At 140 miles above the Earth, the Gravity Field and Steady-State Ocean Circulation Explorer satellite detected sound waves generated by the Pacific plate subduction under the Okhotsk plate off the coast of northern Japan on March 11, 2011. During the Tōhoku Earthquake, Northeastern Honshu, Japan's largest island, moved eight feet to the east and Earth's spin accelerated, shortening our days by 1.8 thousandths of a second. The Earth's crust *rippled*, in temporary display of its permanent liquidity, and tossed the ocean onto Japan's Pacific coast in a vast tsunami wave. It overwhelmed seawalls and laid waste to the veneer of human structures on the narrow coastal plane, including the Fukushima Daiichi nuclear power plant.

Moments of geologic cataclysm dwarf human society with their power and the timescale from which they emerge. Though one can measure an earthquake's force and notate the time span in which tectonic motion unfolds, it enters our lives with the force of a God, exerting agency beyond our sphere of influence. Such was the Tōhoku earthquake and tsunami. The resultant meltdowns at the Fukushima Daiichi nuclear power plant bring into focus human-caused catastrophe: human-created events with ramifications on a timescale that like plate tectonics, may be notated, but defies experience or comprehension. This is the timescale of geologic or "deep" time, time measured in the movements of the solid Earth.

To build a nuclear power plant is to commit to that timescale in a world formed by forces that are ultimately uncontrollable, and in many dimensions unknowable. The act rests on either hubristic ambition or a denial-girded illusion of society's permanence - that society will have the ability to manage the plant and its waste for longer than Homo sapiens have been a distinct species. Ecological theorist, Timothy Morton's distinction of hyperobjects helps one conceptualize nuclear power plants and other objects with permanence far surpassing the human timescale. Hyperobjects are "gigantic nonhuman objects, massively distributed in time and space relative to humans."iii Not all hyperobjects are as imposing in scale as a nuclear plant: dioxins, styrofoam, manufactured materials and molecules that will not lose their forms however spatially minute they may be, for eons are also hyperobjects. They are material manifestations of the collectively-held illusion of industrial, high-liquidity capitalism' permanence. This system, its emergent properties and the illusions it engenders, is termed The Spectacle by theorist-artist Guy Debord, in his 1967 book *Society of the Spectacle*.

Before venturing further in this discussion, a tour of the Spectacle is in order. The Spectacle is that Debord gives to the totality of forces within society: the material basis of economy, politics, and culture and the immaterial glue of ideology and communication that bind the material components, living and inanimate, into a cohesive whole. This cohesive whole, this Spectacle, both develops and is developed by all human activity within it. It is not a steerable, manipulatable system in the way one may think of commodity markets or political bodies, but rather an emergent property of contemporary human civilization that has become a material and ideological positive feedback loop of "the economy developing for itself." In this paper, Spectacle, with a capitol S, is exclusively used to designate the hegemonic Spectacle of contemporary society, that has encompassed all previous spectacles and proto-spectacles.

In Society of the Spectacle, Debord's descriptions rely heavily on unnatural vs. natural and authentic vs. inauthentic as dichotomies for speaking of pre-spectacular societies in contrast to the spectacular present. However, an ecological understanding of the Spectacle must grant it "natural" status, even as it amplifies anthropocentric individual and collective behaviors and transmutes all beings and material in its domain into commodities, potential commodities, or

representations. It is natural, in that it is both a biological and historical phenomenon, or more precisely a natureculture phenomenon. The inevitability of the Spectacle's emergence under present conditions dispels notions of undesirable aspects of society having somehow come about because of "bad" aberrations from "balance," "fairness," or your choice of value-laden terms we sloppily map onto the world. As a natureculture phenomenon, the Spectacle emerges from the evolving social and technological complexity of human society and the non-human beings and materials it incorporates. In his Marxism, Debord identifies the Spectacle as being born from the rise of the bourgeoisie in Enlightenment Europe with their diffuse economic power and progress-oriented vision of a developing, rather than cyclical, economy.

The bourgeoisie is associated with labor time, which has finally been freed from cyclical time. With the bourgeoisie, work becomes work that transforms historical conditions... It is the class that accumulates commodities and capital continually modifies nature by modifying labor itself, by unleashing labor's productivity. VII

This, however, is a reductionist view of the emergence of the Spectacle. It does not incorporate the multiplicity of simultaneous historical developments nor the biological roots of human behavior as expressed in varying conditions. Rather, it is not that the bourgeoisie were bourgeoisie that made them the architects of the contemporary Spectacle, but that the conditions were such that the Spectacle became the collective manifestation of human behavior.

In considering the Spectacle's influence on our perception of events and objects such as the Fukushima Daiichi nuclear plant and disaster, and the more mundane hyperobjects that populate our daily lives, it is useful to imagine the Spectacle as a perception-shaping field of varying density dictated by the concentration of liquid, material, and immaterial capital in a locale. This field presents itself to us via all senses, and influences the way in which we perceive all objects and beings within it and imagine those that are spatially or temporally beyond the Spectacle's domain. Within this field our sense of change and progress is created by the procession of one commodity replacing another, the competition between them, and the promise of a future good to satisfy a previously unknown but now felt need. VIII This procession produces an impression of moving forward from one time to the next in society, while preserving the appearance of a static, passive world outside the Spectacle. Catastrophe momentarily disrupts the Spectacle's progressive homeostasis and also serve as markers of time's passage, but are guickly metabolized by the Spectacle, as "its most glaring superficial manifestations,"ix the mass media, produces images of the disaster and a narrative of reestablishing normalcy. This normalcy is the illusion of permanence, and obscures permanent impermanence.

Earthquake and tsunami: we experience cataclysm as disruptive exceptions from a near-static norm. However, if viewed in deep time, the lens of uranium fuel rods and tectonic plates, the moments that we experience as catastrophe merge into continual motion, the motion that forms and is forming the world. Indeed, the Pacific plate is in perpetual motion; it moves 3 to 4 inches per year on its steady northwesterly trek* The Tōhoku earthquake was a momentary acceleration. Acceleration brings the perpetual motion of tectonic plates into spectacular focus,

reminding us of human vulnerability. Such earthquakes are not without precedent, even in the spectacular memory of that locale, let alone global geologic time. The *Nihon Sandai Jitsuroku* is a compilation of historical records from the Helian period (AD 794-1192) of Japan and contained an account of the AD 869 Sanriku earthquake and tsunami:

On the 26th of the 5th month a large earthquake occurred in the province of Mutsu. The sky was illuminated like day-time. A little later, people, panic-stricken by the violent trembling, were lying on the ground; some were buried under fallen houses and others inside wide-opened ground fissures, while horses and cows desperately ran about and trampled each other. A number of castles, towers, and other tall structures collapsed. Then roaring like thunder were heard toward the sea. The sea soon rushed into the villages and towns, overwhelming a few hundred miles of land along the coast. There was scarcely any time for escape, though there were boats and the high ground just before them. In this way about 1,000 people were killed. Hundreds of hamlets and villages were left in ruins.xi

If one employs their time lapse imagination and zooms out to view the 1,145 years since the Sanriku earthquake, punctuated by hundreds of smaller earthquakes detectable to the human foot, you can see that the Pacific plate and its tectonic neighbors are all in perpetual motion, spread over time such that it is imperceptible save in moments of acceleration - earthquakes.

Nuclear meltdown: here too, we experience cataclysm as disruptive exceptions from a near-static norm. In the case of nuclear meltdowns, or nuclear waste, we do not have the well of retrospective time, motion since the dawn of time, to draw upon in our understanding. We have about 70 years since the dawn of the nuclear age, or if one wishes to consider it in broader terms as humans making highly-organized, technologically-complex, instrumental-use of inanimate objects that occur in the environment, a matter of centuries in some parts of the globe, with an exact date to be disputed. In either context, the three nuclear meltdowns at the Fukushima Daiichi nuclear plant in the days after the tsunami are moments of accentuation that capture spectacular attention, yet are embedded in a process of already in perpetual motion - the motion of uranium mining, refining, and transport, the forty years of Fukushima Daiichi's prior operation, an engineer's CAD rendering of meltdown containment mechanisms, the sand mined for concrete, the steel forged by coked coal's heat, ad infinitum to the printing of this paper: the perpetual motion that forms, and is formed by, the Spectacle. Dramatic, terrible to the living though it is, nuclear meltdown is as intrinsic to the commodification and wasting of the world as an earthquake is to tectonic motion – they are moments of acceleration that bring into focus the processes already underway.

In an ironic turn of fate surpassing any playwright's tragic construction, the illusion of permanence is greatly privileged in our Spectacle induced and inducing paradigm. Our dramatic irony is that the conditions of the Spectacle and its ability to mass produce hyperobjects of scales monumental and mundane, makes this precisely the historical moment in which a perspective that sees perpetual motion and catastrophe as the norm would come in handy. What will become of the nuclear power plants after society's impermanence is revealed?

I live and work within the timescale my body gives me, and I enjoy the appearance of unshifting sands, yet in my art – music performance – I aspire to bring the perspective of deep time, of nuclear fuel rods, climate change, and permanent impermanence to my audiences. I would prefer to gain the disillusionment that earthquakes and nuclear meltdowns grant through shared cultural experience within the comfort of our near-static temporal homes, rather than being ripped from them as our monuments of imagined permanence crumble before the perpetual motion of the world. Can music, momentary performances, reveal the Spectacle in its material and cognitive manifestations, and can it be a tool for its destabilization? I cannot definitively answer this in a paper, and perhaps not in a life, but I hope that this discussion sheds some light on the relation of music to the Spectacle, hyperobjects, and the commodification of Earth's living and inanimate beings. Though I am interested in using music to translate the perpetual motion, or permanent impermanence of Earth systems such as tectonic plates and climate, I will forego that subject here.

As a working singer, I am far more familiar with instances in which music is employed towards Spectacular ends, to sing praise to the permanence of the ephemeral, unjust, trivial or mythological. Indeed, sometimes it feels like my chosen profession is a piece of, in Debord's words, "the ruling order's nonstop discourse about itself, its never-ending monologue of self-praise, its self-portrait at the stage of totalitarian domination over all aspects of life." To illustrate this mechanism, I've pulled off my shelf John Gardener's novel *Grendel*, the modern retelling of the epic poem *Beowulf* from the perspective of the monster Grendel. It offers a vivid account of proto-spectacle* formation through the eyes of the re-imagined human yet alien Grendel, and lessons to those who would hope to destabilize the Spectacle, whether through music or revolutionary struggle.*

Grendel watches the warlord Hrothgar gain power over neighboring chiefdoms through a series of haphazard skirmishes and power-and-gold-hungry violence. In the midst of Hrothgar's campaign a bard, the Shaper, comes to his Hall and uses his songs to elevate the brute violence of nation building into a virtuous endeavor. He defines the disorderly past as history and fortifies Hrothgar's sovereignty with meaning beyond the might-makes-right contests of power Hrothgar waged to gain his throne. Grendel muses, "What was he? The man had changed the world, had torn up the past by its thick, gnarled roots and had transmuted it, and they, who knew the truth, remembered it his way."xiii The Shaper's proto-spectacle colonizes the past, giving it the appearance of narrative solvency, and sweeping away that which does not fit into, or challenges, the king's ordering of the world. The Shaper gives voice to the kingdom's claim of hyperobject status – the empire as an object that "abolishes concepts of distance and norms concerning meaning" is "stretched out in such a way as to challenge the idea that a thing (empire) must occupy a specific place and time," measures itself in its own dynastic timexiv emerging from and disrupting the cyclical time of its environment, and is composed, "yet not reducible to, interactions between a large number of entities." Having faith in your nation's

^{*} I have used the prefix "proto" to define the Shaper's articulation because it is a thin spectacular veneer of virtue and myth that shrouds the physical violence that underpin Hrothgar's kingdom. The process of society becoming spectacular is akin to phase changes in matter "The spectacle is capital accumulated to the point that it becomes *image*." An image that can appear in any locale and take on material form as dictated by the needs of capital. The proto-spectacle depicted in *Grendel* is far from the near inescapability and omnipresence of the contemporary Spectacle with its multi-faceted obfuscation of violence.

exclusion from time's ravages and having limitless temporal and spatial potentials is the heart of societal illusions of permanence.

The Shaper's songs situate Hrothgar's kingdom as a cornerstone of a cosmic order, making the violence at the heart of its rule alternately invisible and celebrated. He constructs a personal and collective mythology that validates Hrothgar's power and extends it to the edge of the known world, imbuing his conquest with ideology and the guise of virtue.

"I would hear the Shaper telling of the glorious deeds of dead kings – how they'd split certain heads, snuck away with certain precious swords and necklaces – his harp mimicking the rush of swords, clanging boldly with the noble speeches, sighing behind the heroes' dying words."xvi

He constructs the agents of this conquest: the hero. Definition is an exclusive tool, and therefor in this construction he also defines all that is not hero. Yet a kingdom must grant some virtue to all its subjects, not just its heros, and thus some disgrace to all who are not subjects. The Shaper does so in a Cain and Abel creation myth that draws a line between human and nonhuman,

"He told of an ancient feud between two brothers which split all the world between darkness and light. And I, Grendel, was the dark side, he said in effect. The terrible race God cursed. I believed him. Such was the power of the Shaper's harp!"

The Shaper is "hierarchical society's ambassador to itself, delivering its messages at a court where no one else is allowed to speak." In this case, it is Grendel, who approaches the Mead Hall upon hearing the Shaper's division of the world in two, pleads to be categorized as the blessed in the Shaper's spectacular narrative, but is *seen* as monstrous and thus is met with axes. Xix Grendel's war on the Danes begins.

Mirroring the unpredictability of catastrophe, Grendel makes his violence disorderly, following no logic save his schizophrenic whim. Its arbitrariness wears no mask. Grendel sees this arbitrariness in contrast to the spectacular justifications and obfuscations of Hrothgar's court and celebrates it as evidence of his own authenticity. As he holds the queen in his grip before a terrified court Grendel contemplates her death at his hands, "It would be meaningless, killing her. As meaningless as letting her live. It would be for me, mere pointless pleasure, an illusion of order for this one frail, foolish flicker-flash I the long dull fall of eternity." ** The illusion of order he would grant to the witnesses would confirm the spectacular role the Shaper designates for him — evil beast, spawn of Cain, inhuman. Grendel however knows the meaninglessness of his actions in a pan-temporal perspective, and deeper than that the meaninglessness of the meaninglessness. Thus, he gently releases the queen and calls off the raid.

One might be tempted to classify Grendel's war as anti-spectacular – as a performance that destabilizes the proto-spectacular kingdom – yet Grendel's violence is co-creational force both born out of and giving further definition to the Shaper's proto-spectacle. This is not to claim that violence is categorically ineffective in countering the Spectacle. It would have been quite effective for Grendel to tear the Mead Hall to the ground and kill all of the Danes. Nip the proto-

spectacle in the bud, so to speak, and make room for a multitude of beings to thrive in its place. It was in his power. Grendel, however, comes to identify with the role in which the Shaper casts him, and thus tempers his violence to maintain his purpose.

It was a cold-blooded lie that a god had lovingly made the world... that brothers had fought, that one of the races was saved, the other cursed. Yet he, the old Shaper, might make it true, by the sweetness of his harp... It came to me with a fierce jolt that I wanted it. As they did too, tough vicious animals cunning, cracked with theories. I wanted it, yes! Even if I must be the outcast, cursed by the rules of his hideous fable. **xi

Grendel could be a poster-child for the Spectacle's tendency to absorb resistance and regurgitate it as commodity, such as the ubiquitous image of Che Guevara, or recast counter-hegemonic violence in a mythologized historic narrative of nation building. Grendel falls prey to the latter, as his death at the hands of Beowulf becomes the subject of the epic poem *Beowulf*, a founding text of western civilization and an ode to the eradication of the wild, the non-human, and the greater-than-human.

The ineffectiveness of Grendel's war and his eventual spectacular fossilization in epic poem hold lessons for those who would hope to destabilize and destroy the Spectacle in its contemporary form. For all his insight in describing the Spectacle, Debord is naive in imagining the path to a post-Spectacular society as exclusively the outcome of proletarian revolution. Following the incisive thesis that "as capitalism's ever-intensifying imposition of alienation at all levels makes it increasingly hard for workers to recognize and name their own impoverishment... revolutionary organization has had to learn that it can no longer combat alienation by means of alienated forms of struggle," Debord goes astray in stating that to accomplish proletarian revolution, which in his Marxist historicism is the only path to a just society, "demands of 'people without qualities' (proletarians) more than the bourgeois revolution demanded of the qualified individuals it delegated to carry out its tasks."xxii As a historic phenomenon of omnipresent cultural and economic dimensions, the Spectacle cannot be overthrown as one traditionally conceives of revolutionary struggles for power. Rather, the post-Spectacle society will only emerge when the conditions are such that the Spectacle dissolves and cannot be maintained. This dissolution will be a natureculture phenomenon, resulting from the perpetual motion of social and biological processes, perhaps catalyzed by the instances in which the Earth's permanent liquidity makes itself apparent. The present challenge is to think and execute ones individual and collective actions as both conditioned and conditioning, and through praxis hone in on an array of methodologies for bringing about the conditions of the Spectacle's evaporation. Debord is correct in stating that "a critique seeking to go beyond the spectacle must know how to wait."xxiii This is a reality imposed on us with the advent of hyperobjects – we have no choice but to wait for their dissolution, and hope that for the sake of our lives that they do so without washing us away in the flood of a broken dam or the irradiating of our bodies.

Let us now extract the voices of the Shaper, who forms the Spectacle, Grendel, who is formed by and becomes a foil for the Spectacle, and a third voice capable of destabilizing the Spectacle, and place them on a mountainside overlooking the Fukushima Daiichi nuclear power

plant in the days after the tsunami, watching Tokyo Electric Power Company's workers attempt to contain the nuclear fallout.

To envision the Shaper's voice, I searched the content of my email and facebook accounts from the week of March 11, 2011, and the results are informative. Though I remember reading with a mix of awe, told-you-so righteousness, and terror that week, there is not a mention of it in either archive. From his podium in the press conference or in his hydra-like manifestation in panel discussion news shows, the Shaper presents information in a narrative of recovery, catastrophe as an aberration from the norm, and challenges that will retrospectively appear as a test of society's metal. In religious and political functions, his mourning is sentimental and reserved for the human victims of the discreet event, through exclusion obfuscating the process in which it is a moment. He can be heard in the saccharine harmonies of *Elegy for the Victims of the Earthquake and Tsunami of March* 11, 2011 by Japanese pianist Nobuyuki Tsujii. This is not to call Tsujii's sadness a cynical manipulation of the listener, rather, Tsujii's response to the disaster seems to be limited to that which appears to him through the Spectacular representation of the disaster and culturally appropriate responses.

These visible roles stand out from the ubiquity of the Shaper's most common song – the ear buds that create personal sound-capsules and the celebrity pantheon that captivates our attention. His performance gives only so much attention to earthquakes and nuclear meltdowns as is required to give the spectator the impression that the event has happened and we will rise above it, and then quickly changes key to the chorus of cat videos, super-hero movies, and party politics.

The absence of the event in my spectacular consoles – email and facebook – shows that the Shaper's song nullified my ability to respond, keeping my relationship to the event in the realm of contemplation. My actions illustrated Debord's thesis "the more he contemplates, the less he lives; the more he identifies with the dominant images of need... The Spectacle's estrangement from the acting subject is expressed by the fact that the individual's gestures are no longer his own; they are the gestures of someone else who represents them to him."xxiv I do recall signing a petition for nuclear safety.

In the contemporary Spectacle, Grendel's voice has been contained and packaged by the Shaper as commodified dissent that serves as a foil for the most socially sanctioned ways of being. Like the most prominent of the Shaper's contemporary songs, Grendel's songs are simplistic – we do not hear the rich inner dialog we read in Gardner's novel, just the gnashing of teeth, howls, and curses. He makes himself heard in anarcho-primitivist anthems such as "Dancing on the Ruins of Multi-National Corporations" and the misanthropic strains of punk and metal. The West Virginia band, Appalachian Terror Unit, comes to mind as giving voice to Grendel's sense of injustice at the rise of empire and the violent recourse he seeks. Ultimately however, he is reliant on the Spectacle for the sustenance of his meaning, just as these songs come to us through iTunes and define themselves in relation to the Spectacle.

Our third voice is nameless, and that in itself is significant. The absence of a name may allow this voice to elude aspects of spectacular definition. Yet it is a voice attempting to communicate, and therefor represent, ideas and emotions through symbolic use of sound, and thus is susceptible to Spectacular regurgitation, for in revealing and "analyzing the spectacle we are obliged to a certain extent to use the spectacle's own language, in the sense that we have to operate on the methodological terrain of the society that expresses itself in the spectacle." XXXV A

question to be answered through performance praxis is – what ideas or experiences can music and performance moments create that are appealing but resist being recast as one of the Spectacle's musical ornaments as it is restated? A kind of musical inoculation to the Spectacle or, to borrow from *The Matrix*, a musical red pill.

This voice must navigate fine lines in questions of ethics and strategy. To what degree can a performer use the Spectacle's vehicles of recorded media, mass communication, and the internet before the content of the performance is diluted or arrives to the recipient in such a way as to reinforce their role as a spectator. What of concert formats that divide audience from performer and performance space from world? Debord states "the very style of dialectical theory is a scandal and abomination to the prevailing standards of language and to the sensibilities molded by those standards." Being music that seeks to set people into motion in dialectical relationship to the Spectacle it need have elements to hold onto from the familiar realms of meaning and values that music expresses in spectacular society, yet go beyond that by flirting with the edges of incomprehensibility and inverting the sense of permanence.

Thus, it is vital that this voice be opportunistic and wedge its foot in the Spectacle's exit door when it swings open, as it did during Tohoku earthquake and tsunami and the Fukushima Daiichi nuclear disaster. In such events there is much that this voice mourns, as it draws its circle of mourn-worthy beings far wider than the Shaper and does not share Grendel's taste for Spectacular violence and death. It mourns the conditions that give rise to the cataclysm, of which the cataclysm is the inevitable result. In receiving attention in the aftermath of catastrophe, it must immediately direct the spectator's attention to the reality of impermanence and the peril of hyperobjects in a society that believes itself permanent. Here, the power of suggestion and empathy may prove more effective than didactic or righteous narratives that spew from environmentalists when given the opportunity to say "told you so." It may do so in telling individual stories; creating moments of authentic connection between performer and audience, in which performance is actually the act of baring ones soul more transparently than one does in day to day spectacular life; fleshing out the skeleton of ritual musical forms with texts that inspire awe and introspection on aspects of the external and internal universe that will outlast the Spectacle; amplifying the imperceptible perpetual motion of the world, while being wary of the technique of amplification overshadowing the content that it amplifies; creating moments of that intimately recreates the violence inherent in spectacular commodification. As the "historical moment in which we are caught,"xxxvii the Spectacle will not be dissipated by music, yet there is potential for music and performance to "lead beyond existing ideas about the spectacle," and perhaps inspire "practical force set into motion."xxviii

I am partial to the voice as the primary instrument of post-spectacular performance praxis. As I write this, Morgantown's evening soundscape washes through my window and I hear dogs. This morning as I edited the bibliography birdsong wafted above the hum of my house ventilation system. The voice is a common instrument to many of our fellow species. We all have our songs. In the history of Homo sapiens, it was our first and likely will be our last way of communicating inner worlds to one another and other beings. I am struck that when speaking to animals and children, when the spirit of what we say is as important as that which the words symbolize, the voice takes on a musical, song-like lilt. I hope it is more than a singer's bias to think that herein lies a few seeds of a post-utilitarian, anti-spectacular society.

ⁱ CBC News. "1-tonne GOCE Satellite Falls to Earth Sunday." *CBC* November 9 2013. Accessed April 18, 2014. http://www.cbc.ca/news/technology/1-tonne-goce-satellite-falls-to-earth-sunday-night-1.2419729

ii Chang, Kenneth "Quake Moves Japan Closer to U.S. And Alters Earth's Spin" *New York* Times March 13, 2011. Accessed April 18, 2014. http://www.nytimes.com/2011/03/14/world/asia/14seismic.html?_r=0

iiiTimothy Morton, "X-Ray," *Prismatic Ecology: Ecotheory beyond Green.* Ed. Jeffrey Jerome Cohen (Minneapolis: University of Minnesota 2013)

iv Guy Debord, *Society of the Spectacle*, trans. Ken Knabb (Berkeley: Bureau of Public Secrets 2014) vIbid., 5

viMy understanding of the term "natureculture", originated by Donna Haraway, is from discussion in Environmental Criticism ENG 393B with Lowell Duckert and class mates.

vii Debord, Society of the Spectacle 77

viii Ibid., 86

ixIbid., 8

^xPacific Northwest Seismic Network "Plate Tectonics" *PNSN* Accesses April 18, 2014 http://www.pnsn.org/outreach/about-earthquakes/plate-tectonics

xi Sawai, Yuki, et al. "Marine incursions of the past 1500 years and evidence of tsunamis at Suijin-numa, a coastal lake facing the Japan Trench." *The Holocene* 18.4 (2008): 517-528.

xiiIf it were easy, it wouldn't be called a struggle.

xiii John Gardner, Grendel, (New York: Vintage Books Editions 1989) 43

xiv This is a combination of Morton's properties of hyperobjects as emitting time and Debord's dynastic time

xvMorton, Timothy, "What Does Hyperobjects Say?" *Ecology Without Nature* December 28, 2012. Accessed April 20, 2014. http://ecologywithoutnature.blogspot.com/2012/12/what-does-hyperobjects-say.html

xviGardner, Grendel 34

xvii Ibid., 51

xviiiDebord, Society of the Spectacle. 7

xixGardner, Grendel 51

xxIbid. 110

xxiIbid., 55

xxii Debord, Society of the Spectacle. 64, 65

xxiii Ibid., 117

xxiv Ibid., 11

xxv Ibid., 4

xxviIbid., 109

xxviiIbid., 4

xxviii Ibid., 108