

Catastrophe Aesthetics: the moving image and the mattering of the world

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ABSTRACT

Aesthetic intervention can reveal new views of the world that work towards undermining the prevailing anthropocentric ideas that undergird the catastrophe of climate change. This paper outlines “catastrophe aesthetics,” an artistic strategy that attempts to deal with “the mess” of the Earth in an effort to “turn the world anew.” To exemplify this aesthetic orientation, I examine three geologically themed films that feature the “matter” of the Earth: Adrien Missika’s *Darvaza*, Sasha Litvintseva and Isabel Mallet’s *The Stability of the System*, and Terra Jean Long’s *Notes from the Anthropocene*. These works share commonalities with new materialist philosophies in that they examine the way in which the “stories” of rocks, fossils, dirt, and other subterranean substances are deeply entangled with humans and have a key role in creating meaning in the world. These films contest the stance that the ground materials of the Earth are inert objects to be used or ignored. Instead, they grant to these substances a certain kind of agency and history.

KEYWORDS

Catastrophe, film, environmental crisis, geology, human-earth relations, anthropocene

Catastrophe permeates the contemporary era. It pervades daily experience and seems to characterize both the past and not so distant future. Christopher Dole et al. assert that catastrophe has become the “mundane background of our daily lives” (7); Garnet Kindervater similarly contends, “catastrophe surrounds us” and “constitutes, at least in part, our reality” (97). The planet is going through a period of great transition, akin to other geological epochs that were marked by cataclysmic change. We know the signs well, so much so that in writing this I feel like I am rehearsing clichés: melting ice, rising tides, floods, droughts, forest fires, powerful storms, species extinction – all the effects of anthropogenic global warming. So quickly have human activities changed the Earth that some scholars proclaim that we are living on a qualitatively different planet than the one on which we were born. These changes are being recorded in the Earth’s substratum and a new geological epoch – the Anthropocene – gives name to the extent to which human beings have shaped the planet.

What are we to do, how are we to respond, in the midst of such a climate of catastrophe? Leaving aside the position of blatant denial, there have been two key reactions. The first is techno-utopianism or techno-optimism. This perspective, which extends from cybernetics, retains a wholehearted belief in technology and its ability to help human beings successfully “manage” the Earth. This orientation projects a *deus ex machina*, the technological god that will swoop in to solve the unsolvable; tragedy will thus be refigured as comedy and a happy ending provided to all (or at least to the most fortunate of us). At the other end of the spectrum is the apocalyptic vision of the future. This position concludes that it is too late, we are already doomed, and there is little we can do about it now. Here, tragedy cannot be forestalled; Nemesis, in the shape of “nature,” will take her revenge. Our options, in other words, or so we have been told, are utopia or oblivion. [1]

[1] The phrase “utopia or oblivion” is lifted from the title of one of R. Buckminster Fuller’s books. See *Utopia or Oblivion*, New York: Overlook Press, 1969.

In Greek tragedy, it is the hubris of the protagonist that leads to the denouement, the downturn, or the “catastrophe,” in its original meaning. The future projections of utopia or oblivion are both undergirded by a human-centric hubris. Resting too comfortably on Cartesian dualisms between human and nonhuman, subject and object, nature and culture, these narratives stage humans as the central protagonists of the Earth and nature as the other, as something to be either mastered or feared. By these estimates, human beings are synonymous with “world” and we are the rightful “owners” of this giant orbiting rock; these narratives thus reinforce and reproduce what is ultimately a colonial, capitalist attitude, inherited from our “forefathers,” projected onto the earth itself. For Michel Serres this stance towards the natural world lies at the core of the ecological crisis: “Cartesian mastery brings science’s objective violence into line, making it a well-controlled strategy. Our fundamental relationship with objects comes down to war and property” (22). It is precisely this hubris that has led to the catastrophe that now imbues the present day. It is thus crucial that we resist these narrative traps and that we continue to interrogate the assumptions and beliefs upon which they stand.

But climate change catastrophe complicates a coherent course of action for meaningful change. It is, as Bénédicte Ramade states, “disproportionate,

overspilling comprehension in terms of scale and temporality” (23). In *The Writing of Disaster*, Maurice Blanchot describes disaster as something that resists being turned into an object of knowledge because it disrupts the very foundations from which we apprehend reality. But it is not so much that we are not cognizant of climate change, for it is an object of knowledge across research disciplines; the problem lies in our lack of ability to *sense* it, at least in the everyday. Indeed, we *know* that climate change is happening. But its enormous spatial and temporal dimensions make it difficult to apprehend affectively. “Aisthesis” is the Greek term for this kind of sensory knowledge, distinct from cognition or intellect, that seems to be presently beyond our grasp. But this is where art may help.

For, aisthesis is the root of the word “aesthetics.” As Lauren Berlant states, “aesthetics is a place where we rehabilitate our sensorium by taking in new material and becoming more refined in relation to it” (13). Artworks, then, can bring to the fore a sensoria attentive to our catastrophic present and help us to communicate the reality of climate change and our place within it. In Rancière’s terms, art plays a role in “redistributing the sensible.”

If the word “catastrophe” commonly designates an end or ruination, it also contains in its etymological roots a sense of the potential for change. “Catastrophe” comes from the Greek word *καταστροφή*, meaning “to overturn,” “a sudden turn.” What this suggests is something much more nuanced than a cataclysmic end. It evokes rather a movement, a shift, or, in its strongest sense, a transformation. As Nigel Clark points out, “even as the disaster overwhelms our taken-for-granted senses and sensibilities, it also challenges us to try and begin sensing, thinking, acting in new ways. It ends the world, and begins it turning anew” (22).

What I call “catastrophe aesthetics,” then, names a tendency in contemporary artworks that both aim to make sensible the catastrophic present and work towards “turning the world anew.” Responding to the catastrophe of anthropogenic climate change, these works offer neither utopian nor apocalyptic imaginations; they do not attempt to assert visual mastery over climate change nor merely give in to the decadence or despair that seem to accompany this loss of control. Catastrophe aesthetics does not aestheticize catastrophe. Instead, it refers to a growing group of artworks whose visual strategies probe into the mess of the world and begin to disrupt prevailing perspectives regarding the relationship between human beings and the earth.

This is a focal point in certain strains of contemporary philosophy and critical theory. New materialism, speculative realism, and object-oriented ontology are at the forefront of realist non-anthropological thinking. While their theories differ in many regards, scholars such as Donna Haraway, Rosi Braidotti, Bruno Latour, Jane Bennett, Karen Barad, Graham Harman, Timothy Morton, to name only a few, all agree that the ecological crisis necessitates a “rethink[ing], reconfigure[ing], and reinvent[ing]” of what we take for granted, or assume, about ourselves and the earth (Ellsworth and Kruse 8). Thus catastrophe aesthetics describes what could be considered the artistic counterpart to this theory. While not necessarily aligning with any one

theory or one theorist, this artistic orientation works similarly to rearticulate senses and sensibilities about a world characterized by ecological catastrophe.

Catastrophe aesthetics is not necessarily limited by medium; however, I focus on moving images in this essay. I look closely at three short films: *Darvaça* (2011) by the French artist Adrien Missika; *The Stability of the System* (2016) by London-based filmmakers Sasha Litvintseva and Isabel Mallet; and *Notes from the Anthropocene* (2014) by Toronto filmmaker Terra Jean Long. These works are emblematic of artistic artefacts of “the geological turn” – a scholarly and artistic orientation brought about with the naming of the Anthropocene. They are aligned in their downward directed gaze as they all, in different ways, take as their subject matter the *matter* of the Earth.

These three films are all experimental documentaries, but each adopts a distinct mode and circulates within different kinds of exhibition spaces. *Darvaça* is a gallery film that is most amenable to being shown continuously on a loop. It is held in the collection of the Nouveau Musée de Monaco but has circulated widely as part of art exhibitions and biennales (I first viewed it in Toronto at the Ryerson Image Centre’s 2016 *The Edge of the Earth*). *The Stability of the System* is the most experimental of the three in terms of form, and although it employs narration, there is a kind of circularity to the narrative that renders it not adverse to be shown outside of the cinema. Long’s *Notes from the Anthropocene* is a heavily narrated essay-film that unfolds linearly, requiring viewing from beginning to end; while it stands out in her oeuvre as her only essay-film, it is also indicative of her wider body of experiments with 16mm and hand-processed film. Litvintseva and Mallet’s and Long’s films have had extensive showings in gallery-affiliated screening programs, but they have also shown in documentary and experimental film festivals around the world. Both also have a research-institution link: Litvintseva is currently pursuing a research-creation doctorate at Goldsmiths where she is developing a theory of geological film and Long’s *Notes* was her MFA thesis project at York University’s film production program. Thus, traversing the white cube to the black box to the lecture hall, these works are representative of a spectrum of “artist films” and their different exhibition spaces and audiences.

A thread that connects them, however, is the way in which their attention to the topologies and histories of the very specific places they represent bring the “real” to the forefront of the film. My decision to discuss moving images in particular comes from a long interest in the relationship between film and the “world” and the ways in which this relationship comes to bear on the context of environmental catastrophe. Cinema has long been theorized as having a special connection to the world or to reality. This connection has sometimes been seen through the lens of indexicality, as the physical world imprints itself on the celluloid strip. But indexicality doesn’t explain the affective force of cinema’s (re)presenting of the world that cuts across the analogical and digital. One of the powers of cinema lies in its ability to seemingly capture “real” life in a way that seems remarkably familiar and yet simultaneously strange or new. This quality of cinema has led many theorists to propose that cinema has the potential to re-connect us with a world from which, for different reasons, we have become detached. Stanley Cavell for

instance believes that cinema has the ability to help us overcome the philosophical position of scepticism; Gilles Deleuze thinks the film image can spark a renewed “belief in the world”; and Siegfried Kracauer holds that cinema can “redeem physical reality.” Given space constraints, I will briefly look only at Kracauer’s work, as it speaks most directly to my present focus.

In *Theory of Film*, Kracauer presents a realist theory of film. “The cinema,” he states, “seems to come into its own when it clings to the surface of things” (285). Much of the book outlines the uniqueness of cinema’s affinities to reality such as the unstaged, the fortuitous, and the “flow-of-life.” But the last chapter makes an argument for an ethics of cinema based on its realist disposition. Kracauer traces how the waning of religion and ideology occurred simultaneously with the rise of science and technology. This marks a re-balancing of an onto-epistemological orientation towards the world: ideological unity through religion is replaced by scientific reason. But even though the gaze of science is directed at the physical world, this privileging of science has not provided a clear picture of reality. It has instead turned the world into an abstraction. He argues that “we not only live among the ruin of ancient beliefs but live among them with at best a shadowy awareness of things in their fullness” (291). To explain how science veils the real, Kracauer quotes A.N. Whitehead: “When you understand all about the sun and all about the atmosphere and all about the rotation of the earth you may still miss the radiance of the sunset” (296). Whitehead calls for a renewed habit of aesthetic appreciation that values the poignancy of the physical world.

For Kracauer, cinema presents such an avenue for a renewed aesthetic appreciation of the world. It begins, for him, with the autonomous quality of the cinematic apparatus, which allows for a unique view of the world outside of human subjectivity. Quoting Lewis Mumford, Kracauer claims that “film may fulfil a timely mission in helping us apprehend and appreciate material objects: ‘Without any conscious notion of its destination, the motion picture presents us with a world of interpenetrating, counterinfluencing organisms: and it enables us to think about that world with a greater degree of concreteness’” (299). Accordingly, cinema treats things on screen – human, nonhuman, living and nonliving – with a remarkable ontological equivalency. In everyday experience, “streets, faces, railway stations” may “lie before our eyes” but “they have remained largely invisible” (299). On screen, however, we are drawn to look at these things that may pass us by in daily life: “film renders visible what we did not, or perhaps even could not, see before its advent” (300).

Accordingly, it is not just that film can show us the world as a kind of mirror image. Film can “diffract” the world, showing different views and revealing things unseen. The distinction between diffracting and reflecting was first explicated by Donna Haraway and later developed by Karen Barad. Barad explains that even though both are optical metaphors, “reflection reflects the themes of mirroring and sameness, diffraction is marked by patterns of difference” and “diffractions are attuned to differences – differences that our knowledge-making practices make and the effects they have on the world” (71-72). For Kracauer, this means that cinema has the potential to challenge habitual ideas and attitudes about the world. He calls this cinema’s capacity

to “debunk” – it can present us with images that directly question our notions of the physical world (306-308). It is here that the fabric of conventions can be pierced.

The culmination of Kracauer’s theory is his suggestion that cinema can “literally redeem this world from its dormant state, its state of virtual nonexistence” (300). Although Kracauer is focused on “physical reality” there is lurking beneath the text a desire for a kind of secular re-enchantment of the world. This is evident in how he believes cinema can fulfil Whitehead’s call for a new aesthetic appreciation. In redeeming the physical world, cinema does not function as a means to master the world; it rather grants a new sensory experience of different fragments of the world. Jeffrey Jerome Cohen describes “enchantment” as “an affective force that might propel ethical generosity, a way of thinking that contests dreary and destructive modes of reducing matter to raw material, diminishing objects to uses” (9). In presenting the world anew or as strange, cinema has thus a privileged potential to disrupt “our fantasies of sovereign relation to environment, a domination that renders nature ‘out there’, a resource for recreation, consumption, and exploitation” (Cohen 9).

Darvaza, *The Stability of the System*, and *Notes from the Anthropocene* show us a unique view of the world in their focus on the rocks, minerals, fossils, and other subterranean substances that make-up the planet’s lithosphere. Catastrophe lingers behind these films in a way that seems oddly familiar to the affective dimensions of climate change. It is present, but not in the mode of “disaster-film” tsunamis, earthquakes, and explosions. It is rather a “quiet catastrophe” that has been for some time easy to ignore [2]. Rather than attempting to visualize the effects of climate change, these three films point to the root of the problem – anthropocentrism and human beings’ so-called mastery of the world – and attempt to shift such attitudes through thinking about ideas such as natureculture, non-human agency, and deep time.

[2] This turn of phrase is taken from Robert Smithson who uses it to describe the way in which matter and mind collide in his work. See “Fragments of an Interview with Patsy Norvell,” *Robert Smithson: The Collected Writings*, edited by Jack Flam, University of California Press, 1996, pp. 194.

The fires of humanature: *Darvaza*

Adrien Missika’s video *Darvaza* opens with thin orange smoke softly billowing against an inky black background. The smoke does not spread outwards to fill the screen, but rather remains steady as it twists and turns in on itself. Without a referent, the swirling vapours evoke a primordial mixing of gases, like an imaginary representation of the universe after the big bang or the Earth’s atmosphere before it was a life-producing planet. The video slowly reveals the source of the smoke: a deep pit in the Earth whose ground is aflame. First shown against the blackness of the night, the emblazoned hole looks like a fiery portal to the underworld. As we view the pit from various angles and distances, the mythological undertones of this scene are heightened by what appears to defy logic: ordinary dirt or sand or ground is ablaze in pockets, like a thousand tiny separate fires. The film moves from night into day and we now see that the burning pit exists in the middle of a vast blue-tinged rocky arid landscape. In the daylight, the images are less abstract, but the phenomenon we see on screen is no less formidable. We are

confronted with a scorched, dry Earth that seemingly exists in a time before or after life.

The empirical reality of Missika's referent complicates what at first appears to be mythological imagery - which, as curator Bénédicte Ramade suggested, seems more primal than nature itself (57). Nicknamed the "Door to Hell," the fiery pit depicted is in fact a gas crater located in the Karakum Desert of central Turkmenistan and named after a nearby town, Darvaza (whose name means "the gate"). As many were informed when the story about this crater went viral in 2014, the phenomenon was created by Soviet geologists in 1971. Thinking they had found a vast oil field, the scientists set up equipment to begin drilling on the land. But the ground they chose was not as solid as they first thought; it was in fact harbouring a cavernous pocket of natural gas. Unable to support the weight of the drilling equipment, the ground collapsed forming the crater we see in the film. The scientists knew that the natural gas escaping from the ground was cause for concern: it could lead to a dangerous explosion and was becoming lethal to the local wildlife. Thus, the geologists decided to light the gas on fire, expecting that it would burn up within a few weeks' time. Almost half a century later, the crater is still steadily burning.

The entanglement of these two levels of meaning, the mythological and the historical-scientific, is a point of entry into the question of Anthropocene, an era whose trace on the Earth's strata connects us with distant pasts and projects an uncertain future. As an otherworldly scene of a wound in the Earth, created by the human search for fossil fuels, the Darvaza crater functions as a metaphor for this new geological epoch. In the curatorial text for the exhibition *The Edge of the Earth* at the Ryerson Image Centre, Toronto, where the film was shown in 2016, Ramade notes how *Darvaza* presents a version of "humanature," Peter Goin's term that signals the indistinct boundaries between nature and culture (Ramade 57). Humanature or Haraway's "natureculture" speaks prominently to the central image in this film: fire. It is primarily in fire that the two levels of meaning in the film intersect. And in both mythology and science, the story of fire tells us that we've always been naturalcultural.

The Prometheus myth from ancient Greek culture tells how human beings were born unto the Earth with the skill of making fire. When Epimetheus forgot to grant human beings an essential quality or power that would give them a chance to survive on the planet, Prometheus had to steal fire and the skill of making it from the gods Hephaestus and Athena. Bernard Stiegler reads the Prometheus myth as revealing that the human being has a fundamental lack ("default") and an essential "prostheticity": the "quality" or "power" given to them by the gods is external to the species itself (*Technics and Time III*). The human emerges in the world with *techne* as an essential prosthesis. And the original *techne*, the prosthetic without which we would not be human at all, is the art of making fire.

Interestingly, a similar perspective has been confirmed in the realm of science. Research has shown that our ancestors, *Homo erectus*, had the ability to produce and contain fire some 1.6 to 2 million years ago (Gowlett 2). According to some scientists, this use of fire by *Homo erectus* is directly

connected to the evolution of *Homo sapiens*. *Homo erectus*' cooking of food over the hearth of the fire allowed for the easier digestion of proteins and, thus, for energy to be directed to the growth of the brain (Glikson 82). So, with some poetic licence one could say that human beings were “born” from the warmth of the fire.

But fire has not only been seen to herald the birth of humans; it has also been suggested to foreshadow their apparent mastery of Earth. The Russian biogeochemist Vladimir I. Vernadsky connects human beings' mastery of fire with the formation of the noosphere, a concept that predicts the Anthropocene [3]. The noosphere – the sphere of mind or reason – marks the evolutionary age in which humankind becomes the planet's main geological agent. This begins when human beings learn how to “master” fire. The creation and control of fire is the first instance of human beings' harnessing of energy, and marks the beginning of a long history of inventions that involve controlling nature, leading up to the contemporary reliance on matter-energies such as fossil fuels. For Vernadsky, the noosphere was an evolutionary process, one both inevitable and desirable. He believed that human beings would learn how to successfully control the whole Earth. Like Vernadsky, techno-optimists – who are today referred to as the “New Prometheans” – believe that it is possible to “use humanity's powers to create a good Anthropocene” (Keary 7).

[3] Vernadsky developed his theories of the biosphere and noosphere alongside Pierre Teilhard de Chardin and Edouard LeRoy in Paris in the 1920s. The three were part of a loose circle of intellectuals –which included the philosopher Henri Bergson– who were invested in alternative understandings of the way in which the universe “worked.” Each had a different version of the noosphere concept. But who actually invented the word “noosphere” remains unclear. While Teilhard has stated that it was he who came up with the term, Vernadsky attributes it to LeRoy. However, it is most often considered a concept jointly developed by all three men. I use Vernadsky's here because his was anchored in geology. See *The Biosphere and Noosphere Reader: Global environment, society and change*, edited by Paul R. Samson and David Pitt, Routledge, 1999.

As hinted at in *Darvaza*, such mastery foreshadows the downfall of humans. For *Darvaza* is also a story about the search for fossil fuels and human dependency on them. This reliance is precisely that which has led us on the road to the present climate catastrophe. Such a “highway towards hell” is confirmed by the sinister undertones of the Prometheus myth, and other world mythologies that link the mastery of fire with a kind of treachery, such as theft, kidnapping, and war. Rather than taking the techno-optimist line, the film asks us to acknowledge the radical entanglement of humans with the world. As Karen Barad has suggested, the world is not composed of “independent objects with inherent boundaries and properties” – ontologically discrete entities – but rather “phenomena” (139). What she calls “intra-action” names the process of the “mutual constitution of entangled agencies” (50). Individual entities materialize through their intra-action with other entities and agency – or the ability to act – emerges from this relationship. “Things,” including humans, nonhumans, inert matter, discourses, etc., are not discrete entities but material-discursive phenomena.

What the fire origin stories tell us – in both science and mythology – is that the “human being” is not a thing but a phenomenon, produced through its intra-actions with multiple entities that have traditionally been categorized as “natural” or “cultural.” Similarly in *Darvaza*, what appears to be a “natural wonder” in the film turns out to be a human-made “accident.” But so far off were the scientist's hypotheses about the amount of gas under the surface of the Earth, the crater has now seemingly *become* a “natural wonder.” Moreover, we should raise the question as to what the status of the fire that lit the gas leaking from the crater is in the first place – is it “natural” or “cultural”? It seems to be something in between. In its multiple layers of meaning, then, the film tells us that these two categorizations cannot be separated. The

Darvaza crater is a phenomenon that cannot be disentangled from the human agents – the Soviet geologists, but also the tourists who today go to witness this “wonder” – and the natural agents – the natural gas hidden beneath, the desert floor that was too thin to support the weight of drilling equipment. Whilst the film itself makes no mention of the backstory it cannot be separated from the discourses surrounding its image – the mythological, scientific, as well as the media that the crater has garnered.

The crater’s “origin” story also reveals that the Earth is never altogether predictable – the scientists that ignited the natural gas did not think that the Earth would then burn for almost fifty years. Indeed, this film intimates at the inherent creativity of the Earth. I turn to Sasha Litvintseva and Isabel Mallet’s film, *The Stability of the System*, to develop this idea further.

The creative agency of matter: *The Stability of the System*

A mathematical point, a single white dot against a black background, opens *The Stability of the System*. Existing at zero, zero, this point is dimensionless, timeless, formless, both inside and outside. At the same time it carries within it all possible forms, all actions and possibilities of expression. The point narrates itself in a monologue that describes its transition from nothing to existence, as its awareness of itself grows into a frustration with its nothingness: “full up and fed up of only being myself. I am drowning in my formlessness. My inwardly directed frustrations of my situation leads to me to the discovery that I am in fact surrounded. Time begins.” As the point slowly becomes aware of the space around it, of the outside blackness, the stuff that is not itself, it discovers it loves this other “because it is not me.” In and through its attachment to the other, the dot becomes a spiral as it begins to create time, space, and form: “We spin outwards. Around and around. In becoming form we have made an image of ourselves. An image with a past, present and future. An image to be seen if eyes were open to see us.” A moment of blackness before the image of a black rocky landscape. From nothing, matter.

The film is divided into three parts: the opening animation and voiceover described above, a middle section composed of mostly static frames of the rocky terrain of the volcanic island of Lanzarote, Spain and a closing scene of the landscape in motion that is accompanied by a new narrator. *The Stability of the System* probes into the vibrancy of matter and the creative agency of nonliving things. In doing so, it is part of a growing work of art that points toward the “outer limit in the search for agency and meaning in matter” (Hampton 2).

The narration in the opening scene borrows heavily from Italo Calvino’s short story collection *Cosmicomics*. In these works, an indeterminate narrator, Qfwfq, embodies a variety of forms: from the point that contained all the matter of the universe before the Big Bang to the mollusc whose spontaneous formation of its shell prompts the advent of a spiralling constellation of forms in the world. Qfwfq is, in other words, everything: the “universe in its synchronic and diachronic metamorphoses, the whole

presenting itself in different fragments” (Iovino 226). The film does something similar. The mathematical point gives birth to the world and presents itself in this film in the form of the volcanic island. It is reminiscent of Jan Zalasiewicz’s claim that the formation of the universe can be found in a pebble (*The Planet in a Pebble*). Like Qfwfq – who functions as a radical levelling force, as through this character the living and non-living, the huge and the miniscule are both given ontological equivalency and intimately connected – the “characters” in *Stability of the System* move from abstract concepts to the natural matter of the island to the human. As such, these ostensibly very different things are not just related but shown as intertwined. Just like Calvino’s literature, Litvintseva and Mallet’s film presents a “tangle of matters, forms, and signs” in an attempt to reveal the “realm of potentialities that lies ‘out there’” (Iovino 220-225).

But the film is mostly comprised of images of rocks and other natural features of Lanzarote. In consequence, *Stability of the System* encourages us to think about these things in their *thingness* - their shapes, their formation, their changeability, and their deterioration. In her book *Vibrant Matter*, Jane Bennett discusses the way in which “objects” in the world sometimes beckon us with their “thing power.” Thing-power is that “strange dimension of matter” as it presents itself as an “out-side” (Bennett 3). Bennett states that thing-power “seeks to acknowledge that which refuses to dissolve completely into the milieu of human knowledge” (3). As Kracauer showed, film images have the potential to present us with things on screen in such a way that we are drawn to the object not as a device or prop or background but as a kind of being in its own right. In *Stability* such an effect is created both by the numerous images of different kinds of rocks, which lead us to pay attention to the peculiarities of each specific rock, and by the juxtaposition of what appears to be “natural” landscapes (e.g. vistas composed of black molten rock) with “cultural” landscapes (e.g. image of plants being cultivated), which prompts us to compare the form of the two. In this case, the formations of the “natural” materials are just as intricate as the “cultivated.” This parallel tells us that rocks have a history, a story, and a set of relations that are both inside and outside of a human framework.

More than just an examination of the “thing-power” of things, *Stability of the System*, like Bennett’s scholarly work, wants to consider things as active agents, or “actants,” to use Bruno Latour’s term. At one point in the film there is a shot of the tide ebbing and flowing onto a beach; as it does so it forms small inlets in the mixture of sand and rocks that make up the beach. The next shot, a long shot of a lengthy stretch of the island, reveals that the island itself has a similar shape to the one just seen being created by water and sand on a particular section of the beach. Such a graphic match begs the question: do the rocks and water and wind “know” this shape? Is it just our eyes that find these patterns or is the island creating itself as form? Like the sightless mollusc in Calvino’s “The Spiral,” who through his increased sense of himself, and hence of otherness, falls in love with a female mollusc and from this act of love creates a beautifully coloured and patterned spiral shell, *Stability* hints at the creative agency of the island’s matter. The variegated rocks in this film point to a world not drawn by human design, but to “an interstitial field of nonpersonal ahuman forces, flows, tendencies, and

trajectories” (Bennett 61). That this is a volcanic island only furthers the sense of the creative agency of the island: its forms can be seen as an expression of the outpouring of lava and molten rock from deep within the Earth. As magma fossilizes all that it touches, Jussi Parrika even names it as the first time-based art form (116).

We could say then that there are multiple materials and forces that are creating images in this film. Ultimately the film wants to question its own being not only as an expression of human subjectivity, but one that is equally entangled with the expressions of the allegedly inert matter that it films. Like *Darvaza*, then, it recalls Barad’s theory of intra-action. In the last section of the film, we are positioned clearly from a human perspective: we now see the landscape from a moving car and the camera “blinks” to mimic human sight. As the landscape moves by increasingly faster, a new voice narrates a monologue that borrows from Robert Smithson’s dizzying description of his experience of his own land artwork, *Spiral Jetty*. In the voice-over, as in Smithson’s essay “Spiral Jetty,” the expressions of the natural world merge with human physiological experience, to the point that the two become indistinct: “my eyes become combustion chambers churning orbs of blood blazing by the light of the sun” and “perception heaving, stomach turning” as the “sun vomits corpuscular radiations.” Viewing *Stability* in light of Barad’s theory of intra-action, we could say that the film itself is constituted by the intra-action of many agencies: human beings, camera technology, the lava rocks, the sunlight, the wind, and so on.

That is to say, as the images at the end of the film become increasingly blurry, so do the notions of “subjects” and “objects.” In Smithson’s essay he describes viewing *Spiral Jetty* from a helicopter; surrounded by mud, salt crystals, rocks, and water for as far as he can see, Smithson experiences a sensation of losing his subjectivity, of somehow merging with the landscape. The end of the film attempts to recreate this as the landscape moves so quickly by that it is rendered formless; it is now just colour passing by as the voiceover recites Smithson: “I was slipping out of myself again, dissolving into a unicellular beginning, trying to locate the nucleus at the end of the spiral.”

The last part of the film weaves Smithson’s tale with an evocative narrative about the Ganzfeld effect – a temporary blindness that occurs when one encounters an undifferentiated visual field: a “black water of a lava wave swept by the wind,” a “giant sheet of solid black” that spreads over the land and absorbs light and life “into vast clouds of electric dust, split summits, fiery lakes, sounds of thunder, whirlpools of rubble, tectonic collisions, contorting strata, the furious ocean, swallowed land...” This narration contributes to the loss of subjectivity that the film evokes. But the black lava – that matter which will form into the rocks seen throughout the film – is both the source and a result of some catastrophic force. For Cohen, the matter of the ground and catastrophe are intimately intertwined:

Rocks are the archive in which we read that we dwell intracatastrophe. They index the exterminations of remote epochs, extinctions that near again. They yield narratives of

celestial fire, massive volcanic blasts, an atmosphere inimical to life, an earth ripped by ice, ablaze, overheated, engulfed by sudden flood. (Cohen 63)

Having lived on Earth for millions if not billions of years, rocks narrate quite different stories about the world than ones given to human beings (63). Thus in multiple ways, *Stability* cues us to consider that the world is not only for us.

Fossilized Time: *Notes from the Anthropocene*

If the deep time of rocks is hinted at in *Stability*, the subject of prehistory, history, and “posthistory” become central in the focus on fossils in Terra Jean Long’s *Notes from the Anthropocene*. Shot mostly in the Alberta Badlands, an area known for its plentiful dinosaur fossil findings and a province infamous for its tar sand industry, this 16mm essay film explores the relations between three kinds of fossils: dinosaur fossils, fossil fuels, and the future fossils of the Anthropocene. In this short work, a tour of Drumheller, Alberta and its famous Royal Tyrell Museum doubles as a tour of the Anthropocene and the socio-economic system – industrialized capitalism – that has brought it about. As an ancient artefact, the fossil is a material manifestation of time. The film probes how the deep time of the fossil, past and future, converge in and constitute the material conditions of the present.

The film is inspired by W.J.T. Mitchell’s speculative inquiry in his book, *The Last Dinosaur*: what, it asks, would a future alien race who discovers the remnants of human civilization make of our obsession with dinosaurs, found in museums, schools, amusement parks, children’s bedrooms, and scientific labs? Whereas Mitchell embarks on a cultural history of human beings’ fascination with dinosaurs, Long’s film employs the dinosaur – a creature part scientific, part mythological, and part fantastic – as a crystalline figure through which to think “geologically.” Via the dinosaur, then, the film refracts multiple entanglements of geological time. Three particular geological times intersect in the film: the Carboniferous period (359 - 299 mya), whose sedimentary layers contain the fossil fuels on which we so depend; the Cretaceous period (145.5 - 65.5 mya), during which the dinosaurs of Alberta lived; and the Anthropocene (dates TBD), whose future fossils can only be imagined.

The film questions how these ancient times inflect the present when it asks: what if in our various digging rituals we are awakening these ferocious creatures from the deep past? That the “monsters being unearthed” not only refers to dinosaurs is revealed in the way in which the digging for dinosaur fossils and digging for fossil fuels are paralleled. The burning of coal, oil, and gas: this is the fire that has made its mark on the Earth in the form of the Anthropocene. It is the fire that both sustains and threatens our current way of life. And perhaps like a monster being disturbed from its hundred million year slumber it will wreak havoc in our world.

One particular image in the film directly links the dinosaur and the fossil fuel industry: crosscut with scenes of Dinosaur Park and museum exhibits at the

Tyrell Museum are scenes of an oil well that moves methodically up and down. Framed in a medium close-up, the pump-jack of the oil well resembles the head and neck of a dinosaur – perhaps the *Parasaurolophus*, one of Alberta’s own. Elsewhere, oil and the petroleum industry lurk in the background in the images of cars speeding down highways, truck stops and gas stations, signs on roadsides that warn of pipelines underneath, and the various plastic objects that fill the museum and its gift shop. Tellingly, there is also a shot that lingers on a museum sign that explains the prehistoric conditions that have created this oil rich ground and the three billion dollar industry it supports. Metaphorically the film suggests that the dinosaur is alive in the petroleum that is the material foundation of so much of our contemporary culture. Ancient matter flows through the material realities of our current civilization. Twin temporalities are at play here – a human time, the time frame of late capitalism, and geological time – the hundreds of millions of years that it took for ancient plants to be compressed into oil.

That human beings are also the “monsters” is implicit; whereas once the dinosaurs were masters of the terrestrial realm, we now dominate the Earth. The film, however, suggests a deeper connection between these prehistoric reptiles and the human being, through a reference to the r-complex of the “triune brain.” The triune brain is a theory that the forebrain has developed in three evolutionary stages. These are named the reptilian complex (r-complex), the paleomammalian complex, and the neomammalian complex. The forebrains of reptiles and birds are dominated by the r-complex, characterized as the part of the forebrain that governs instinctual behaviours involved in aggression, territoriality, and ritual displays. The human brain is ruled by the neomammalian complex, but this is built upon the earlier two complexes. In this way, at the “bottom” of the human brain lies the r-complex. The metaphor of depth in the triune brain theory has been read as analogous to the triadic structure of the psyche, in which the id/unconscious corresponds to the r-complex, and so on. But its structure of depth as time also begs a geological reading. Since deep within the human brain lies the R-complex, Carl Sagan has suggested that “deep down” human beings are themselves dinosaurs (Mitchell 201). The triune brain theory has since fallen out of favour in the scientific community but it is nonetheless an alluring theory. Building on posthumanist scholarship that has shown that we have never been really human, since our biological bodies are composed of numerous “alien” entities, the triune brain adds an “alien” temporality into the mix. Parts of us, this film tells us, may be as old as the dinosaurs; indeed, it points to the strange notion that we are made up of multiple times, from the ancient past to the deep future, just like the figure of the fossil.

By referencing the r-complex, *Notes from the Anthropocene* suggests partly that the “dinosaur part” of human beings emerges in the aggressive, territorial fossil fuel industry. But the film also evokes another integral feature of dinosaurs as it turns its focus to the “ritual displays” that revolve around the consumption of goods, culture, and nature: the sudden extinction of dinosaurs. The carbon deposits from the burning of fossil fuels left on the Earth’s stratum are the key sign of the Anthropocene. Thus, in digging up fossils, we have unwittingly brought about a new fossil stratum that conjures our own extinction.

Here, the film asks a question closer to Jan Zalasiewicz's in *The Earth After Us* than to Mitchell's: what remains of our civilization will be found in the rocks? The film has an answer to this question: the plastic figurines of brightly coloured dinosaurs found in the museum gift shop, items that again link dinosaurs to the petroleum industry. In the film, the "tour" of the museum is interrupted by a museum attendant's voice: "The tour will continue after the gift shop." Maybe. Or maybe it is precisely here that the tour will end. This is to say that it will not be the fragments of human beings left behind but our *things*. The film highlights the plastic dinosaur toys, filming them row upon row in the gift shop. It then shows particular specimens isolated, filmed from underneath a clear platform against a white backdrop, as if Long is now the future scientist studying these remnants of a civilization long gone. Embossed on the bottom of each plastic souvenir: "Made in China." The reference to the globalized market demonstrates the Anthropocene as something that surpasses geology: "it is constitutive of social and technological relations and environmental and ecological realities" under late capitalism (Parikka 46).

In thinking about which human things will be the remnants of our civilization, *Notes from the Anthropocene* raises the question of its own materiality as a film. Like a fossil, film records a trace of a world that has passed. We are thus reminded that this film itself will become part of the fossil layer. Media itself is material and will have its own "life" – from the minerals and metals extracted from the earth used to create our media apparatuses to the day they end up in a garbage dump, slowly decaying as they become part of the newest strata of Earth. As Robert Smithson proclaimed: "The tools of technology become a part of the Earth's geology as they sink back into their original state. Machines like dinosaurs must return to rust or dust" ("Sedimentation" 104). And perhaps our debris will generate new fuels: "The day the Earth's crust reabsorbs the cities, this plankton sediment that was humankind will be covered by geological layers of asphalt and cement until in millions of years time it thickens into oil deposits, on whose behalf we do not know" (Calvino, "The Petrol Pump" 175).

Conclusion: Mattering the World

Cohen states that "catastrophe is entanglement," it is "a call to creativity that might best be answered through unexpected alliances" (65). The films discussed here are exemplary of this call to creativity; the experimental documentary mode lends itself to radical thought and the generation of surprising connections as it combines the modes of speculation, evocation, and association with the presentation of the "real" in the form of actual places, events, and histories. A common image in these films was the lingering shots of rocks; these recurring images provide the spectator a novel engagement with a material normally relegated to the category of mundane object. They show how the matter of the Earth is anything but unremarkable as they connect it to far-reaching environmental, socio-historical, and political contexts.

Indeed, while these three artworks include varying levels of direct engagement with the wider contexts of their represented locales – Turkmenistan, Lanzarote, and the Badlands of Alberta – their orientations toward the natural world are nonetheless aligned with political ecology, which holds that the environment can never be thought apart from social, political, and economic conditions. As such, these works are in dialogue with a larger body of contemporary environmental artwork that possess a similar position, most notably discussed by T.J. Demos in his recent book *Decolonizing Nature: Contemporary Art and the Politics of Ecology*. They particularly resonate with the *World of Matter* project, a collaborative multimedia undertaking that brings together art, environmental activism, and ecological research to examine, in the project’s own words, the “global ecologies of resource exploitation and circulation.” But it should be noted that while similarly attentive to the non-neutrality of the Earth’s matter, the films discussed here and *World of Matter* depart significantly in form; for the most part, the latter is rooted in a documentary activist film tradition.

Because climate change and other environmental calamities seem to be exacerbating by the day, Demos’ book is especially interested in these intersections between art and activism exemplified by *World of Matter*, and rightly so. The works discussed here – *Darvaza*, *The Stability of the System*, and *Notes from the Anthropocene* – may not be considered activist films by common understandings. But they nonetheless do their part in making interventions into the ways in which we view and situate ourselves within the natural world. Through speculation about the creative agency of ostensibly inert materials and the way in which they are deeply entangled with human beings, these films begin to challenge the dualisms that bolster climate change and the human-centric perspectives that underpin the Anthropocene. With an eye to the ground, they present stories and images that weave together the human with the nonhuman, the living with the nonliving, nature and culture, fact and fiction, history and fantasy, past and future. In doing so, they make the world matter differently, bringing a renewed affective force to, and hence a possibility of a renewed politico-ethical encounter with, a part of the world that normally remains far below our field of vision.

Works Cited

- Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter*. Durham: Duke University Press, 2006.
- Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press, 2010.
- Berlant, Lauren. *Cruel Optimism*. Durham: Duke University Press, 2011.
- Blanchot, Maurice. *The Writing of Disaster*. Trans. Ann Smock. Lincoln: University of Nebraska Press, 1995.

Cavell, Stanley. *The World Viewed: Reflections on the Ontology of Film*. Cambridge: Harvard University Press, 1979.

Calvino, Italo. *Cosmicomics*. Trans. William Weaver. New York: Harcourt, Brace & World, 1968.

Calvino, Italo. "The Petrol Pump." *Numbers in the Dark: and other stories*. Translated by Tim Parks. Boston: Mariner Books, 2014, pp. 170-175.

Clark, Nigel. "Geo-politics and the disaster of the Anthropocene." *The Sociological Review*, Vol. 62 (2014): 19-37.

Cohen, Jeffrey Jerome. *Stone: An Ecology of the Inhuman*. Minneapolis: University of Minnesota Press, 2015.

Deleuze, Gilles. *Cinema 2: The Time-Image*. Trans. Hugh Tomlinson and Robert Galeta. Minneapolis: University of Minnesota Press, 2007

Demos, T.J. *Decolonizing Nature: Contemporary Art and the Politics of Ecology*. Berlin: Sternberg Press, 2016.

Demos, T.J. "Against the Anthropocene: Visual Culture and the Environment Today." *The Edge of the Earth: Climate Change in Photography and Video*. Ed. Bénédicte Ramade. London: Blackdog Publishing, 2016. 27-34.

Dole, Christopher, Robert Hayashi, Andrew Poe, and Austin Sarat. *The Time of Catastrophe: Multidisciplinary Approaches to the Age of Catastrophe*. London: Routledge, 2015.

Ellsworth, Elizabeth and Jamie Kruse, editors. *Making the Geologic Now: Responses to Material Conditions of Contemporary Life*. Punctum Books, Dec. 2012, <http://www.thegeologicnow.com>.

Glikson, Andrew Y. *Evolution of the Atmosphere, Fire and the Anthropocene Climate Event Horizon*. Dordrecht: Springer, 2014.

Gowlett, J.A.J. "The discovery of fire by humans: a long and convoluted process." *Philosophical Transactions of the Royal Society B: Biological Sciences*, Vol. 371, Iss. 1696 (2016): 1-12.

Hampton, John. G. "Contemporary Rock Art." *Rocks Stones Dust*. M. Barnicke Gallery and the University of Toronto Art Centre, 2015, <http://www.rocksstonesdust.com/>.

Iovino, Serenella. "Hybriditales: Posthumanizing Calvino." *Thinking Italian Animals: Human and Posthuman in Modern Italian Literature and Film*. Eds. Deborah Amberson and Elena Past. New York: Palgrave Macmillan, 2014. 215-232.

- Keary, Michael. "The New Prometheans: Technological Optimism in Climate Change Mitigation Modelling." *Environmental Values*, Vol. 25 (2016): 7-28.
- Kindervater, Garnet. "Catastrophe and Catastrophic Thought." In *Biopolitical Disaster*. Eds. Jennifer L. Lawrence and Sarah Marie Wiebe. New York: Routledge, 2017, pp. 97-112.
- Kracauer, Siegfried. *Theory of Film: The Redemption of Physical Reality*. Oxford: Oxford University Press, 1960.
- Mitchell, W.J.T. *The Last Dinosaur: the Life and Times of a Cultural Icon*. Chicago: University of Chicago Press, 1998.
- Parikka, Jussi. *A Geology of Media*. Minneapolis: University of Minnesota Press, 2015.
- Ramade, Bénédicte (ed). *The Edge of the Earth: Climate Change in Photography and Video*, London: Blackdog Publishing, 2016.
- Samson, Paul R. and David Pitt (eds). *The Biosphere and Noosphere Reader: Global environment, society and change*. London: Routledge, 1999
- Serres, Michel. *The Natural Contract*. Trans. Elizabeth MacArthur and William Paulson, Ann Arbor: University of Michigan Press, 1995.
- Smithson, Robert. "A Sedimentation of the Mind: Earth Projects." *Robert Smithson: The Collected Writings*. Ed. Jack Flam. Berkeley: University of California Press, 1996, pp. 100-113.
- Smithson, Robert. "Spiral Jetty." *Robert Smithson: The Collected Writings*. Ed. Jack Flam. Berkeley: University of California Press, 1996, pp. 143-153.
- Stiegler, Bernard. *Technics and Time III: Cinematic Time and the Question of Malaise*. Trans. Stephen Barker. Stanford: Stanford University Press, 2011.
- World of Matter*. <http://www.worldofmatter.net>.
- Zalasiewicz, Jan. *The Earth After Us: What Legacy Will Humans Leave in the Rocks?* Oxford: Oxford University Press, 2008