonstrate “the notion that art can interrogate the future with some semblance of rigor . . . to face the challenge of Climate Change Caused by us all, it is a cultural, social and economic problem and must move beyond scientific debate. *Cape Farewell* (Buckland's umbrella project) is committed to the notion that artists can engage the public in this issue, through creative insight and vision (Buckland, 2017).

Another COP21 artist is Nazhia Mestau, whose determinedly cheerful work *I heart, I Tree* combined technology, spirituality, and earth-awareness to draw attention to (and actually ameliorate) deforestation. Mestau projected dynamic, virtual forests, powered by the heartbeats of viewers interacting with the work, onto classic city monuments including the Eiffel Tower. Her technology-based project connects people to far away ecosystems through an interactive art installation in which a visitor “plants” a

digital “seed” made of light. The “seed” is generated by the visitor’s real-life heartbeat (as captured through an iPhone) and eventually grows into a unique digital tree, joining others in the virtual forests projected onto city spaces (Mestau 2017). For each virtual tree created, a physical one is planted in a vulnerable region somewhere in the world.

The land installation works of Argentine artist Pedro Marzaroti interact with natural elements. In *Where the Tides Ebb and Flow*, also shown during COP21 in Paris in 2015, a series of bright blue sculptured heads of an archetypal human male projects from a pool of water in an arcing sequence, emerging from the depths to ultimately drown beneath them. A related work, installed in a public garden, depicts the hands of a man and a woman reaching toward each other. While one hand emerges from stone (urban development), the second emerges from the earth (nature). The artist intends the two hands seeking each other to suggest that the reconciliation of development and the natural world is possible, embodying the artist’s belief that humans can achieve modern urbanization within the natural environment without destroying it or exhausting its resources. “Man has the capacity to change the world through his actions,” Marzaroti has said. “This hand, holding tools, can be creative or destructive, according to his choices and decisions. In my new series *Mano à Mano*, I am showing a hand which persists in shaping man’s common fate” (Marzaroti 2017).

We have encountered a broad range of artistic responses to climate change, from elegiac to hopeful, from frozen-in-death to spring-like rebirth. For painter, sculptor, writer, and former physicist Enrique Martinez Celaya, climate change is only one aspect of our fractured physical existence on Earth, and art is explicitly a religious way to move through the world. Painting for Celaya is as much about the sacred as it is about how we think about our relationship to nature. As he explains, his work is about “reconciliation to the real,” a mute, healing encounter with the broken material world (Ruprecht 2010). For Celaya, artists live in two worlds, an inner world and an outer one (2017). In any artwork, he would say, there is the technical aspect of art, the chemistry of materials, the knowledge of the history of art and the tools, practices, traditions, and conventions of art, all of which is akin to the rational and would align with science. Then there is the intuitive aspect of it, an experience and an expression that is beyond thought and language and akin to the spiritual.

For many artists, whether or not their practice focuses on climate change, art is ultimately a way to address questions about being and the cosmos, a line to what Celaya calls the “secret in all things” that “only religious attitudes can approach” (2017). In art, says Celaya, “a consciousness unfolds. A profoundly thoughtful and emotional personal engagement with the world is shared. And you are different—changed” (2017). Celaya says: “One must be quiet and listen for the whisper of truth, the whisper of the order of things like the rustling of leaves beneath the noise of days” (2017).

Celaya urges us to look and listen very carefully for the more stable reality under appearance, as poets, theologians, artists, and scientists throughout history have done and do.

Time and again, artistic movements have responded to the undercurrent of their times by sparking higher degrees of self-awareness and renewal. Is it too much to hope that art can be a midwife to a global cultural transition from a period of devastating commercial exploitation to a more integrated, mutually beneficial and spiritual coexistence with nature? As this glimpse into the preceding artists' passions and obsessions suggests, creativity is where knowledge and imagination meet, where to know and to invent join with to marvel and to love. Judging by the work of these artists, creativity is a place where what we call religion and science can meet to save ourselves individually and to save our planet. Could creativity, as common ground between art, science, and spirituality, help us to re-vision how we inhabit the Earth and to ascend to a further level of evolution as a species?

As Heidegger reminds us, "the closer we come to the danger, the more brightly do the ways into the saving power begin to shine and the more questioning we become. For questioning is the piety of thought" (1977, 317).

The eternal equilibrium of things is great,
And the eternal overthrow of things is great,
And there is another paradox.
(Walt Whitman [1855] 2007)

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