Fig. 1: Matthew Brandt, Moose Falls Y1M1C1, 2013. Courtesy of Yossi Milo Gallery, New York.

Fig. 2: Alison Elizabeth Taylor, Kelso, 2013

Fig. 3: Fred Tomaselli, Unfished, 2014
THE FIFTH SEASON

The theme of the ‘four seasons’ has inspired countless works of art throughout history. As a subject, the seasons are metaphors for life cycles and transitions. The calendar propels our existence on a regular emotional and physiological schedule. The rhythm of life is inextricably connected to the quartered year.

Ecological and technological changes have created a less defined cycle of life, one that is sped up by the velocity of communication and slowed down by unpredictable environmental behavior, calling into question our long-held notions of how time behaves. One is confronted on a daily basis by unprecedented connectivity and growing awareness of irregular natural patterns, and we as a species are struggling to understand this new reality.

Some of the works in this exhibition thrive on the reassurances of nature, while others reflect on today’s intense technological hybridity and climate change. This publication is a reader and glossary, reaching further into the concerns and backgrounds of the artists on display. From these companion platforms, we have an opportunity to situate ourselves in this fifth season—a highly nuanced, unfamiliar place.
TWO ARTISTS IN THE AGE OF PESSIMISM

Mark Dion and Alexis Rockman in conversation

Alexis Rockman
Mark, I want to talk about our outlook on art and how it may have changed in terms of things that we care about in our work and in our lives. Do you feel more or less hopeful about ecology, conservation and biodiversity than you did when we both started our careers in the mid 1980s?

Mark Dion
I fear the trajectories of our thoughts about wild lands and wildlife conservation have been parallel. It is a long train of ideas that terminates in pessimism and melancholy. If I had to categorize my thoughts and feelings about ecology over my development as an artist, it would form a list like this:

- Amazement/Wonder
- Curiosity
- Outrage/Anger
- Hope/Activism
- Disillusionment
- Pessimism/Melancholy

We were both fascinated by a wonder and love for animals and wild places. This became the motivation for reading about natural history and zoology in particular, which led to our understanding of the challenges of wildlife conservation issues. At one point I became convinced that environmental issues were really information problems. I believed that if people knew the damage their way of life caused to the natural world, they would change. I believed that people would opt for environmental sanity over ecological suicide. My early work tended to be quite informational and didactic since I was literally attempting a kind of sculptural documentary practice.

After a while it became apparent that access to knowledge wasn’t the problem. Ecological knowledge was readily available. The main issues were questions of political will, ideology, capitalism and psychology. It is hard to say that people don’t know about the crisis in biodiversity because the information is everywhere.

For me it is clear that we will continue to disregard for other living things and the degradation of the environment to suicidal extremes. This leads me to a perspective of pessimism. However, I would love to be proven wrong. Dark conclusions and complex positions that end in ambivalence are difficult to articulate in various forms of culture. You cannot express these sentiments in politics, in activism, perhaps even in journalism. Art is an excellent place to express complexity, paradox, uncertainty, ambivalence and hopelessness. The role of the artist as witness can be as valuable as the artist as catalyst.

Don’t you find a great deal of pushback from the environmental community you sometimes work with when it comes to issues of pessimism and doubt?

AR: Yes, there is a lot of pushback from the scientific and environmental activist community. They might confess privately that they are despairing, but they often feel that if they articulate this in public, people will flee as it from a burning building. Well, it is a building on fire, and it’s terrifying. I’m grateful to have art as a way to cope. One of my jobs as an artist is to show how we can’t afford to be ambivalent about human activity.

Obviously, it’s easy to be confused by what fuels our behavior and motivation. Knowledge just isn’t enough. Our behavior has as much to do with the Pleistocene as it does with the 21st Century. What I mean is we are tribal, territorial animals who are afraid of mortality. We really can’t imagine what the world will be like one hundred years from now, let alone two years. This is an unfortunate cocktail of paradigms for everything else alive on this planet. I often try to imagine what the person who cut down the last tree on Easter Island was thinking around 1600 CE.

Like you, I used to believe that knowledge and information would open our eyes to the environmental issues and create radical change in behavior and save the world. I made art to teach a lesson. But I learned the lesson from Al Gore’s An Inconvenient Truth that people, if they will listen, just don’t have the collective will to do much. The engine of capitalism is just too powerful.

How do you think future generations will perceive this period in history, now that our impact on the planet is an undeniable and acknowledged fact?

MD: I guess we could look at how we feel about those who made selfish, corrupt and unforgivable choices in the past. How do we feel about those who clear cut the entirety of New England? How do we feel about the agriculturalists who killed the last Carolina Parakeet or the market hunters who raided the last passenger pigeon nest site? How to we feel about those who administrated the Trail of Tears and other schemes of genocide? How do we judge those who brought buffalo and wolves to the very border of extinction? How do we judge the chemical magnates who attacked Rachel Carson, employing the notion that a woman could not produce good science?

AR: How do we feel about those who brought buffalo and wolves to the very border of extinction? How do we judge the chemical magnates who attacked Rachel Carson, employing the notion that a woman could not produce good science?

MD: If it is true that we are the last generation that can significantly change the course of environmental degradation and we end up doing little or nothing, then I imagine our place in history, as the enablers of shaping the planet as a crumrier place, will not be terribly noble.

I am not sitting on the moral high ground and wagging my finger. I am very much implicated in history, as the enablers of shaping the planet as a crumrier place, will not be terribly noble.

I am not sitting on the moral high ground and wagging my finger. I am very much implicated in the problem. I am far from a paragon of environmental sainthood. While we need some leadership and models of a positive culture of nature, it seems to me very much a question of values under capitalism.
Mark Dion’s installations often question methods of environmentalism. Over the years art and arts organization that we love have taken financial support from companies or sponsors that would be at direct odds with our conscience and political positions of our work. People like the Koch brothers are very involved in philanthropic activities around the country. The American Museum of Natural History will enjoy a new Dinosaur Wing thanks to David Koch’s 20 million dollar donation. They even had their name on the building where I just had surgery. What does one do when the potential benefactor is at least a symbol of the very problem?

I think environmental groups overestimate the importance of individual contributions to problems, making it seem like one’s choice of light bulbs or household recycling are real solutions. This tends to let the policy works, elected leaders, corporations and other masters of the culture of consumption off the hook.

As long as your sponsor does not control your content and you have no intention of changing your work, I say take the money. I don’t really know of any clean money in the world. You must be careful and cautious of how you are being used, and be certain that your content cannot be co-opted to contradict your convictions. No greenwashing.

You depict a good deal of trash in your work. What does it mean to you? How does it function in your iconography?

Trash. It works for me in a number of exciting ways. When I first started to paint natural history landscape paintings in the 1980s, trash was a big thrill. It was something that hadn’t really been included in the history of painting and seemed like a taboo. There was something perverse about painting it in a loving and careful way. Trash was also a way to stake out my own territory. I was aware that one can’t make a painting about ecology in the 20th or 21st Century and not include it. It’s everywhere, whether visible on a beach or on a microscopic level, and it’s the reality of the state of the planet.

One of my earliest memories was being in Lima, Peru and seeing what looked like mountains of trash clogging the river. To add insult to injury, it seemed as if the trash was covered in vultures. It terrified me particularly because at home I lived near the East River in New York City and I was afraid that might happen there too.

You have traveled to as many “dream” destinations as anyone I know. Is there a place you have yet to go that is at the top of your list?

Where does art fit into this?

AR: Art is one of the few places where one can have a singular voice that challenges corporate globalism. However, there can be surprises too.

It is possible to find oneself in bizarre professional paradoxes. Over the years art and arts organization that we love have taken financial support from companies or sponsors that would be at direct odds with our conscience and political positions of our work. People like the Koch brothers are very involved in philanthropic activities around the country. The American Museum of Natural History will enjoy a new Dinosaur Wing thanks to David Koch’s 20 million dollar donation. They even had their name on the building where I just had surgery.

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You have traveled to as many “dream” destinations as anyone I know. Is there a place you have yet to go that is at the top of your list?

MD: I have been to some remarkable places—both remote and natural, and highly populated and cultured—but what makes traveling fulfilling is the company I’ve shared. Traveling with people who share my passion for wild places and commitment to conservation but who came with such different sensibilities and strategies was amazing.

Artists and scientists are obvious allies when it comes to environmental justice and wildlife issues, but they speak different languages and employ entirely separate toolboxes in their approach. The GYRE expedition to the trash-strewn beaches of Alaska was a real model of the kind of travel I would like to do more of. The team was relaxed, yet highly committed and remarkably intelligent and thoughtful. I had not imagined that the expedition would be so productive and that we would all get along so well, but of course it makes sense given we all share them same concerns.

Needless to say, there is always a sense of urgency in nature travel today since so many wild places are under pressure. It is easy to get caught up in “the last chance to see” mentality. Places you and I traveled to in the 1990s have become drastically degraded. Many of the forests you visited in Madagascar are gone forever. For me, the importance of travel is that it affirms my connection with wild places and makes me give a damn. It is easy to lose a sense of what we’re fighting for, so I find visiting wild places essential to keeping my focus. The idea I mentioned earlier about the artist as a witness is also an important dimension of conservation travel. Artists were important to the process of documenting new animals as they were first identified to science. Now they are equally important in documenting their disappearance.
Pierre Huyghe’s *La Saison des fêtes* was conceived for the Palacio de Cristal in Madrid, a majestic greenhouse-like space constructed in 1887 to showcase the flora and fauna of the Philippines, then a Spanish colony. Engaging the history of the space, the artist presented an invented landscape of plants from a variety of festivals and celebrations around the world—from Halloween pumpkins to the red roses of Valentine’s Day or cherry blossoms signaling the start of spring. Huyghe made a “bouquet of anniversaries,” a simultaneous and strange blooming of life’s symbolic moments in different cultures.
Katie Paterson’s *Future Library* is a large scale public art project commissioned by Bjørvika Utvikling in Oslo, Norway, and produced by Situations as part of the Slow Space public art program. For the next century it will exist in two forms—as a print, and as 1,000 trees. “A forest in Norway is growing,” the print reads. “In 100 years from now it will become an anthology of books. Every year a writer will contribute a text that will be held in trust, unpublished, until 2114. This certificate entitles the owner to one complete set of the texts printed on the paper made from the trees after they are fully grown and cut down in 2114.” With *Future Library* we wait for a forest to be ready to make a book, we trust today’s technology to work long after our lifetimes, and we reflect on stories read by no one for a hundred years. www.futurelibrary.no

Figs. 10–12: Views from the planting of Katie Paterson’s *Future Library*, May 2014. Photos: MJC
PICTURING THE PERFECT STORM, AS DRAWN IN A SINGLE LINE

David Brooks

Tropical rainforest ecology is an ongoing history of natural destruction. A common scenario in this history is the opportunistic rise of pioneering species in the undergrowth of the rainforest, a phenomenon known as “gap ecology.”

The onslaught of rain and wind during the unrelenting storms of the Amazonian forest’s rainy season often results in the natural clearing of emergent trees. When one of these towering hardwood giants topples it typically takes a handful of neighboring trees with it, thus ripping a hole in the forest canopy—a “light gap”—and exposing the understory to uninhibited shafts of light. The felled tree leaves a powerful mark on the forest. This newly formed gap will be quickly colonized by opportunistic species in the undergrowth. Certain types of palms, bamboos and shrubby plants are well adapted to capitalize on such improvisational events. Taking advantage of their brief exposure to light, these pioneering species begin fruiting and flowering at accelerated speeds, attracting numerous bands of animal life to their momentary bursts of growth. It’s a veritable bacchanal.

Typically this event has a relatively limited duration as these species are not designed for long-term existence in the rainforest but are designed to take advantage of another’s downfall—a rupture in the status quo. Nevertheless, many tree species are dependent on this event to complete their life cycle. Saplings can lay dormant in the understory for decades, awaiting such an event, if it happens at all. These portentous forest fires, the apocalyptic life are ever-present but concealed in the hierarchy of the forest’s body, waiting to be enacted. By creating such an invasive mark on the forest, the felled tree delineates a discrete territory within the immeasurable plane of the Amazon Basin. It becomes an island of difference in what is otherwise a carpeted sea with invisible boundaries.

A more acute form of delineation occurring on the body of the Amazon, a perverse enactment of gap ecology, is a controversial dirt road in the Brazilian interior called the BR-163. The road makes a much cleaner line for us, but its originating forces and implications are far more nebulous than the mere telling of an emergent tree.

What makes the BR-163 exemplary and unique, compared to the innumerable other roads that traverse our landscapes, is its unprecedented length and location. The BR-163 draws a clean line between the capital of the Brazilian state of Mato Grosso and the deep-water port of Santarem on the Amazon River.

As an unpaved road, the BR-163 spends the rainy season, a large part of the year, as a useless path of knee-deep mud. While the rainy season brings the storms that topple those towering hardwood trees of the forest canopy—forming light gaps and engendering accelerated flowering, fruiting and animal frenzy in improvised bursts of growth—the BR-163 lays dormant and unused during this time, like the sapling awaiting its light gap.

But contentious plans are already underway to pave the entire stretch of the road, which will become a superhighway, complete with billboards, through the heart of undeveloped regions in the Amazon, dissecting two of the most fragile ecosystems in the hemisphere. It draws an unmistakable mark on the Amazon, a feat previously unattainable due to the forest’s sheer size and inhospitable nature. However, thanks to the unwavering determination and monetary might of luminaries such as Blairo Maggi, the former governor of Mato Grosso, a paved Amazonian highway is now underway. The drawing of a clean and visible line through this impenetrable forest will soon bring growth and opportunity to a big swath of the world’s largest wilderness. Developers liken it to the North American Transcontinental Railway, which opened up the West to migration and development in the 19th Century. “Land without people is an island of difference in what is otherwise a carpeted sea with invisible boundaries.”

One of the primary incentives for paving the BR-163, however, and what many people feel is a fair trade for forest that’s collectively recognized as the world’s lungs, is soy production. Escalating ethanol production has put a premium on the cultivation of corn, causing soy production in North America to abate, while the world’s demand for cheap soy increases exponentially. So the market looks to Brazil.

Blairo Maggi, Mato Grosso’s recent governor, is also, coincidentally, the owner of Gruppo Maggi, the world’s largest soy producer and exporter. This BR-163 superhighway will act as the feeding tube for the world’s demand for soy. And the Amazonian interior is fertile ground for the soy cultivation. What was once the world’s lungs is fast becoming the world’s breadbasket.

So the market looks to Brazil.
In solid aluminum and marble, the abstract sculptures of David Brooks’ Crates, Blocks and Mammals series loosely recall animal forms before slipping into abstraction. The works are, however, each deeply engaged with some of the most critically endangered mammals on earth: the form of each sculpture is determined by the amount of material needed to mimic the exact weight of the animal it depicts. Brooks has never seen these creatures in person, and based on their impending extinction, it is unlikely that many others will either. These sculptures will outlive the species they reference, rendering them veritable monuments to the unknown and soon-to-be obsolete. The weight of these rare creatures is a verifiable fact. Brooks engages the actual scale of the presence of these beings, while tackling the scope of their elimination.

Fig. 13: The BR-163 under construction. Photo: David Brooks

Fig. 14 (bottom): **David Brooks**, *Aluminum Blocks - 352 lbs - or Pygmy Hippopotamus (West Africa)*, 2014.

Fig. 15 (left): **David Brooks**, *Aluminum Blocks - 352 lbs - or Pygmy Hippopotamus (West Africa) (detail)*, 2014.

Fig. 16 (right): **David Brooks**, *Marble Blocks - 280 lbs - or South China Tiger (China)*, 2014.

David Brooks images courtesy of American Contemporary, New York.
The figure of the whistleblower—the concerned individual who takes on the vested interests of corporate consensus—has become something of a fixture in environmental communication, particularly in contested policy areas such as nuclear power, pesticides, and climate change. Bill McKibben has described how climate scientists and activists inhabit “one of those strange dreams where the dreamer desperately needs to learn something about something bad and imminent; but somehow, no matter how hard he shouts, the onlooker persists in staring smiling, perhaps, with his back to an oncoming train—can’t hear him.” For a long time scientists maintained that they have no business making political statements, but climate change has removed such historic inhibitions, and now the course of the debate is led by instances of direct intervention. James E. Hansen’s appearance before the U.S. Senate Committee on Energy and Natural Resources on 23 June 1988 was the first of a most high-profile such episode and represents an environmental communications watershed. Hansen, director of NASA’s Goddard Institute of Space Studies, told the Senate that ‘global warming has begun,’ claiming that it was very likely that rising temperatures represented a warming trend rather than any kind of natural variation. That’s why the warning that ‘we are loading the twentieth-century climate scientist Guy Callendar to the Royal Meteorological Society in 1930, for example, beginning with his own Sussex garden, and applied it to data, including those taken from his laboratory. Another of life’s lonely statistical enthusiasts, Callendar compiled a vast body of global temperature data, including those taken from his own Sussex garden, and applied it to measurements of recent concentration of atmospheric carbon dioxide since pre-industrial times, as well as to recent and historical accounts of observed glacial retreat. Callendar’s great insight, that recent global cooling might be connected to increased fossil fuel use, was by far the most influential idea that he introduced—the idea of linking rising temperatures to human industry. Everywhere we look, in every area of our lives, the rising temperatures represented a threat to life, his answer to the question of the deadly past thirty years—though Callendar did not himself use the word ‘global warming’—is real, large, and threatening. The iconography of the whistleblower continues to be a feature of climate change narratives, whether supportive of the consensus view or not. In fact, many leading climate change sceptics such as the Danish statistician Bjørn Lomborg, or the American physicist S. Fred Singer, have sought to appropriate and repurpose the role, portraying themselves as lone, voice raised against the unthinking consensus promoted by self-interested scientists. William Ruddiman, in his Power, Plagues and Petroleum, has described this reversal as the “white knight” or “hero” syndrome, the conviction that only heroic action in uncovering the truth will save humanity from disaster or folly: many contrarians appear to see mainstream scientists as dull-witted sheep following piles of federal grant money doled out by obliging federal program managers. In this view, only those who toe the party line that the global-warming problem is real, large, and threatening will get their hands on federal money. And of course only the lone visionary with clear vision can save the day.”
In the wake of the Fukushima Daiichi nuclear disaster in March 2011, a period of great uncertainty and suspicion about the transparency of the cleanup effort, the Tokyo Electric Power Company set up live camera feeds of the Fukushima I plant, viewable by anyone on the web. In August 2011, a worker in full-body protective gear walked across the roof of the plant and pointed a finger, for fifteen minutes, into the lens. This is the Finger Pointing Worker, a figure whose ambiguous accusation encapsulates the alienation of technology, the confusion of collective grief, and the prismatic nature of responsibility and blame in contemporary culture.
A friend of mine is a geophysicist who travels to the edges of the planet to study small particles in lake and ocean sediments and the great ice sheets of Greenland and Antarctica. These particles, deeply embedded in the ice, hold data that helps him understand how landscape and climate have changed through time. Pollen records in lake-sediment cores, for example, document the botanical reconstruction of New York and New England as the last ice age began, drawing to a close some 18,000 years ago. Dust records of pollen, charcoal, soot and dung-fungus spores have been used to understand the ecological path to extinction for mammoths, mastodons, and other large animals that once dominated North America.

To study climate change, scientists must often travel to extremely remote places, but in 2007 a group of scientists at the National Observatory of Athens conducted their research by looking only at paintings, specifically those representing sunsets throughout the period 1500–1900. Over 550 paintings by Edgar Degas, Peter Paul Rubens, Claude Lorrain, Joseph Mallord William Turner, John Singleton Copley, Caspar David Friedrich, Jules Breton, Alexander Cozens and Gustav Klimt formed the source observational material to study the amount of natural particulate matter emitted into the skies by eruptions such as Mount Etna, in 1883. Reports from the time describe stunning sunsets for several years afterward, as the retreating light was scattered by reflective particles thrown high into the atmosphere. By studying the color of sunsets painted before and after such eruptions, the researchers say they can calculate the amount of material in the sky at the time.1

There are written records of eruptions stretching way back, but technology did not exist to precisely log the timing and extent of these volcanic events. The oil-paint-based method of deduction provides a new way of studying the history of aerosols, according to the Athens research team. A computer program was used to work out the relative amounts of red and green along the horizon in each picture. Sunlight scattered by airborne particles appears more red than green, so the reddest sunsets indicate the skies most impacted by volcanic particulate matter. The researchers found most pictures with the highest red/green ratios were painted in the three years following a documented eruption. There were 54 of these “volcanic sunset” pictures.

Professor Zerefos, lead scientist, said five artists had lived at the right time to paint sunsets before, during and after eruptions. Turner witnessed the effects of three: Tambora, Indonesia, in 1815; Sabturan, Philippines, in 1813; and Cosiguina, Nicaragua, in 1835. In each case the scientists found a sharp change in the red/green ratio of the sunsets Turner painted up to three years afterward. The results of the red/green ratios study are remarkably similar to estimates prepared from historical observations, early measurements and material found in ice cores.

In his essay Dust Lingers, the geobiologist Albert Colman discusses something closer to home: dust. Away from arid lands and remote environments and toward lands claimed for agriculture, mining and cities, the human dust print overwhelms the natural. This includes the enhanced logging of mineral dust following the filling of fields and excavation at construction sites. Pollen profiles reflect cultivated species and groomed landscapes. The power of destruction has left its mark, too. Aboveground nuclear weapons testing has left a coating of radioactive dust around the world. And the towers that once stood above Ground Zero are now their own dust horizon, a tragic reminder of the terrorist attacks. The soot released in exhaust is unintended—it is the carbon-rich residue and the organic-rich condensate that result from the incomplete combustion of a fuel. This soot leaves a grimy stain on buildings, foliage, and any surface on which it departs its dark accumulations. Their dustprint commends soot and char for ink making. They have been used in powdered form as pigments, which when mixed with water and a binder, have recorded brushstrokes and pen strokes for more than two millennia. Nature’s tales and human tales—both are written in dust.

My artwork The Sun Set in Type Using Matter Fallen from the Sky is a list of the titles of over 100 paintings studied by the Greek scientists in 2007. Drawn from a paper entitled “Atmospheric effects of volcanic eruptions as seen by famous artists and depicted in their paintings,” these titles create a text-based portrait of a moment in time. This study and the process used to create this work brings into question the quest and methods we use to truthfully represent what we see in front of us or how a history is told. The titles given to each painting came to be legible in The Sun Set in Type through a process of accumulating atmospheric fallout or particulate matter. Over a course of days, particles of dust, pollen, skin, meteorite particles, salt from sea spray, tiny particles of rubber from cars, unburnt fuel from our vehicles and the decomposition of organic matter fell upon a piece of paper placed on my rooftop in San Francisco. The Sun Set in Type is made visible through the accumulation of this ecology of natural and human-made bits. The gravitational pull of the Earth brought this complex blend of ingredients down onto the paper where it settled as evidence of our collaboration with nature, evidence of the fallout of production, evidence of life and evidence of its inevitable decomposition into dust. As Rebecca Solnit puts it:

‘You eat dust all your life. We are all said to eat a peck of dust before we die, dirt from the earth that Jan Hamilton, Finlay remarked is carnivorous. For we always walk in circles, especially if we go the whole way, as everything does. The creation that rises up out of the earth falls back into it and is eaten again by all those walkers and slitherers, dust to wanderer to dust, words I want to say for this project, whose ink is likewise distilled from dust, so that you understand better that walking and writing and reading and following a storyline always were the same activity. All ink is dust because all words are tracks, and to read is to track the mind of the author, scurrying along like a hare on the snowfield of the page, white page marred by the black tracks of thought, and around every word is the white of silence. Around every idea the penumbra of unknowing, and behind the paper, trees, and behind the trees—forests that fall to their knees and are pulped into the paper on which the forest of ideas marches into your mind, that other fertile soil in which all things compost in your own imagination and then into forgetting en route to your own dissolution back into the soil on which others will walk in circles while musing and digressing.’

—Institute for Policy Integrity.
In order to characterize the redness of the sunset sky, the chromatic ratio (RG) was calculated from the R/G values measured on the digitized paintings and when possible, also the solar zenith angle (position of the sun) values measured on the digitized paintings and when it is measured on the ground. Each unique hue refers to the perceptual experience of that hue alone. Perceptual accuracy of red-green forms the conceptual basis for quantifying the redness of monochromatic light. In a classic study, Jameson and Hurvich (Jameson and Hurvich, 1965) reasoned that the amount of redness in a monochromatic light can be measured by combining it with a second light that appears green when viewed alone (Shawell, 2003).

Notes on The Sun Set Using Matter Fallen from the Sky

1. Albert Colman, Assistant Professor: Geobiology, University of Chicago. Excerpt from his essay, “Dust Lingers” in Futurefarmers: Soul Sermons. 2007.
3. Atmospheric effects of volcanic eruptions as seen by famous artists and depicted in their paintings. C. S. Zerefos et al. respectively from the National Observatory of Athens, the Academy of Athens, the National Meteorological Service, the Laboratory of Atmospheric Physics Aristotle University of Thessaloniki, and the School of Architecture, National Technical University of Athens, Greece, 2007.
4. Albert Colman, op. cit.

PLANET GRATITUDE  Rory Rowan

The iPhone 3G, this innocuous and already outdated little cluster of minerals and marketing, is an emblematic meeting point for the material and symbolic processes shaping the contemporary entanglement of social and geologic stratifications: both product and engine of those great geopolitical tractions in the global economy that Marxist critics euphemistically refer to as ‘uneven development’, a treasured possession bound up with resource wars and environmentally destructive extraction practices driven by a rapacious global system of neo-colonial corporate-feudalism, the consumer excretion of a world where exhausted Chinese factory workers are driven to suicide satisfying the herd instincts of those queuing around the block of landmark retail spaces, hoping to be the first to dissect the latest cosmetic innovations in the myopic navel of the Veilosphere: a Trojan horse for the ever-increasing marketization of all areas of life and a key instrument in the ongoing erosion of the distinction between work and everything else; a vital tracking device in the fiction that endlessly curating objects as a surveillance-ready editorial spread will bear fruit in coherent self-realization rather than exponential alienation, no matter how many tainting apps are used to create a trompe l’oeil of ‘authentic experience’.

It’s perhaps fitting then that the ubiquitous Apple-infused aesthetics of today’s ‘post-internet art’—pastele palettes set off against the sterile, Café Gratitude transcendence of white plastics; social media sculptures; high-gloss-clean-edged-biomorphic-desk-top ‘objects’—are trending on the art world’s Richter scale (Contemporary Art Daily, e-flux, etc) with almost synchronized frequency and intensity as the concept of the Anthropocene. This concept—which claims that the human impact on the planetary environment has been so great that it constitutes a new geological epoch legible in the earth’s stratigraphic record—has become something of a curatorial meme, adding a dash of deep-time drama and geological grandeur to the pervasive, if vague, claim that ours is a ‘post-human’ era, when the conceptual and material boundaries between the human and the non-human are in breach.

Almost every discussion of the Anthropocene evokes the image of the earth shot from space, and likewise the default screen of the iPhone 3G is one of NASA’s famous ‘Blue Marble’ images. It would be easy to spin this as the perfect symbol of a hubristic era failing to heed the dire warning written in the rocks: the earth, totally entrapped in technological systems and reduced to a ‘world picture,’ can be slipped into any pocket with cocksure confidence that Man has mastered Nature. A planet domesticated on an interface. However, it seems unlikely that many today would believe this as they scroll past the latest numbing reports proving what they are already bored of knowing: climate change. However, perhaps the image is better understood as a reassuring totem of a pre-Anthropocene belief in the human capacity to manage a harmonious earth, a sort of civilizational pacifier for the anxious subjects of late liberalism—those who are exhausted from having so much on their plates, and are pretty sure we are fucked anyway.

Notes

3. The mineral configuration in Erik Wycoff’s Unfitted (iPhone Mise) is determined by what is known as a Life Cycle Assessment, an engineering technique which traces a product’s raw materials’ supply chains to their source, through geological deposits precipitated over millions of years to mines deep in the earth. The unassuming scatter of rocks and dust that forms the piece in fact describes a natural history that reaches back through stratified chronology, layer by layer, to the beginning of time. The work precisely replicates the amounts of organic minerals required to build an iPhone, and the work may be considered as a portrait of that ubiquitous device.
Beatriz Milhazes’ O Paraíso (“The Paradise”) is a collage the artist made based on a suggestion by the French mathematician Cedric Villani. Milhazes has composed a landscape in which plants, animals and natural phenomena are interspersed with triangles, circles and other geometrical forms inspired by sangaku, the wooden tablets inscribed with sacred geometry found in Japanese temples from as early as the 15th Century. A set of equations is added to this landscape to show how the illustrated natural phenomena can be described using mathematics: the continuity of light (the sun’s rays), the Bernoulli Principle (birds in flight), iridescence (the peacock’s tail), electromagnetism (lightning), waves (sea waves), diffusion of heat (fire) and morphogenesis (the jaguar’s spots). O Paraíso was the starting point for a film, Mathematical Paradises, produced in collaboration with BUF, which will be seen for the first time in the United States in The Fifth Season.
oxygen and upside down, eaves are like L and immobilizing pollutants on their surface. LAI (UFP) trapping many harmful substances.

In order to consistently incorporate flowering perennials, we see significant mortality proportional to the extent of urban structures. We are exposed to the worst air quality in the world, particularly in New York City's most densely populated area. Despite this and other evidence showing that air pollution increases the risk of cardiovascular hospitalization by 7%, a decrease in cardiovascular hospitalization rate from LAI to the block is not just dependent on increased LAI. These findings also show evidence of improved human health: they demonstrate improvements in air quality and health benefits of LAI.

I will be monitoring LAI and integrating living material into our built environment. Consequently, this research asks what can we do (inexpensively, practically) to improve our shared environment. What we can do to improve our shared environment is an inexpensive way to increase urban health and diversity. We can improve our shared environment by leveraging our urban context and exploring how we can collectively improve our shared environment.

I would like to address any questions. This work will improve our shared environment. Consequently, this research asks what can we do to improve our shared environment. What we can do to improve our shared environment is an inexpensive way to increase urban health and diversity. We can improve our shared environment by leveraging our urban context and exploring how we can collectively improve our shared environment.
The abstract shapes that appear in Spencer Finch’s series *Peripheral Error (After Moritake)* depict butterflies painted from photographs which the artist placed at the edge of his peripheral vision. If the viewer stands at a distance of 18 inches and looks at the center of the page, he or she can replicate the artist’s original experience when making the work. The eye and the mind attempt to capture nature, but can only go so far. The series was originally inspired by a poem by the 16th-Century master of Haiku, Moritake: *The falling flower / I saw drift back to the branch / was a butterfly*
Matthew Brandt
Moose Falls YJMICI, 2013
Multi-layered duraclear prints processed with Moose Falls water, in LED lightbox frames
68 1/4 x 46 1/4 x 2 inches (173.8 x 117.5 x 5 cm)
Courtesy of Yasi Milo Gallery, New York

David Brooks
Aluminum Blocks - 352 lbs - or Pygmy Hippopotamus (West Africa), 2014
Aluminum, stainless steel pins, wood slat crate, stencil paint, packing material, hardware
39 x 60 x 34 inches (99 x 152.4 x 86.4 cm)
Courtesy of the artist and American Contemporary, New York

David Brooks
Marble Blocks - 218 lbs - or Sumatran Orangutan (Indonesia), 2014
Verde Antiqua marble, stainless steel pins, wood crate, stencil paint, Tyvek, hardware, packing material
27 x 35 x 24 inches (68.6 x 88.9 x 61 cm)
Courtesy of the artist and SNOW Contemporary, New York

Charles Burchfield
Summer Sun, 1920
Watercolor, charcoal, and gauze on joined paper
21 x 26 3/8 inches (53.3 x 67 cm)
Courtesy of DC Moore Gallery, New York

Charles Burchfield
Bird Wing Twilight, 1951
Watercolor, charcoal and chalk on paper, mounted
29 7/8 x 25 inches (75.9 x 63.5 cm)
Courtesy of DC Moore Gallery, New York

Martin John Callanan
Departure of All, 2011
LCD display, computer and computer program
Dimensions variable
Courtesy of the artist

Claude Louis Châtelet
View of Mount Etna Seen from Trecastagni, 1776
Wash and brown ink on paper
8 1/4 x 15 3/8 inches (21 x 39 cm)
Private collection

Mark Dion
Harbingers of the Fifth Season, 2014
Mixed media
Dimensions variable
Courtesy of the artist and Tanya Bonakdar Gallery, New York

Finger Pointing Worker
Painting at Fukushi Live Cam, 2011
Single channel video with audio, DVD, 24:40 minutes
Edition of 10
Courtesy of the artist and SNOW Contemporary, Tokyo

Futurefarmers, Amy Franceschini
The Sun Set in Type Using Matter Fallen from the Sky, 2014
Particulate matter and volcanic ash on paper
39 5/16 x 39 5/16 inches (100 x 100 cm)
Courtesy of the artist

Spencer Finch
Peripheral Error (After Montlake), Agris Clavudina, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Mylothris Rhodope, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Gononepteryx Rhamni, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Cymothoe Cocconae, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Phoebis Sennae, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Calliphrys Augustinus, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Greta Andromica, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Calliphryis Weiski, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Graphium Weiski, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Spencer Finch
Peripheral Error (After Montlake), Apatura Iris, 2004
Watercolor on paper
22 x 30 inches (55.9 x 76.2 cm)

Causten Höller
Reindeer, 2008
Green bizona, blue glass eyes, horn
3 7/8 x 20 1/2 x 11 inches (9.8 x 52 x 28 cm)
Edition 1 of 5
Courtesy of the artist and Gagosian Gallery

Pierre Huyghe
La Saison des fêtes, 2004
Animated film, 15:28 minutes
Mathematical Paradises
Beatriz Milhazes + BUF
Private collection

Katie Paterson
Futuro Library (certificate), 2014
Poli block on paper
16 1/2 x 11 1/16 inches (42 x 30 cm)
Edition of 100
Commissioned by Bjaerva Utvikling and produced by Situations as part of the Slow Space public art program

Alexis Rockman
ARK, 2014
Oil and alkyd on wood panel
44 x 56 inches (112 x 142.2 cm)
Courtesy of the artist and Sperson Westwater Gallery, New York

Erin Shirrell
Apples, 1921, 2014
16-mm film, loop, silent
Courtesy of the artist and Sikkema Jenkins & Co., New York

Kota Takeuchi
From the moment of Recording, it became Peeping, 2011
Single channel video with audio, HDD, 91:50 minutes
Edition of 20
Courtesy of the artist and Sikkema Jenkins & Co., New York

Alison Elizabeth Taylor
Kitchen, 2014
Wood veneer, shellac and acrylic on panel
91 1/4 x 115 1/4 inches (231.8 x 292.1 x 3.3 cm)

Fred Tomaselli
Unfolded, 2014
Photo-collage, leaves, acrylic, and resin on wood panel
30 x 24 inches (76.2 x 61 cm)

Erik Wysocon
Untitled (iPhone Mine), 2014
Wood, halite, chalcopyrite, bauxite, colemanite, chromeite, perlodite, quartz, sphalerite, crude oil, dolomite, graphite ore, limestone, magnesite, gold ore, silver ore, pyrolusite, celestite, hematite
Dimensions variable
Courtesy of the artist and Laurel Gillen, New York
The French painter and draftsman Jacques de Lajoüe specialized in paintings of architecture and park scenes animated with figures, bridging the gap between the mythological and contemporary in a style most closely associated with Antoine Watteau’s fête galante. Le Palais de Soleil depicts an elaborate salle des machines, a mechanized system for changing opera scenery and backdrops. The sun god, at the center of the composition, illuminates the architecturally precise but infinitely mutable chamber—a version of our world.

(Jacques de Lajoüe, Le Palais de Soleil, 1734. Private collection.)