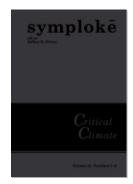


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POISONED GROUND: ART AND PHILOSOPHY IN THE TIME OF HYPEROBJECTS

TIMOTHY MORTON

Global warming is a manifestation of the Anthropocene, the moment at which human history has intersected decisively with geological time. Since the later eighteenth century, humans began to deposit a thin layer of carbon in Earth's crust. The fossil fuel burning that caused this has given rise to logarithmic increases in Earth's average temperature. In this essay, I argue that philosophy is now tasked with bringing human thinking up to speed with this new reality. I shall argue that what now emerges are what I call *hyperobjects*, massively distributed entities that can be thought and computed, but not directly touched or seen. The simultaneous unavailability yet reality of the hyperobject require a radical new form of thinking to cope with it. This essay will argue that object-oriented ontology is that form of thinking.

The aesthetic implications, and the implications for artistic practice, of the global warming age, which I here call *the time of hyperobjects*, are manifold. Pushing Hegel's history of art beyond its expected limits, I argue that the time of hyperobjects obviates the kind of Romanticism (and related practices) that have been prevalent since the dawn of the Anthropocene. The new phase of art is best thought as a strange asymmetry between equally matched forces: the human capacity for knowledge and computation on the one hand, and the gigantic and withdrawn hyperobjects on the other. I provide some examples of contemporary art that exemplifies this asymmetry.

Previous critical modes do not disappear altogether when it comes to examining this proposed aesthetic phase. Rather, they reappear as if distorted by the new conditions, as my essay will show.

Thinking outside the Human

Symplokē means agreement. For Leibniz, this is the agreement between a subject and a predicate, such as "this weather we've been having is very strange." Underlying this agreement is a deeper *symplokē*, which is that

between the principle of reason and some kind of entity that "grounds" this principle. Leibniz supposes that everything must have a sufficient reason for its existence—the principle of sufficient reason (2006, 29-31). Yet for this principle to be operative, something must always already be given. This givenness is the seeming, "ontic" existence of a thing, determined by a (human) subject, a determination that Kant develops as the a priori synthetic judgment that grounds reason. Philosophy thus finds itself in a bubble, talking about the impressions on the bubble's inside surface. It is this bubble that has recently popped, the name given to the pop being *speculative realism*.

Speculative realism's name for the bubble is *correlationism*. It is now no longer possible, claims speculative realism, to ground reason in the human subject, since science now knows things that are radically outside of cognition, such as events in the Universe before consciousness as such could have arisen—this is what Quentin Meillassoux, who coined the term correlationism, calls the *arche-fossil* (2009, 10-26). One way to save reason is to jettison sufficient reason. Since I can no longer meaningfully correlate reality to my self-positing act of synthetic judgment (or what have you), I must entertain the more than disconcerting possibility that *anything could happen*. This is the line of argument that Meillassoux himself follows.

Another way to solve the problem posed by the popping of the correlationist bubble is to follow the other lead hinted at in Leibniz and later in Kant. For the ontic givenness of things prior to their being posited must mean that there are beings that somehow underlie this given state of affairs. And since the human subject is no longer the guarantee of why things exist, it must be the case that what is special to human subjectivity—that it correlates things to itself—is not so special after all. Perhaps everything is at it. There are the bubbles of geraniums, the bubbles of champagne bottles, the bubbles of chimpanzees and decaying pellets of plutonium 239. Things are given for orangutans and droplets of mercury as much as they are for humans. This approach calls itself *object-oriented ontology*, and it was discovered by Graham Harman.

Heidegger argued that a tool is withdrawn (*Entzug*, withdrawal) but a broken tool appears. There I am, hammering away, when all of a sudden I hit my thumb or the hammer breaks: then I notice the hammer. But it is not quite a hammer any more. This must mean that before the hammer broke, its essence was withdrawn. There is nothing to stop this thought applying not simply to humans who hammer, but to nails, walls, and even the hammer in question. Harman argues forcefully that this startling insight opens up a gigantic coral reef below the Heidegger U-Boat: the coral reef of OOO, resplendent with trillions of entities all twinkling in their different ways, some of which are humans, some of which are not, but all of which have what humans have, and so do what humans do (2002). Which is to say that every entity renders the real in some sense according to its physical form and structure. Chimpanzees and raindrops appropriate global warming just as much as humans.

The End of the World

OOO has appeared on the scene at an urgent moment, at which scientific instruments and models such as systems theory were first able to map some new entities that fail to correspond to what we commonly suppose entities to be. These entities are a direct result of modernity since many are produced by industry and technology, and all are made discoverable by contemporary science. They are hyperobjects: global warming, nuclear radiation, tectonic plates, biosphere, evolution. Hyperobjects are entities that are massively distributed in time and space.

The ecological crisis is best thought as the time of hyperobjects. Why? Because this is the moment at which massive nonhuman, nonsentient entities make decisive contact with humans, ending various human concepts such as "world," "horizon," Nature and even "environment." Entities such as biosphere, climate and climate change (which I still prefer to call global warming) are massively distributed across Earth. We find ourselves inside them, part of them yet not part of them. Concepts such as world are plausible only when distinctions between here and there, or foreground and background are possible. These distinctions are precisely eroded by hyperobjects. It is "the end of the world." If we expand the concept world to include sentient lifeforms, as Uexküll does, then the normative force of that concept evaporates. If we continue, as we should, to apply it to nonsentient and even to nonliving beings—since there is no thin or rigid boundary between these categories - the concept of world becomes weaker still. Furthermore, world floats ontologically "in front" of actually existing beings. But what is revealed in the age of global warming is that beings have a profound temporal and physical scope that transcends our ability to grasp them as "worlding" in any meaningful sense.

The notion of a single, solid, stable ground collapses into a series of hyperobjects in which we find ourselves always already to have been, like some kind of noir version of Jonah in the Whale. This indeed a matter of whales within whales (if I may), since what surrounds an object (including a hyperobject) just is another object. The Newtonian-Cartesian idea of time and space as neutral containers in which objects float is now ended, decisively, in our everyday experience of the ecological emergency. This is not a comforting "return to Nature" but rather a treading on poisoned grounds of all kinds hence the title of this essay. The grounding of reason in the human subject is over, while the idea of a neutral ground beneath our feet has also ended. Yet far from placing us in as state of relativism or nihilism, the ecological awareness of poisoned ground thrusts us into an acknowledgment of our disturbing, uncanny coexistence with other beings, from mitochondria and viral DNA code insertions to blue whales, comets and Earth's electromagnetic field.

Human attunement to hyperobjects in this era is not simply art "about" hyperobjects, but art that evokes hyperobjectivity in its very form. I shall explore some of this art here. In particular, I shall show how what we thought of as postmodern art is often better thought as the first stirrings of a truly ecological art. Moreover, I shall investigate why irony hasn't gone anywhere in the time of hyperobjects—in fact, it is even more poignant than ever.

Dawn of the Hyperobjects

Hyperobjects are viscous, molten, nonlocal, phased and interobjective.

- 1: Viscosity. The more we know about them, the more we find we are glued to them. We find ourselves unable to achieve epistemological escape velocity from their ontological density. Just as we were beginning to enjoy our ironic free play, something emerges from within modernity as such to end the possibility of free play.
- 2: Molten Temporality. Any massive object distorts space-time. Many hyperobjects really are massive enough to do this for real, with visible effects, as in the case of planet Earth itself (so time runs faster on a plane than on Earth's surface). But all objects melt and ripple time like this. There is no such thing as a rigid body extended in time and space for this reason (Bohm 2006; 156, 189-90, 204-18). And for every object there is a radically unknowable space and time, because the speed of light sets limits on what objects can apprehend. Hyperobjects end the idea of absolute, infinite time and space as neutral containers.
 - 3: Nonlocality. Hyperobjects cannot be localized:

[H]yperobjects are...like our experience of a pool while swimming. Everywhere we are submersed within the pool, everywhere the cool water caresses our body as we move through it, yet we are nonetheless independent of the water. We produce effects in the water like diffraction patterns, causing it to ripple in particular ways, and it produces effects in us, causing our skin to get goosebumps. (Bryant 2010)

Furthermore, local phenomena such as rain become what Levi Bryant calls a *local manifestation* of these nonlocal objects (2011, 69). Thus hyperobjects invert what is real and what is only appearance. Thus the wet stuff falling on my head is less real than the global warming of which it is a manifestation. This disturbs normal modern human categories of *here* and *there*, *hither* and *yonder*.

- 4: Phasing. Hyperobjects occupy a high dimensional phase space, the space of the manifestations of a system. The first "strange attractor" was discovered by Edward Lorenz in research into weather patterns. The now familiar Lorenz Attractor, a figure of eight made of plots of weather events in phase space. The fact that hyperobjects are phased is why they are partly invisible to us three-dimensional humans. They seem to come and go, like seasons. Yet really they continue to unfold elsewhere than we look.
- 5: Interobjectivity. Hyperobjects are shared by numerous entities in a common sensual space. This shared space is a vast nonlocal configuration space that I call the *mesh*: more on this in a moment. Phenomena such as

human subjectivity-"intersubjective" phenomena that is, since I am someone called Tim by the other, for instance—occupy small regions of this larger space of interobjectivity.

I shall dwell on this last one somewhat because perhaps it is the most interesting for thinking about art. Every interobjective phenomenon requires 1+*n* real objects. This means that for every interobjective system, at least one real object is withdrawn. Every event is a kind of inscription in which one object leaves its footprint in another one. Interobjective reality is just the sum total of all these footprints, crisscrossing everywhere. This sum total is nonlocal by definition. The print of a dinosaur's foot in the mud is seen as a foot shaped hole in a rock by humans sixty five million years later. There is some sensuous connection, then, between the dinosaur, the rock, and the human, despite their vastly differing timescales.

Now when we return in our mind's eye to the time of the dinosaur herself, we discover something very strange. All we find there is another region of interobjective space in which impressions of the dinosaur are transmitted - tooth marks in a some hapless prey, the frozen stare of the dinosaur as she looks at her next victim, the smooth scaly feel of her skin. More dinosaur prints, even when the dinosaur is alive. Even the dinosaur fails to know herself entirely, only in a rough translation that samples and edits her being. A mosquito or an asteroid has their own unique sample of dinosaur-ness, and these samples are not dinosaurs. Why? Because there is a real dinosaur, withdrawn from access even from herself. Black holes are right here, in magazines and on the web, as jpegs and pop science essays and science fiction movies. Yet they are not here, evidently. But even if one could somehow climb into one with a video camera, one could not know the whole story about black holes. Why? Because my video of a black hole is not a black hole. Because black holes are real.

In April 2011 I made a short video of a hyperobject, an ancient bamboo forest on Qi Lai mountain in central Taiwan. The video demonstrates how interobjectivity works. What one watches and hears is the wind in the bamboo. What one watches and hears are the bamboo stems clicking one another. What one watches is a Quicktime movie, which samples visual images and sound at a certain rate, translating them into a more or less perforated version of themselves. What one watches is my hand, moving slightly as the muscles in my right forearm fail to maintain stillness. What one watches are photons from the sun, reflecting from quanta in the chloroplasts that make the bamboo green. What one watches are chloroplasts, bacteria hiding from the environmental cataclysm they created, the cataclysm called oxygen, one and a half billion years ago.

The sum total of all the sampling events by which an object inscribes itself on other objects is a history, in both senses of that wonderfully ambivalent Greek term—since history (historia) can mean both events and recording. Hyperobjects have a history of their own, not simply in so far as they interact with humans. This history is strictly the time of hyperobjects. Raindrops splatter on the ground in western California. They record the history of El Niña, a massive weather system in the Pacific. In particular, they record how the Japanese tsunami scooped up some of El Niña and dumped it on trees and hills and other objects in the object called the USA. The frequent occurrence El Niña itself shows how massive objects that preceded global warming—El Niña and El Niño were among the first hyperobjects discovered by modern reason, as Mike Davis has shown—are themselves frequently related significantly to climate change (Davis 2001, 213-38). Another footprint may well have been the Japanese earthquake itself, since the changing oceanic temperature may have changed the pressure on Earth's crust, resulting in an earthquake. The quake destroyed four nuclear reactors. Quanta from these reactors, known as alpha, beta, and gamma particles, inscribe themselves in soft tissue around the world. We are living textbooks on global warming and nuclear materials, crisscrossed with interobjective calligraphy.

The Time of Hyperobjects

This is the historical moment at which hyperobjects become visible by humans. This visibility changes everything. We humans enter a new age of *sincerity*, which contains an intrinsic irony that is beyond the aestheticized, slightly plastic irony of the postmodern age. Ecological awareness is a detailed and increasing sense, in science and outside of it, of the innumerable interrelationships among life forms and between life and non-life. Now this awareness has some very strange properties. First of all, the awareness ends the idea that we are living in an environment.

This is so profoundly counterintuitive that we should dwell on it a little. What it means is that the more we know about the interconnection, the more it becomes impossible to posit some kind of entity existing beyond or behind the interrelated beings. When we look for the environment, what we find are discrete life forms, non-life, and their relationships. But no matter how hard we look, we shall never find a container in which they all fit, and in particular we shall be incapable of finding an umbrella that unifies them such as world, environment, ecosystem or even, astonishingly, Earth.

What we discover instead is an open-ended mesh that consists of grass, iron ore, popsicles, sunlight, the galaxy Sagittarius, and mushroom spores. Earth exists, no doubt, but not as some special enormous bowl that contains all the "ecological" objects. Earth is one object coexisting with mice, sugar, elephants, and Turin. Of course, there are many scenarios in which, if Earth ceased to exist, Turin and mice would be in trouble. But if the mice were shot into space aboard a friendly extraterrestrial freighter, Earth wouldn't be the

¹I derive the term *sincerity* from Graham Harman's reading of Ortega (63-70). See Harman (2005; 39, 40, 135-43, 247).

cause of their death. Even Turin might be rebuilt, brick by brick, on some other world.

By mesh, I mean something disturbingly entangled, without center or edge, so finely interwoven that everything is caught in it.² I also mean something that appears to us, since *mesh* stems from the word *mask*. A mesh is a screen of finely interwoven links. Is there anything behind it? Suddenly we discover the second astonishing thing. Mice are surely mice no matter what we call them. But mice remain mice as long as they survive to pass on their genome—it is what neo-Darwinism calls satisficing (Dawkins 1999, 156; see Roughgarden 2004, 26-27). Satisficing is a performative standard for existing. And there is no mouse-flavored DNA. There isn't even any DNA-flavored DNA—it is a palimpsest of mutations, viral code insertions and so on. There isn't even any life-flavored life. DNA requires ribosomes and ribosomes require DNA, so to break the vicious cycle, there must have been an RNA world of RNA attached to a nonorganic replicator such as a silicate crystal. So there is a mouse-this is neither a nominalist nor an idealist argument. But the mouse is a non-mouse, or what I call a strange stranger (Morton 2010, 14-15, 17-19, 38-50). Even more weirdly, this is why the mouse is real. The fact that wherever we look, we cannot find a mouse, is the very reason why it exists! Now we can say this about everything in the universe. But one of the most obvious things we can say this about is a hyperobject. This is because hyperobjects are so huge and so long lasting, compared with humans, that they obviously seem both vivid and slightly unreal, for exactly the same reasons.

Hyperobjects such as global warming and nuclear radiation surround us, not some abstract entity such as Nature (I capitalize it to restore its constructedness) or environment or world. Our reality has become more real, in the sense of more vivid and intense, and yet it has also become less knowable as some one-sided, facile thing - again, for exactly the same reasons. In Berkeley, California, radiation levels in water in late March 2011 spiked one hundred and eighty one times higher than normal, because of the Sendai reactor meltdowns.

We know this. We know we are bathed in alpha, beta, and gamma rays emanating from the dust particles that now span the globe. These particles coexist with us. They are not part of some enormous bowl called Nature; they are beings like us, strange strangers. Should we stop drinking water? Should we stop drinking cow's milk because cows eat grass, which drinks rainwater? The more we know, the harder it is to make a one-sided decision about anything. As we enter the time of hyperobjects, Nature disappears along with the modern certainties that seemed to accompany it. What remains is a vastly more complex situation that is uncanny and intimate at the same time.

²Oxford English Dictionary, "mesh," n. See Morton (2010, 28-33).

There is no exit from this situation. Thus the time of hyperobjects is a time of sincerity, that is, a time in which it is impossible to achieve a final distance towards the world. But for this very reason, it is also a time of irony. We realize, after we discover hyperobjects, that non-human entities exist that are incomparably vaster and more powerful than us, and that our reality is caught in them. What things are and how they seem, and how we know them, is full of gaps, yet vividly real. Real entities contain time and space, exhibiting nonlocal effects and other interobjective phenomena, writing us into their histories. Astonishingly, then, the mesh of interconnection is secondary to the strange stranger. The mesh is an emergent property of the things that coexist, and not the other way around. For the modernist mind, accustomed to systems and structures, this is an astounding, shocking discovery. The more maps we make, the more real things tear through them. Nonhuman entities emerge through our mapping, then they destroy them.

Art in the Time of Hyperobjects

Thus the art of the time of hyperobjects is an art that explores:

The uncanniness of beings
The uniqueness of beings
The irony of relationships between beings
The ironic secondariness of the intermeshing between beings

The art that explores the hyperobject appears spontaneously within contemporary art, because of nonhumans. Human artists did nothing to make them appear. Of course there is art that thematizes global warming and so on. But even this art is a function of the sudden appearance of hyperobjects in front of the human modern structural tendency, like those 3D images of cups and flowers that appear in front of a magic eye picture. But again, just like those very pictures, it turns out that the nonhumans were there all along, staring us in the face. In a magic eye picture, the cup or flower is distributed throughout the mesh of fuzzy little patches of the image. *The object is already there*, before we look at it. Global warming is not a function of our measuring devices. Yet because it is distributed across the biosphere and beyond, it is difficult to discern as a unique entity. And yet, there it is, raining on us, burning down on us, quaking the Earth, spawning gigantic hurricanes.

In some deeply rigorous sense, then, objects in general infested human art forever. All that has happened is that humans have dropped something—a concept that their art is by them, for them, about them. Nonhumans are responsible for the next great moment in art history. The human mist evaporates, leaving behind what is real—entities, objects, strange strangers, without a totalizing context, without a world, without Nature—all because of ecological awareness.

What does this mean, this art by, for and about nonhumans—art that includes humans, for sure, but in a far wider configuration space? It resembles a return to the Platonic notion of art as demonic inspiration (lon), like a regression from the last two thousand years of Western art history. But in another way we could read the evaporation of human mist as a step beyond the story of art so beautifully told by Hegel. In this story, art has three phases – which makes art in the time of hyperobjects the fourth phase.

Hegel exemplifies thinking inside the bubble of correlationism that I discussed in the introduction, which is why I shall use him here. Indeed, Hegel's solution to the problem of the thing in itself is idealist—in effect, he erases the trace that the bubble has an outside. For Hegel, when I posit the thing in itself as unavailable to me, there I am, thinking it. This inaugural phenomenological reduction means that the tension within correlationism, the surface tension of the bubble as it were, produced by real things outside my ken, dissolves.

> The birds' variegated plumage shines unseen, and their song dies away unheard, the Cereus which blossoms only for a night withers without having been admired in the wilds of southern forests, and these forests, jungles of the most beautiful and luxuriant vegetation, with the most odorous and aromatic perfumes, perish and decay no less unenjoyed. The work of art has not such a naïve self-centered being, but is essentially a question, an address to the responsive heart, an appeal to affections and to minds. (1993, 78)

Hegel declares that there is a nonhuman world that human thinking cannot reach. It is empirically real, but we are deaf to it-an ironically material version of the proverbial Berkleyan tree, falling without ears to hear it. But this world *does* appeal to our affection! An apophasis sublimely renders the very things that the argument claims, at another level, remain unperceived. Even within this peachy idealism, then, we discover the emergence of nonhumans, an emergence that Hegel himself is unable to bring to order, but which is logically thinkable within the very confines of his thought. There is no better philosopher, then, for exploring the intrinsic fragility of the modern consensus.

Phase 1: Symbolic Art. Hegel's view is that art develops according to the interplay between what we know and what objects are-precisely, those objects that constitute art: art materials. The interplay then is a dance between humans and nonhumans. It is true that Hegel's history does have its many quirks and charms, not the least being an insufferable imperialist sense of manifest destiny, in which western art and religion play the central role. However, since it is precisely against western fantasies of mastery and exception that hyperobjects exert their overwhelming powers (among other things, such as Pacific islands flooded by global warming), it seems appropriate to trace Hegel's narrative, especially since we're going to kick it away at the end, or rather, since hyperobjects do.

Phase 1 of the dance between nonhumans and humans is when the humans see the nonhumans as overwhelming in another sense, argues Hegel. Not because they understand them, but because they don't. Nonhumans seem to possess godlike powers. Stones speak, the heavens shape human destiny. Symbolic art is Hegel's term for art in this phase. This kind of art shows how objects tower above human comprehension and mastery (Hegel 2010, 1.408, 1.427-1.431, 1.439; Hegel 1993, 82-84). So even early Christian art such as a gothic cathedral is awe-inspiringly huge and terrifyingly magnificent: human worship just bows down before it. This is not just the age of indigenous "fetishism" so called, but also the European dark ages.

Phase 2: Classical Art. Then there comes a sweet spot in which human comprehension is just enough to understand some of the true inner nature of objects (Hegel 2010, 1.301, 1.427-1.442; Hegel 1993, 84-85)—but not everything. In this sweet spot, a harmony emerges that a later age can only regard as an illusion. Humans and nonhumans meet each other halfway, generating all kinds of beautiful machinery. The nonhuman no longer towers over the human, but the human does not fully comprehend the depths of its own inner space.

Phase 3: Romantic Art. Hegel is telling this story from the standpoint of the human comprehension of the absolute. The one-way street quality of Hegel's story is significant. It is downright impossible to unknow what you know. So this is a story about evolving human understanding, though I differ from Hegel in holding that the story does not have a telos or end point. Hegel's terminus is the Romantic period, Hegel's own. In this period, humans recognize the infinite depths of their inner space for the first time. It becomes radically impossible to embody this inner space in any nonhuman entity. So Romantic art must talk about the stunning failure to embody the inner space in outer things (Hegel 1993, 85-86; Hegel 2010, 1.301-1.302, 1.516-1.529). Yet by failing this way, art ironically succeeds to talk about the inner space. Isn't the inner space precisely what cannot be embodied? So the job of art is to fail beautifully, or rather sublimely. A truly Christian art is now possible, because art can now express the ironic gap between the divine idea and fallen human flesh, embodied in the incarnation of Christ (Hegel 2010, 1.530-1.539, 1.243-1.244, 1.438, 2.994). So oddly medieval cathedrals are less Christian than a Beethoven string quartet.

The story of this failure is recorded in the history of the avant-garde, which is also bound up with the history of the failure to change the objective social conditions of capitalism. The long march of the *isms* (Impressionism, Expressionism, Cubism...) is the march of one form of Romanticism after another. At the same time, art realizes that philosophy is now its big brother. At the very least, art needs manifestoes and statements of purpose, philosophical exploration and justification—because of its failure. We know more than we can embody and we cannot put the genie back in the bottle. So the default position of Romanticism—which just is the aesthetic mode of modernity—is a kind of irony. Irony just is the aesthetic exploitation of gaps.

In my undergraduate classes, I jokingly call it *gapsploitation*. To be more precise, irony is the exploitation of a gap between 1+n levels of signification. Irony means that more than one thing is in the vicinity. Irony is the echo of a mysterious presence. For irony to manifest, something must already be there.

We can perhaps detect in this phenomenon of irony stemming from an awareness of 1+n levels the seeds of Romanticism's dissolution. But perhaps this knowledge is only available to us now in the time of hyperobjects. Recall how hyperobjects point out how things share a weird kind of sensual space in which everything is entangled. When you encounter a phenomenon in this sensual space, 1+n entities are withdrawn in order for this encounter to take place. What does this say about the sensual space of art, humans and nonhumans? As Phase 3 continues, art becomes increasingly abstract and increasingly strident. First, human inner space, subjectivity, is liberated from sensuous appearance. Then this inner space is encapsulated as the inner spaces of characters in realist fiction. Then the realist narrator collapses and we readers are led to encounter more nakedly the mysterious human inner space, in naturalism. Then interior monologues develop and narrative almost collapses into drama.

At the very same time, something strange is happening to nonhumans such as poems, books and prose, paint and stone. In 1790, it was possible to see prose as a special kind of poetry with very long lines, lines that have to be right justified and called paragraphs. But by 1900, poetry had become a little island of consistency in a giant ocean of prose. And now it is even possible to see prose narrative as part of an even larger configuration space of games and gaming, fully including the human in the object – the move from reader as passive spectator, to reader as participant observer (naturalism), to player. Monet had starting painting water lilies, or rather, he had started to paint the space in which water lilies float, or rather, he had started to paint the rippling, reflective object in which the lilies float — the water. Just as Einstein discovered a rippling, flowing spacetime, where previously objects had just floated in a void, Monet discovers the sensuous spaciousness of the canvas itself, just as later Tarkovsky was to discover the sensuous material of film stock. All this had been prefigured in the Romantic period with the development of blank verse narratives, meandering through autobiographical detours. Suddenly a whole lot more paper was involved.

Proust took this discovery to its wonderful, logical conclusion. Jackson Pollock took it to another conclusion. Paint and brushes and drips started to set themselves free from the inner space whose representation they were supposed to be, in some ironic, half-failed way. Huge resonant sound waves began to escape from the composer's dreams into the performance space and beyond on radio signals and in MP3s. Yves Klein Blue, a color whose chemical components killed their inventor, spread itself across canvasses with the help of naked human bodies. It is hard to discern exactly when it happened, though with hindsight and some clues as to the ontological priority of objects, we can begin to see it everywhere. Nonhumans stopped speaking about the human failure to access them. The evanescent mist that Hegel identified as the modern human style of subjectivity just evaporated, leaving objects behind like crystals in a solution. All of a sudden it was the time of hyperobjects.

Phase 4: The Time of Hyperobjects. This time is very like Phase 1—objects now exceed the human again. But with the lack of a reverse gear, this is not because we have suddenly stopped knowing things. We have a Phase 3 sense of irony. Human knowing is stratospheric, yet object withdrawal from access—including the object we call ourselves—is abyssal, at one and the same time. Irony now means not that we have achieved escape velocity from Earth, but that we haven't. Irony now means that we are glued to objects like Anansi glued to the Tar Baby. The more he tries to pull free, the more glued he becomes. It turns out that there is a time after the end of the world, after the conclusion of the film noir of human history in which we figured out that we are the criminals. At this time humans have entered an uncanny valley, a valley that has no outside. As more and more entities slip into the valley with us, as we come to know them better, the more we find ourselves coexisting with strange strangers. This is what ecological awareness means, not some pleasant hippy utopia or healthy paradise, but a charnel ground, a bardo (the interstitial realm between lives in Tibetan Buddhism), a valley between illusory peaks.

In robotics and CGI design, the uncanny valley is a set of appearances of robots and CGI figures that is strange and horrifying for humans (Mori 1970, 33-35). The less like a human the robot seems, the more acceptable it is. Doesn't this explain certain features of racism? Hitler loved his dog Blondi, but spent his time exterminating humans whom he dehumanized, reducing them to "lower than dogs." Now the map of the uncanny valley suggests that beyond the "zombie" trough there are "healthy person[s]" — the valley slopes back up again (Figure 1). In other words, the uncanny valley diagram itself is racist: who gets to decide when that slope starts to ascend again? I suggest by contrast that all entities, humans included, begin to slip into what at first appears to be a valley, but which actually turns out to be a very different reality altogether. The other point against the upward slope is that a robot version of your mother is uncanny not because it apes a "healthy human," but because your mother is already a robot: a life form who satisfices the conditions for being a female human and performs motherhood in a manner that passes our ad hoc Turing Test.

Chief among these entities would be hyperobjects with which we are intimate. The water content of the atmosphere has increased by five percent since 1960—not much but enough to make the weather very uncanny. And global warming is an object on whose inside we find ourselves. Vast cosmological hyperobjects such as black holes are so distant and exotic and so instantly fatal to anything like a life form—close to them you and I would just cease to exist—and they are shielded from Earth by the glass-like screen of the atmosphere. Jane Taylor's poem "The Star" is all about the atmosphere,

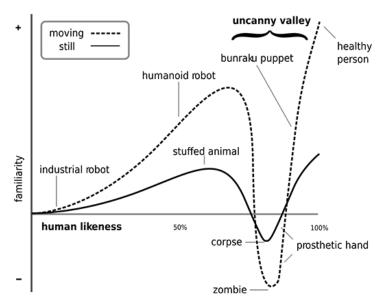


Figure 1: Masahiro Mori's diagram of the uncanny valley (a term coined in 1970). Ecological awareness necessitates negotiating with disgust and strangeness.

in which stars are not cold and dead (like in outer space) but "Twinkle, twinkle." Now when this atmosphere ceases to be a glass-like screen and starts to threaten us, it is as if the glass in front of a painting in an art gallery had started to attack us with radiation, shooting out beams of ultraviolet onto our sensitive skin. Our experience becomes one of disgust and pain—default modes of the aesthetic that art normally displaces.

So art about hyperobjects must trade in this disgust and pain. It is that JLiat's work is instructive. JLiat is a composer who makes sonic hyperobjects. On JLiat's webpage there are some found art pieces, some of which are recordings of three hydrogen bomb tests in the Pacific (JLiat 1954). To hear this cataclysmic sound of the Bravo test, "the worst radiological disaster in U.S. history" as JLiat's home page puts it, without the minimal protection of the distance afforded by a small movie image of an exploding bomb, an image for which no sound is given, as if the event is taking place too far away to hear—it is devastating. I remain too frightened to play it again, having tried to listen to the Bravo test on headphones just once in early April 2011. Pieces like this force us to get a close look at gigantic objects whose shadow looms into our world everywhere.

Research published recently in *Psychological Science* has correlated moral disgust with physical disgust. If one eats something disgusting one can feel moral disgust, with the reaction rising in those with more conservative views. Ecological politics has to do with coexisting with other life forms even if they are threatening or disgusting. Kantian taste is about knowing how to appear disgusted at the right moment (Derrida 1981). Moreover, the

whole Kantian edifice (hence correlationism) operates through the aesthetic. It seems mightily important to me that we investigate this. In the time of hyperobjects, humans have gone beyond good taste, even Romantic sublime good taste, into an uncanny coexistence with other entities, the strange strangers. Art can now only be an uneasy collaboration between humans and nonhumans, not a purely human exploration of access to nonhumans, or the lack thereof. Yet art also becomes expressive of profound causal relationships between beings, since it has been discovered that the aesthetic is the very blood of causality. Philosophy again must draw its inspiration from art, after the moment at which, in a state of the purest refined cynicism, it seemed like a sick joke even to think that thought.

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