

## Unsettling Dreams: Investigating Crisis in Earthquake Fiction from Japan and the Pacific Northwest

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**Abstract:** Like many scholars in the humanities, I ask what art and stories can offer a world unsettled by change. For the environmental studies, unsettling changes in the world often relate to fears of environmental crises. Including natural disasters under the umbrella of environmental crisis, I examine depictions of earthquakes across several fictional works from Japan and the Pacific Northwest, two places with high seismic risk. To better understand the experience of crisis through literature, I ask how and why authors from Japan and the Pacific Northwest render earthquakes in fiction. I explore Haruki Murakami's short story collection *after the quake* written after the Kobe earthquake of 1995, Ruth Ozeki's novel *A Tale for the Time Being* written after the 2011 Tohōku earthquake and tsunami, Adam Rothstein's *After the Big One* which imagines a future earthquake in Portland, Oregon, and several other works. I find that through fictional representation, readers and writers alike access the rhythms of the earth, the intimate experiences of others, and future worlds of crisis. By examining earthquake literature under a framework of ecocriticism, I establish the potential for literature to promote survival and resilience in crisis by forging intimate connections between earth systems, stories, and humans.

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## The Humanities Question

The humanities have long struggled to articulate their relevance. Why study art and literature in a world distressed by politics, environmental alarm, violence, suffering, and pressing matters of injustice across the planet? Some in the humanities have argued that the arts have an instrumental use – that reading literature promotes empathy or that making art develops analytical skills (Pratt 1991; Veysey 1970). Such arguments justify the humanities by their utility. Others argue the humanities have inherent value to understanding the experience of being human (Kuklick 1991). Instrumental justifications, they believe, undersell the true importance of what the humanities can bring to the world. Recently, this debate has been hashed out in the context of the liberal arts and higher education (Roth 2015; Bonevac 2015; Gless and Smith 1991).<sup>1</sup>

The question of *what art and stories can afford a world unsettled by change* guides this thesis. In particular, I ponder the role of the humanities in the task of understanding environmental narratives of crisis. Much of the crossover between environmental studies and the humanities has been in the investigation of the past. Studies such as Lynn White’s “The Historical Roots of Our Ecological Crisis” and William Cronon’s “The Trouble With Wilderness; or, Getting Back to the Wrong Nature” trace environmental attitudes through religion and history (White 1973; Cronon 1996). Literary studies that investigate the environment are likewise retrospective, often looking to 18<sup>th</sup> and 19<sup>th</sup> century romanticisms in projects such as Jonathan Bate’s *Romantic Ecology: Wordsworth and the Environmental Tradition* (Bate 1991). Bate looks to the past to uncover poetic contributions to contemporary environmental understanding.

While these works explore the conditions and traditions that seem to lead towards an impending crisis, less work in the environmental humanities has been done to explore the experience of crisis itself. If we can look to history, religion, and literature to understand the trajectory of environmental crisis, might we also look to the humanities to study how humans confront crisis, environmental or otherwise? For instance, might environmentalists look to

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<sup>1</sup>While the function of the humanities is highly contested, so is the function of science education as fundamentally instrumental or importantly emotional and aesthetic ([Hadzigeorgiou 2015](#)).

Modernist art of the 1920s to study how humans reacted to – and survived – unsettling traumas that upturned the world in World War I? In other words, if we are already looking at art, literature, and history in order to understand *why* environmental crisis seems to loom ever closer in the horizon, why not also look in these places understand the experience of crisis itself?

This project looks towards the humanities to understand the human experience of environmental crisis. I choose to examine literature depicting earthquakes across several works from Japan and the Pacific Northwest. I ask: *how and why do authors from Japan and the Pacific Northwest render earthquakes in fiction?* These questions prompt me to describe how literature represents, describes, and grapples with crisis, rather than emphasize the instrumental use of crisis-oriented literature. However, I find instrumental potential in the particular ways that the fictional worlds in my case study are impacted by crisis. This instrumental potential varies by the specific works of fiction in my study from preparing readers for future earthquakes to generating global empathy to the emotional recovery from past crises. I find that these instrumental possibilities depend on how fiction represents and imagines humans and nonhuman relationships both during and after crisis.

I begin by examining how crisis functions in the structure of stories. Informed by Aristotle, Ursula Le Guin, and Bruno Latour, I create a theoretical framework for studying environmental narratives that emphasizes both the relationships revealed by fiction and the instrumental possibilities of reading. In applying these theories to ecocriticism, I reconcile the field's political aspirations with its scholarship of environmental and cultural interconnections. In my case study, I first establish why natural disaster literatures, particularly about earthquakes, are relevant to ecocriticism despite being understudied. To situate the fictional works I analyze, I give a brief background of the seismic forces that shape physical and cultural landscapes of Japan and the Pacific Northwest. I track 1) how the earthquake crises are characterized in each text and 2) what connections are revealed or asserted between humans and nonhumans, including earth systems and texts. The narrative account of my results begins with Haruki Murakami's short story collection *after the quake* written after the Kobe earthquake of 1995. I then examine two different literary responses to the 2011 Tohōku earthquake and tsunami: several collections of stories sold to promote relief funding to victims and Ruth Ozeki's Canadian novel *A Tale for the Time Being*. Lastly, I turn to Adam Rothstein's speculative fiction piece *After the Big One*,

imagining a future earthquake in Portland, Oregon. I find that, through fiction, readers and writers alike access the rhythms of the earth, the intimate experiences of others, and future worlds of crisis. By examining earthquake literature under a framework of ecocriticism, I establish the potential for literature to promote survival and resilience in crisis by forging intimate connections between earth systems, stories, and humans.

## Investigating Crisis in Stories

Looking back to the dramatic tragedies of Greek theatre, it seems that people have long been interesting in accessing crisis through fictional and artistic means. In Aristotle's *Poetics*, he writes that tragedy "achieves, through the representation of pitiable and fearful incidents, the catharsis of such pitiable and fearful incidents" (Aristotle trans. in Golden 1968, pg. 11). "Catharsis" literally means purging or cleansing of the body. Aristotle's medical metaphor describes the function of tragedy to stimulate an emotional purge in the audience. By experiencing "pitiable and fearful incidents" through "representation," the audience witnesses, and thereby accesses, the emotions and repercussions of such events without becoming destroyed like the players on a stage, the figures in a painting, or the characters in a novel. Audiences feel and experience fear and pity – or empathy – by watching tragedy. Aristotle's dramatic tragedy relies on artistic imitation or "representation" to restrict dramatic tragedies to the realm of the stage. These are not recounted tragedies from history but ones crafted through fiction.

Aristotle privileges the actions of a story that lead a tragic hero towards the bitter ending, placing great emphasis on that bitter ending as a structural component of successful tragedy. His *Poetics* delineates many ways that playwrights should craft successful and excellent tragedies. The craft of the Aristotelian tragedy follows many conventions. The best tragedies, according to Aristotle, have the plot as "the soul of tragedy" (Aristotle in Golden 1968, 13) and the end of the play as "the most significant thing of all" (Aristotle in Golden 1968, 12). Aristotle establishes – at least for poetics and drama – that the actual structure of a narrative represents tragedy: "Pity and fear can arise from the spectacle and also from the very structure of the plot, which is the superior way and shows the better poet" (Aristotle in Golden 1968, 23). Thus, it is not just tragic

circumstances that contribute to the genre of tragedy, but the form through which those tragic circumstances materialize.

Aristotle's dramatic structure has persisted as a common structure of fictional narratives, where plots progress towards moments of crisis where a protagonist or hero finds triumph or falls. Joseph Campbell describes the archetype of the hero's journey that persists in many of significant narratives in Western tradition (Campbell 1949). Acclaimed science fiction author Ursula Le Guin describes stories of heroes and triumph where "the central concern of a narrative, including the novel, is conflict" (Le Guin 1986, 152). This model of conflict and crisis is reflected in diagrams such as Freytag's pyramid which describes a story rising in action, peaking in crisis, and falling in resolution (Freytag 1900). Rising and falling action is often the bones of storytelling taught to aspiring writers in creative writing workshops (Conroy 2002). At a basic level, the structures of these stories hinge on central crisis.

Aristotelian tragedy points towards three different understandings of narrative. The first is the importance of crisis in narrative plots. The second aspect of narrative we get from Aristotle is the instrumental function for affecting the audience in emotional ways, specifically catharsis. Third, Aristotelian narratives must always be understood as representation and imitation. To begin to answer the question of what stories can offer to a world unsettled by change, we must confront the structures of the stories themselves. Next, I will investigate crisis and story structures in both literary and environmental theories.

## Revising Linear Narratives

Ursula Le Guin's "Carrier Bag Theory of Fiction" (1986) applies Elizabeth Fisher's "Carrier Bag Theory of Evolution" (1979) to the realm of writing and telling stories. Fisher's theory asserts that the "earliest cultural inventions must have been a container" (Fisher 1979, 59). Fisher's theory presents "woman the gatherer" as the harbinger of technological innovation as opposed to "man the hunter" (Fisher 1978, 47). Le Guin harnesses the anthropological language of Fisher's feminist history to criticize the linear, crisis-oriented structure of stories. In doing so, Le Guin compares the stories to the history of human technology. However, her comparison of story and technology is not strictly metaphorical; Le Guin remembers – as does Aristotle – that stories *are* technologies. Indeed, foundational studies of linguistics remind us that language is a

“signifying system which enables... utterance” (Selden 1995, 4).<sup>2</sup> The symbols and signs that comprise human language are manipulated for purposes of communication, both spoken and written. Jared Diamond cites writing systems alongside weapons and political systems as powerful “agents of conquest” (Diamond 1999, 216). Le Guin’s comparison not only considers language as technology, but the enterprise of making fiction as technological innovation. For the question of what stories can offer the world, making a technological comparison seems to presuppose an instrumental value. While there is an instrumental aspect of Le Guin’s theory, it is rooted in her exploration of how stories represent the world.

Le Guin, by way of Fisher, discusses the different shapes of hunting and gathering tools, describing the hunting tools as “sticks and spears and swords” (Le Guin 1986, 152). These linear objects, she explains, resemble the “proper shape of a narrative [as an] arrow or a spear, starting *here* and going straight *there*” (Le Guin 1986, 152). Like the arrow of Freytag’s Pyramid and the structures of drama, the point of these linear narratives is “conflict, competition, stress, struggle” (Le Guin 1986, 153). However, Le Guin rejects the primacy of linear, crisis-centric stories:

I differ with all of this. I would go so far as to say that the natural, proper, fitting shape of the novel might be that of a sack, a bag. A book holds words. Words hold things. They bear meanings. A novel is a medicine bundle, holding things in a particular, powerful relation to one another and to us (Le Guin 1986, 151).

Here, Le Guin reimagines the “proper shape” of fiction as Fisher’s “carrier bag.” Novels and stories are structures that hold and contain. As containers, stories place “things” in “a particular, powerful relation to one another and to us.” In other words, stories make (and unmake) connections and relationships between “things” and readers. In this network, the things contained within the book are specifically related to one another in ways that don’t necessarily line up from beginning to end. They are also related “to us” as readers outside of the book world. Secondly, the things and relationships contained within Le Guin’s carrier bag have the potency of a “medicine bundle.” This medical aspect of Le Guin’s theory suggests that fiction’s reimagined relations and connections can heal, sooth, purge, or otherwise medicate. The medical aspect of

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<sup>2</sup> My discussion of language as technology points to the debates of Structuralism, Deconstruction, and Poststructuralism that literary and linguistic scholars have debated at great length for decades. I don’t mean to simplify these theoretical debates or imbue this study with any one of these theories. I only reference Saussure to recognize one of many technological, systematic, and structural interpretations of language. See *The Cambridge History of Literary Criticism, Volume 8, From Formalism to Poststructuralism* (Selden 1995).

Le Guin's medicinal carrier bag resembles Aristotle's catharsis in its ability to intensely – perhaps viscerally – affect readers. Catharsis is not the purpose of her fiction, but one of many affects that stories may have on readers. What Le Guin resists in the Aristotelian model of narrative is not the functional, instrumental aspect of catharsis, but rather the direct, pointed linearity that presupposes stories to have clear heroes that either perish or triumph at the end.

Le Guin applies her carrier bag theory of fiction to popular and literary narratives of science and technology that presuppose growth and linear progress. She calls these myths and claims that the “fiction embodying this myth will be, and has been, triumphant (Man conquers earth, space, aliens, death, the future, etc.) and tragic (apocalypse, holocaust, then or now)” (Le Guin 1986, 153). These narratives are familiar in the genre of science fiction, which often follows those archetypes of plot.<sup>3</sup> Le Guin's theory serves as a manifesto for her own body of work and calls for the reevaluation of the genre of science fiction. By instead writing stories about science and technology in carrier bags, Le Guin believes science fiction can approach realism. Le Guin proposes that the endeavor of science fiction should grapple with the relations between humans and nonhuman things rather than continue to prescribe the tired, phallic stories of conquest and collapse. She argues that fiction affords writers and readers tools to reconfigure and attend to the interactions between such things as science, technology, and human beings. However, by considering science fiction, the carrier bag theory applies to both science and fiction. This is relevant to contemporary debates in the environmental studies regarding science and technology and asserts a place for fiction among these debates.

Le Guin revises the linear narrative that leads towards a crisis end, instead proposing a round structure that contains and fosters relations and connections. Likewise, Bruno Latour revises the story of technological modernity from one of separation to one of intimate attachment (Latour 2012). In his essay “Love Your Monsters,” he invokes Frankenstein's monster from Mary Shelley's *Frankenstein, or The Modern Prometheus* (Shelley 1818). In the novel, Frankenstein's monster is the grotesque, horrific, transgressive exemplar of human technology. Dr. Frankenstein has “trespassed Nature” by creating a horrible monster (Latour 2012, 2). But Latour points out that the monster is not immediately monstrous from the moment of its creation. The monster only becomes a true threat after Dr. Frankenstein forsakes him. Being rejected and

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<sup>3</sup> See Susan Sontag's “The Imagination of Disaster” (1965) regarding common science-fiction narratives.



neglected, the monster blunders through the world causing violence and mayhem. If Dr. Frankenstein had accepted and nurtured his creation, Latour speculates, their relationship might have been familial and intimate rather than antagonistic.

The trajectory of *Frankenstein* is Latour's model for the human tendency to reject technology out of fear. It begins in Dr. Frankenstein's attempt to liberate himself from nature by conquering death. But his aspirations backfire and the rest of the story plays like an Aristotelian tragedy. Dr. Frankenstein is ruined by the consequences of his hubris and readers take away a "cautionary tale against technology" (Latour 2012, 1). However, Latour argues that we should see human progress as "neither liberation from Nature nor as a fall from it, but rather as a process of becoming ever-more attached to, and intimate with, a panoply of non-human natures" (Latour 2012, 2). Like Le Guin, Latour rejects narratives of triumph or tragedy, instead proposing networks of interaction that are increasingly interconnected.

For Latour, the story of technology is a chapter in the story of modernity. Like Le Guin, he connects the structures of triumphs and tragedies to a presupposed linearity:

The dominant, peculiar story of modernity is of humankind's *emancipation* from Nature. Modernity is the thrusting-forward arrow of time — Progress — characterized by its juvenile enthusiasm, risk taking, frontier spirit, optimism, and indifference to the past. The spirit can be summarized in a single sentence: "Tomorrow, we will be able to separate more accurately what the world is really like from the subjective illusions we used to entertain about it.

Science is the shibboleth that defines the right direction of the arrow of time because it, and only it, is able to cut into two well-separated parts what had, in the past, remained hopelessly confused: a morass of ideology, emotions, and values on the one hand, and, on the other, stark and naked matters of fact (Latour 2012).

The "story of modernity" that Latour criticizes is defined by a forward pointing arrow. "Science" is at the forefront of this arrow, moving the "story" forward towards the optimist's "emancipation from Nature" or the *Franken*-pessimist's "fall." For optimists, "Science" affords a clean separation between things: future and past, reality and illusion, values/emotions and facts. Science delineates these things and is "right," or correct. However, Latour rejects this ideology of separation and "emancipation." Instead of looking to "Science" to separate humans and Nature, future and past, illusion and reality, fact and value, we should be seeking intimacy and attachment. Through *Frankenstein*, Latour argues that this intimacy should be with our

technologies, but his discussion of modernity suggests that intimacy is also between humans and that which we call the natural world.

In addition to asserting the interconnection of humans in technological and non-human networks, Latour's critique of this linear narrative suggests that emotions and values are not discrete from "stark and naked matters of fact." Rather, he argues they are intimately intertwined. Latour criticizes separation, including between what he identifies as "what the world is really like" and "the subjective illusions we use to entertain about it." His critique implies that "what the world is really like" is closely attached to the "subjective illusions we use to entertain about it." This connection resembles Le Guin's assertion that the science fiction genre is one of realism. Together, Latour and Le Guin suggest that rethinking linear narratives as containers or networks that afford connection enables us to better understand "what the world is really like." While Latour's theory describes a nonfictional narrative about technology, he utilizes metaphors of Shelley's fiction to communicate his vision about how the world "really" works. In fact, by arguing against the nonfictional narrative of modernity, Latour reveals the fictional aspects of scientific narratives that some people hold as ideological truth. In this way, he underscores the sustaining technological power of fiction and metaphor to connect and transmit meaning. His use of Shelley holds technology and fiction in "a particular, powerful relation to one another and to us" in his rendering of modernity.

I have discussed how Le Guin and Latour imagine fiction and narrative as networks or carrier bags. But neither Latour nor Le Guin set limits for the kinds of things that can be connected to one another. Their theories include texts themselves as mobilized actors that carry ideas to readers. In Latour's use of *Frankenstein*, Shelley's ideas are connected to Latour's ideas, both of which are connected to us despite impossible distances of time and space. On one level, we have our writing system to thank for fostering the distribution and preservation of ideas. Further, both Le Guin and Latour discuss narratives as actors themselves: medicine bundles, carrier bags, arrows. This suggests that the narratives themselves are actors. The shapes and qualities of narrative actors impact the relationships contained within, but also determines interactions with readers and other narratives. Indeed, a carrier bag is meant to be carried as much as it is meant to contain.

*Fictional Place*

While texts travel to readers through many means, psychologists who study the mental processes of reading describe the engagement in a fictional narrative as transportation (Busselle and Bilandzic 2008, Green et al. 2004, Green 2004). Readers travel from the immediate world of their body into a world defined by the fictional parameters of the language. Readers absorbed in a narrative agree to the rules of the fictional world by actively “creating belief” in that world (Worth 2004, 447). Under transportation theory, fiction and its world become a place where the audience can go, like a “dream in the reader’s mind” (Gardner 1984, 31). Busselle and Bilandzic’s research on transportation theory finds that even when fictional worlds include impossible rules –as in science fiction and fantasy – readers are still transported. Readers can visit fictional worlds that break the rules of the reader’s immediacy, just as the world of one’s dreams can break the rules of the waking world. Readers can visit the past, the future, other planets, alternative universes by reading genres such as fantasy, magical realism, science fiction, and historical fiction. Indeed, the entire premise of fiction is that it exists in a different, represented world where words signify things and the audience decides to believe. Le Guin’s notion that science fiction can be realistic relies on the ability for readers to believe in the truth of the narrative even when it contains magic or other impossible elements.

Fiction, thus, becomes like an imaginative dream space where a reader goes. By the connective abilities Le Guin establishes, this virtual fictional space has the characteristics of place. The definitions of space and place have been highly theorized in philosophical works such as Henri LeFebvre’s *The Production of Space* (1991), sociological theories such as Anthony Giddens’ *The Consequences of Modernity* (1990), and many other fields. For the purpose of categorizing fiction as place, I refer to Jeffrey McCarthy’s definition:

Place is a way of talking about connection throughout a particular landscape that softens the barbed fence between perceiving subject and perceived object (McCarthy 2002, 181).

Place, like Le Guin’s fiction and Latour’s modernity, is about attachment and intimacy between what McCarthy calls “perceiving subjects” and “perceived objects.” Considering fiction as a place one can access reveals possibilities for readers to become connected to the things in fictional worlds despite the “barbed fence” of barriers that would otherwise seem to discourage connection. Labeling fictional transportation as mental engagement with place rather than space

acknowledges the connections it fosters and affords. By using McCarthy's language of place to describe fiction, I enhance the psychological concept of being transported into fiction as an act of traveling to a place where connections can be made. While the landscape of connection includes the things of the fiction world, it also includes the reader that moves into and out of the container of fiction.

The theoretical framework that emerges from this discussion of fictional structure is has three main facets:

- 1) Stories hold and define relationships in networks that yield meaning.
- 2) Stories are pieces of technology that function as non-human actors in networks. The contents of stories are also actors in that network.
- 3) Stories foster connection both within and without their borders, thus becoming places readers can go and be.

By bringing the ideas of Le Guin and Latour to bear on one another, the very structure of stories becomes the location where fictional and technological intimacy can be forged. These theories point to both instrumental and descriptive attributes of narrative. However, the instrumental possibilities that Aristotle and Le Guin discuss (such as catharsis) depend on the craft and structure of the stories themselves.

### The Crisis of Ecocriticism

Le Guin's "Carrier Bag Theory of Fiction" appears in Cheryll Glotfelty's 1996 anthology *The Ecocriticism Reader*. In the introduction, Glotfelty defines ecocriticism as "the study of the relationship between literature and the physical environment" (Glotfelty 1996, xviii). She explains the "fundamental premise" of ecocriticism is that "human culture is connected to the physical world, affecting it and being affected by it." In other words, "ecocriticism takes as its subject the interconnections between nature and culture, specifically the cultural artifacts of language and literature. As a critical stance, it has one foot in literature and the other on land." (Glotfelty 1996, xix). Le Guin's theory of fictional relationships corresponds with this broad description of ecocriticism. Glotfelty even invokes the language of drama, calling "nature" an "actor" in a play rather than just the "stage upon which the human story is acted out" (Glotfelty 1996, xxi). This metaphor seems to give "humans" and "nature" the ability to interact with one

another without presupposing the power of one over the other. Based on the theories outlined above, Le Guin and Latour would approve.

However, on the very next page, Glotfelty refines the enterprise of ecocriticism and reveals that the script of the play is not a carrier bag at all, but a straight line of Aristotelian tragedy heading towards collapse:

Most ecocritical work shares a common motivation: the troubling awareness that we have reached the age of environmental limits, a time when the consequences of human actions are damaging the planet's basic life support systems. We are there. Either we change our ways or we face global catastrophe, destroying much beauty and exterminating countless fellow species in our headlong race to apocalypse (Glotfelty 1996, xx).

Here, Glotfelty reveals a starkly different narrative of ecocriticism, one that draws a line leading from species fellowship and planetary health towards “global catastrophe” and “apocalypse.” Instead of the carrier bag of humans and nonhumans that ecocriticism means to study, Glotfelty reveals the underlying crisis-oriented narrative that ecocriticism adopts from its forbearer, classic North American environmentalism.<sup>4</sup> This narrative pits humans against nature, ascribes value judgements such as “damage,” “destroy,” and “exterminate” to the interactions between humans and nonhumans. It condemns “human actions” as wrong, dangerous, and harmful to the integrity of earth’s human and non-human systems. It ascribes blame. This is not the kind of network that Latour imagines for modernity, nor the kind of shape Le Guin believes narratives should take.

Glotfelty’s description of ecocriticism falls into the category that Lawrence Buell calls the first wave of ecocriticism, which arose in the 1990s (Buell 2011). These scholars studied mainly Romantic poetry and American nature writing à la Thoreau, utilized ecological models to describe literature, adhered to Naess’s deep ecology, associated literature with bioregions rather than nations, and venerated the preservation of rural and wild places (Naess 1973; Buell 2011; Meeker 1996). This first wave of ecocriticism dealt mainly with literatures of England and the United States that romanticized ruralness, wildness, and other North American environmental values. The first wave was motivated to use scholarship as action against the “global environmental crisis” (Glotfelty 1996, xv).

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<sup>4</sup> The development of North American environmentalism in the 20<sup>th</sup> century revolved around threat of environmental crises, such as overreaching the ecological limits of the planet by overpopulation (Ehrlich 1968; Hardin 1968, Meadows et al. 1974).

The second wave of ecocriticism in the 2000s adopted a more socio-centric purpose. This second wave focused on environmentalism of public health, environmental justice, and toxicity aligned with Rachel Carson's *Silent Spring* (Heise 2008; Buell 2011; Carson 1962). Marginalized populations across the world joined "compromised, endangered landscapes" as the vulnerable victims in the environmentalist narrative (Buell 2011, 97). The "global environmental crisis" was now assigned names like climate change and nuclear risk. Though the second wave has moved towards a more nuanced definition of "nature" that questions the primacy of nonhuman nature in environmental discourse, the field retains two major limitations from the first wave. First, ecocriticism is still dominated by England and the United States, and particularly by the legacy of American nature writing (Oppermann 2011).<sup>5</sup> Second, the fearful narrative of human-induced environmental crisis persists.

Serpil Oppermann criticizes ecocriticism's lack of theoretical engagement with recent literary discussions of representation, sign, and language. Ecocriticism's practical and activist motivations seem to ignore the theoretical depth of literary studies. She argues that ecocriticism must better engage with the literary theory in order to ground its commitment to praxis:

Ecocriticism must recognize both the discursive nature of the referent in texts and its material reality. All discourses of nature and the nature of discourse itself intersect through a mutually coalescent experience of the physical world. This is the way we can collapse the artificial distinctions between nature and culture, experience and representation, knowledge and being, and discourse and the natural world. With such a critical approach, ecocriticism can legitimately cross the threshold between discursivity and materiality, experience and representation (Oppermann 2011, 166).

Concerned with scholarly legitimacy, Oppermann addresses problems embedded in ecocriticism's crisis-centric assumptions and activist stance. The fundamental project of ecocriticism was articulated by Glotfelty as the study of "interconnections between nature and culture." However, this carrier bag foundation has been hijacked by linear narratives of insidious progress, villainous human actions, and heroic activists endeavoring to save the earth – and the human race with it – from apocalypse and collapse. These are precisely the technological narratives Latour argues against. Oppermann believes in the mission of ecocriticism to deeply understand, even promote, interconnection and "collapse the artificial distinctions." She prods

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<sup>5</sup> Buell predicts the future of the field will cross-pollinate with postcolonial discourses (Buell 2011)

ecocriticism towards a more rigorous and theoretically informed investigation of the way texts exist in the world.

Like the debate between instrumental and inherent value for the humanities, ecocriticism is motivated by two pillars that seem to be at odds. The first is the investigation of connections between humans and non-humans through the examination of literary texts. The second is to address (experienced or foreseen) changes that many perceive or predict threaten earth systems and human survival. The first is a carrier bag; the second is a forward thrusting arrow. The theories of Le Guin and Latour pit these two shapes against one another. They hold up the bag/network as the correct tool to investigate and describe the way that the world is.

The outstanding question is: how can ecocriticism reconcile its two pillars? How can you fit a bag around a line? How might this question show a middle ground between inherent and instrumental justifications for the humanities?

Informed by Le Guin and Latour's theoretical framework, this project revises the narrative of crisis that permeates much of ecocriticism. I don't argue that ecocriticism should do away with their second pillar entirely. I think narratives about crisis are crucial to the projects of ecocriticism and environmentalism. Likewise, scholarship-activism plays a fundamental role in aspirations and possibilities of ecocriticism. But by reexamining the structures of the apocalyptic narratives to which ecocriticism adheres, I argue that ecocriticism can better investigate the concerns of its first pillar. By applying both the first and second pillars of ecocriticism to literature about natural disasters, I recast narratives of environmental crisis and examine connections between human systems, text, and earth systems. Using the theoretical framework derived from Latour and Le Guin, I investigate the connections represented by stories about earthquakes alongside the instrumental possibilities those stories intend and offer.

## A Case Study of Earthquake Literature

Situating my application of ecocriticism in narratives of natural disaster rather than in anthropogenic environmental crisis is an opportunity to investigate the ways modern societies have dealt with crisis related to the earth. Natural disasters are distinct from the notion of environmental crisis first and foremost because they carry the label "natural" rather than

“environmental.” The labeling of “natural” assigns the blame of the “disaster” to things bigger than us, such as the weather, explosive volcanoes, tectonic plates, wildfires, and other events that occur without human contribution.<sup>6</sup> The events that initiate a “natural disaster” – earthquakes, volcanic eruptions, tsunamis, tornadoes – are technically natural hazards, and are often outside of human control. In the fundamental text of disaster studies, *At Risk*, the authors define disaster as “a complex mix of natural hazards and human action” (Wisner et al. 2004, 5). *At Risk* takes issue with the assumed separation of natural disasters from the social frameworks that influence how hazards affect people, arguing instead that the social causes of differential vulnerability determine risk, which in turn determines the caliber of the disaster.<sup>7</sup> Disasters are inherently social. The natural hazards that trigger major disasters don’t necessarily dominate the outcome or fallout. Thus, a study of natural disasters contends with human systems and choices alongside erratic behaviors of the earth.

*At Risk* dispels the distinction of blame between natural and anthropocentric disasters, arguing that the differential vulnerability that turns a natural hazard into a disaster is often independent of that hazard. Throughout the book, Wisner et al. catalogue vulnerability and hazard types in disasters with varying degrees of human causation. Regarding earthquakes and volcanoes, *At Risk* describes:

These are highly energetic natural events that occur irrespective and independently of social action and any modification of the environment. We mention the significance of human action in relation to these natural trigger events in order to highlight not the insignificance of humanity in relation to these geologic processes, but to underscore the fact that human action and inaction can nevertheless impact upon the *outcomes* of earthquakes and volcanic eruptions (Wisner et al. 2004, 274).

Earthquakes and volcanoes constitute “natural trigger events” that are not caused by human or social conditions.<sup>8</sup> Other disasters, such as Hurricane Katrina, Chernobyl, the Dust Bowl, and the Irish Potato Famine, have root causes in historical, social, technical, or otherwise human manipulations with earth systems (Cronon 1992). The impetuses of both earthquakes and volcanoes stand outside of the category of human-caused or human-stimulated disaster, although Wisner et al. points out that human actions and cultures can influence the results of these events.

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<sup>6</sup> Although weather events and wildfires can be connected to anthropogenic sources.

<sup>7</sup> Differential vulnerability recognizes that social and place-based inequalities impact the potential for people to suffer varying degrees of loss from a natural hazard (Cutter et. al 2003; Wisner 2004)

<sup>8</sup> Only recently has fracking induced earthquakes.



For instance, building a metropolis or a nuclear facility on an active tectonic plate boundary could yield greater physical and economic damage to human systems than if the human infrastructure was built elsewhere. Likewise, the emergency response by governments or civilians could either alleviate or intensify the suffering and damage unleashed by non-anthropogenic events such as earthquakes.

Earthquakes and volcanoes are as old as Earth's crust, outdating humankind by a grand scale. Instead of human cultures developing towards crises, like in the discourse of classic environmentalisms, many human cultures developed around the natural hazards of their environments. These disaster cultures are the result of knowledge and memory of destabilizing events in the cultural conception of place. These memories become narratives, folded into spiritual beliefs and religious doctrine, oral traditions and origin stories. For instance, the Japanese earthquake myth of Namazu describes a catfish living underground that shakes its tail to cause the entire earth to shake, resulting in an earthquake. Namazu is tempered by the god Kashima who holds down the catfish with a capstone. When Kashima is tired or distracted, Namazu jumps at the opportunity to cause an earthquake.<sup>9</sup> In Cascadia and Sumatra as well, similar imagery appears in indigenous myths regarding earthquakes. Ancient stories from Sumatra say that the Earth rests on the horns of a monster described as a serpent with the horns of a cow (Frazer 1918). An indigenous myth from British Columbia outlines the struggle of Thunderbird and Whale that culminates in periodic earthquakes and tsunamis (Ludwin et al. 2005).

Human cultures developing with the historical memory of disasters and understanding of risk have adapted to such events and folded their occurrence into regional cultures. These disaster cultures can be seen in infrastructures, laws, educational curricula, local myths and narratives, signposts, as well as in the knowledge of local residents. For example, the State of California has a highly visible earthquake disaster culture with strong historical memory of large earthquakes in recent history, such as the San Francisco earthquake of 1906 and Loma Prieta in 1989. Building codes and earthquake drills are two such ways that earthquake risk and preparation are built into the daily culture of this specific region. Other regions of the United

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<sup>9</sup> The Japanese myth of the catfish is an enduring image in the Japanese culture of disaster. Its history is discussed in detail in Weisenfeld (2012) and Rambelli (2014). Its relationship to the Edo earthquake of 1855 is discussed in Smits (2006).

States, such as southern states with frequent hurricanes or Midwestern states with frequent tornadoes, integrate these weather events into the curriculums, city development, codes, and daily tasks as well. Shelter basements, evacuation routes, systems for alert, and stories about past events are examples of this disaster culture. Escape routes and signage in places at risk for tsunami waves, such as the east coast of Japan and the Oregon Coast demonstrate how the built environment reveals earthquake culture.<sup>10</sup>

Disaster culture is a network where nonhuman natures and human cultures collide and coalesce. The connections between hazards, infrastructures, stories, decisions, and attitudes interweave earth and human systems as a method of survival. In order to withstand the pressures of earthquakes, the gales from hurricanes, and other forces from earth and atmosphere, people have long been forging relationships with the events and processes of the earth. These relationships are largely studied and created in the disciplines of geology, meteorology, public health, public policy, engineering, and communication. However, in the endeavor of studying the connections between humans and non-humans through the lens of narrative, disaster culture provides a largely unexplored arena.

One of the most fascinating case studies of artwork grappling with natural disaster is the event of Mount Tambora. In April 1815, Mount Tambora erupted in modern-day Indonesia at 100 times the force of Mount St Helens (Broad 2015). It was the most powerful volcanic blast in recorded history, causing major disruptions to atmosphere and agriculture across the planet for several years following. The particles propelled from the blast entered the atmosphere and blocked sunlight, resulting in “three years of planetary cooling” (Broad 2015). Freezing temperatures and crop failures were prevalent across Europe and North America. The fallout from the eruption worsened the Irish Potato Famine and eliminated summer weather in New England and Europe in 1816, becoming known as the “year without a summer” (Bate 2000, 97).

Filtered through the volcanic atmosphere, the world looked different. The vivid sunsets and frigid weather were documented by painters such as Caspar David Freidrich of Germany and England’s J.M.W. Turner and John Constable (Broad 2015). The cold summer detained a party of English writers indoors on the shores of Lake Geneva, where they spent gloomy days reading

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<sup>10</sup> I am indebted to Dr. Elizabeth Safran for coining the term “earthquake culture” and this project is derived from her research on earthquake communication entitled *Shaping an “Earthquake Culture” Through Informal Learning*.

ghost stories and writing their own. Among these writers was Mary Shelley who wrote *Frankenstein* and John Polidori who wrote the “The Vampyre.” Two of the most iconic monsters in literature were born out of the global aftermath of a volcanic eruption. In the case of *Frankenstein*, critics have used its origin story as leverage in interpreting the text (Phillips 2006). The relationship between the volcanic eruption and the fit of horror literature it inspired is frequently acknowledged in both literature and geology courses. Lord Byron’s “Darkness,” John’s Keats’s “To Autumn,” and Li Yuyang’s “A Sigh for Autumn Rain” are poems that were also inspired by the volcano’s weather effects (Broad 2015; Bate 2000).

Regarding earthquakes, Voltaire’s response to the Lisbon earthquake of 1755 is well known. Voltaire’s poem, *Poem on the Lisbon Disaster*, and his novel *Candide* (Voltaire 1755, Voltaire 1759) describe the traumatizing event that tested religious and philosophical doctrines of good, evil, sin, and blame.

Overall, the critical work is sparse on the literature of natural disasters, and earthquakes in particular. Disaster literatures are more frequently analyzed as artifacts of specific disasters rather than components of a larger discussion regarding the contours and connections of nature and culture in literature. This reveals a gap in ecocriticism. By adding a study of earthquake literature to the discipline of ecocriticism, I aim to demonstrate how such narratives may complement or revise persisting stories of environmental crisis, point towards instrumental possibilities for literature, and reckon with unsettled environments in the modern world. Situated within networks of place-based disaster culture, earthquake literature offers a niche where ecocriticism’s simultaneous commitment to understanding connection and addressing crisis may coincide.

### Earthquakes in the Pacific Northwest and Japan

In *At Risk*, Wisner et al. (2004) ascribes the highest level of naturalness to earthquake and volcano hazards. In the task of redressing ecocriticism’s crisis narrative, I choose to focus specifically on earthquakes and their literature for three reasons. First, earthquake disasters are among the least human-caused, and therefore human-blamed, events that threaten human systems. Second, earthquakes can be felt in human bodies and infrastructure. This infiltration is both threatening, connective, and acutely unpredictable. Third, although earthquakes have

affected human culture since its beginning, recent earthquake catastrophes demonstrate a need for better mitigation strategies to address seismic risk. Thus, a study of earthquakes fulfills three of the goals of ecocriticism: crisis, connection, and practical contribution to the ongoing struggle for human survival.

### *The Pacific Northwest*

Connecting the west coasts of the United States and Canada, the Pacific Northwest tops the list for unexpectedly high seismic risk. The Pacific Northwest stretches from Northern California through Oregon and Washington to British Columbia in Canada. The Pacific Northwest is adjacent to the plate boundary where the Juan de Fuca plate subducts underneath the North American plate. This convergent boundary is a mega-thrust fault, the type of fault that produces the largest earthquakes ever recorded. Chile 1960 (9.4-9.6 Mw), Alaska 1964 (9.2 Mw), and Tohōku 2011 (9.0 Mw) are all examples of subduction zone earthquakes. Despite the major earthquake hazard posed by the subduction zone, the region has not experienced a major earthquake since January 1700, before white settlers had arrived. This event has been dated through oral traditions of indigenous tribes of the Pacific Northwest, geologic deposits of tsunamis sands and landslides, and a remarkable connection to Japanese recordings of a mysterious tsunami that flooded seashores without the warning of prior shaking (Ludwin et al 2005; Goldfinger et al. 2012; Atwater et al. 2015). Goldfinger et al.'s study corroborated various geologic evidence to generate a history of massive seismic events causing tsunamis and earthquakes across the entire span of the plate boundary. Goldfinger et al.'s study estimates a 40% chance that the southern portion of the plate boundary (Northern California and Southern Oregon) will experience an earthquake of 8.0 in the next 50 years. A full slip of the Juan de Fuca plate from Northern California to British Columbia would generate an earthquake of 9.0 or greater. Goldfinger et al. estimates this event has 10-15% chance to occur the next 50 years.

Because the modern civilization in the Pacific Northwest has not experienced an earthquake and the historical memory of the indigenous people has been silenced as a result of colonization, the region lacks the earthquake culture to reconcile seismic risk with human lives. For example, the scenario of a 9.0 earthquake would decimate hundreds of outdated buildings, key infrastructure such as transit and sewer systems, and the energy storage hub for the State of

Oregon, and, not to mention, unhinge economies and individual lives (Wang et al. 2012; OSSPAC 2013). Without the actual experience of a major earthquake, it is unclear how effective media campaigns and scientific papers can be in instigating an earthquake culture.

### *Japan*

Japan is located at the convergence of the Pacific Plate, the Philippine Plate, and two slabs of the Eurasian Plate – the Okhotsk and the Amur Plates. The Pacific Plate subducts underneath both the Okhotsk and the Philippine Plate, which subducts under the Amur Plate. This multiple plate boundary is highly active, resulting frequent earthquakes across the Japanese islands. The next Japanese earthquake geologists anticipate is due to hit Tokyo. A 2008 study isolated a slab fragment wedged beneath the city, identifying a recurrent source of seismicity that poses high risk to the metropolis (Toda et al. 2008).

Unlike the Pacific Northwest, Japan has a strong and historical earthquake culture. By the time the Cascadia tsunami washed ashore in Japan 1700, Japanese society had long been documenting earthquakes and tsunamis with regularity (Atwater et al. 2005). In *Earthquake Nation* (2006), Gregory Clancey traces the seismic story of Japan's burgeoning modernity of the late Meiji and Taisho periods. Between the Nōbi earthquake of 1891 and Great Kanto Earthquake of 1923, Clancey and others ponder how earthquake disasters shaped the rise of modern Japanese national culture (Clancey 2006; Karlsson 2014; Morton 2014; Starrs 2011, 2014). Though not earthquakes, the two atomic bombs that the United States dropped on Hiroshima and Nagasaki in August of 1949 are fundamental catastrophes that have not only reshaped the disaster culture of Japan, but enacted one of the cornerstone fears of environmental crisis (Shibata 2014; Doak 2014). Most recently, the Kobe earthquake of 1995 and the Tohōku earthquake, tsunami, and nuclear meltdown of 2011 have severely shaken contemporary Japan, revealing major cracks in earthquake infrastructure and culture that must be addressed.

*At Risk* declares that it's impossible to generalize about a national culture of disaster when different populations within any region face different degrees and types of vulnerability (Wisner et al. 2004). Such heterogeneity and differentiation yields different disaster cultures. Starrs asks: "Do people's social and cultural responses to disaster reveal anything about their 'national culture' or even 'national character' or 'national psychology'? Is there even such a

thing as a ‘unique’ national-cultural response to disaster” (Starrs 2014, 7). I recognize the limitations of generalizing a culture according to regional or national boundaries. While I use the term “earthquake culture” to describe the societal adaptations to disaster including art and literature, I do not assume that the earthquake culture is homogenous across either Japan or the Pacific Northwest.

By examining the narratives and cultures of both Japan and the Pacific Northwest, I explore two places with very different seismic pasts and a very different range of earthquake cultures. However, they each share a similar seismic hazard and have coasts on either side of the same ocean. These connections are intriguing, especially the story of the Orphan Tsunami of 1700 where a tsunami traveled from Cascadia to Japan, perplexing historians and geologists for centuries (Atwater et al. 2005). Only recently has the information of the Orphan Tsunami traveled back to Pacific Northwest to bring understanding to Cascadia’s seismic past and hazard. The physical connection between the Japanese and Pacific Northwest earthquake cultures begs a comparative study of these two places. It adds a geopolitical level to the integrated network of earthquake cultures both in and between Japan and the Pacific Northwest. This has the potential to push ecocriticism outside its range of American and European nature writing and towards an engagement with comparative literary studies.

Since this is a comparative study between two nations with starkly different literary histories, canons, conventions, symbols, and genres, I acknowledge that my lens is heavily Western. After all, I am an American student in the Pacific Northwest looking west across the Pacific Ocean towards Japan. As earthquakes of the late Meiji period helped to coalesce a national culture (Clancey 2006), an onslaught of Western influence also characterizes the rise of modern Japan (Benfey 2003, Starrs 2011). The genre of the novel was a powerful component of this Westernization, transforming the literary landscape of Japan in modernity of forward.<sup>11</sup> I bring this up to recognize that Western story structures have influenced the particular texts I have chosen to examine and certainly complicates the way I distinguish between Japanese and Pacific Northwest fiction.

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<sup>11</sup> “The most immediate and far-reaching effect of Western influence on late 19<sup>th</sup>-century Japanese literature was a sudden rise in the status of fiction, and of the novel in particular. [Japanese writers] encountered in the modern Western novel a very powerful vehicle of modernization and nation-building” (Starrs 2011, 85). A longer literary study of this aspect of my project would be fascinating.

## Earthquake Literature

To explore and expand the field of ecocriticism in the ways I've described, I examine several pieces of earthquake literature from Japan and the Pacific Northwest. "Earthquake literature" isn't a genre in the way of science fiction or modernism. There is no Cambridge Companion or Norton Critical Edition about earthquake literatures. Perhaps one could define "earthquake literature" as any piece of literature that includes an earthquake somewhere in its plot. Another definition might be a piece of fiction that has been written in response to an earthquake or in proximity to an earthquake. My definition of "earthquake literature" considers any work that includes mention, portrayal, representation, or response to an earthquake of any size and sort. However, the texts that I chose to explore are more specific. Certainly, they include an earthquake as an important element of plot. But moreover, they must engage with a real earthquake either experienced or predicted. In this way, I am able track the earthquake's connections within and without texts, thereby considering fiction part of the larger cultural treatment of earthquakes, and disaster at large.

To choose the texts that met my criteria, I first scoured the internet for "earthquake literature" to find lists such as one compiled by the *Los Angeles Times* (Ulin 2011). I restricted my analysis to written fiction, choosing to forego a broader media analysis of films, comics, documentaries, and radio. As shown in Table 1, I settled on three major texts and four minor

*Table 1: Major Works*

TEXT	AUTHOR	DATE	SETTINGS	SEISMIC EVENT	GENRE
<i>after the quake</i>	Haruki Murakami; Jay Rubin (translator)	2000, 2002 (English translation)	Various cities and prefectures in Japan	Great Hanshin (Kobe) Earthquake January 16, 1995	short story
<i>A Tale for the Time Being</i>	Ruth Ozeki	2013	British Columbia, Canada; Various prefectures in Japan; Tokyo, Japan	Tohoku Earthquake, Tsunami and Fukushima Nuclear Disaster March 11, 2011	Novel
<i>After the Big One</i>	Adam Rothstein	2016	Portland, Oregon	9.0 Cascadia Subduction earthquake (predicted)	Serialized speculative fiction

texts.<sup>12</sup> From Japan, I chose Haruki Murakami’s collection of short stories *after the quake* (Murakami 2000) written in response to the Kobe earthquake of 1995. From the Pacific Northwest, but responding to the Tohōku earthquake, tsunami, and nuclear disaster, I examined Ruth Ozeki’s novel *A Tale for the Time Being* (Ozeki 2013). Also from the Pacific Northwest but prospective rather than retrospective, I include Adam Rothstein’s science fiction installment *After the Big One* (Rothstein 2016). The only exception to the literary fiction is the inclusion of Frank Galati’s stage adaptation of Murakami’s *after the quake* (Galati 2009) which expands my analysis of Murakami. I also considered three collections of stories published after the Tohōku earthquake: *March Was Made of Yarn* (Karashima and Luke 2012), *Shaken: Stories for Japan* (Parker et al. 2011) and *2:46: Aftershocks: Stories from the Japan Earthquake* (Gibson et al. 2011). These minor works are shown in Table 2.

Table 2: Minor Works

TEXT	AUTHOR	DATE	SETTING	SEISMIC EVENT	GENRE
<i>after the quake</i> (stage adaptation)	Frank Galati	2009	Tokyo, Japan	Great Hanshin (Kobe) Earthquake January 16, 1995	Drama
<i>March Was Made of Yarn</i>	Elmer Luke and David Karashima (editors)	2012	Various	Tohoku Earthquake, Tsunami and Fukushima Nuclear Disaster March 11, 2011	Fiction, nonfiction
<i>2:46: Aftershocks: Stories from Japan</i>	Gibson et al.	2011	Various	Tohoku Earthquake, Tsunami and Fukushima Nuclear Disaster March 11, 2011	Mixed
<i>Shaken: Stories for Japan</i>	Parker et al.	2011	Various	Tohoku Earthquake, Tsunami and Fukushima Nuclear Disaster March 11, 2011	Mixed

### *A note on methodology*

The emerging field of ecocriticism “has not developed a methodology, although its emphasis on interdisciplinarity assumes that the humanities and science should be in dialogue” (Gifford 2008, 15). Since there is no specific methodology established for the

<sup>12</sup> In addition to the *LA Times* list, I followed the informal recommendations of two advisors, Dr. Elizabeth Safran and Dr. Andrew Bernstein, to find Ruth Ozeki’s *A Tale for the Time Being* and *March was Made of Yarn* respectively.



application of ecocriticism, I am guided by the theoretical framework I have defined. I ask: how and why do writers from Japan and the Pacific Northwest render earthquakes in fiction? My reading of each chosen text is steered by two questions developed from my theoretical description of ecocriticism's aspirations.

- 1) What are the characteristics of the earthquake?
- 2) What connections does the text express between the earthquake and non-humans, human characters, writers/authors, readers, and texts/stories themselves?

The first question addresses the crisis while the second question addresses the actor network of connections that texts foster. Because the second question explores the concept of a fictional text as a network, I gathered statements from the authors of the texts regarding their own relationship with their work and the earthquakes they represent. This author-focused component of my methodology is inspired by Satterfield and Slovic's work on environmental values (Satterfield and Slovic 2004) and Pauls Toutonghi's fiction writing courses at Lewis & Clark College, both of which consider the life and intentions of an author crucial to understanding the work.

To answer the first question, I conducted close-reading analyses of key passages where earthquakes are described or mentioned. I also considered plot analysis of how earthquakes alter the events of the story. To answer the second question, I included several other methods in addition to my treatment of the texts themselves. I researched the geology and history of the earthquakes represented in the text and mined author statements for philosophy regarding fiction writing and personal experiences with earthquakes. To organize, visualize, and further my literary analysis, I employed several mapping techniques. Using the 3D Maps function in Microsoft Excel, I mapped the settings at the level of city and region of relevant texts using sample postal codes. By applying a Cartesian framework to an array of fictional worlds, I examine the relationships between fictional place and geographic space that contains both seismic events and human cultures.

My literary analysis locates earthquakes in textual relationships. This essentially ruptures the borders between the fictional worlds and our own. This rupture has implications for considering fictional texts as empowered actors in networks of disaster culture. To visualize these relationships, I create networks that account for fictional actors such as characters, human

actors such as writers, and nonhuman actors such as the texts and the earthquakes.<sup>13</sup> By this, I account for texts as cultural artifacts and cultural architects both within and outside the confines their fictional worlds (Latour 1996; Moretti 2011; Felski 2012). While I describe these networks in a written analysis of each text, I visualize the relationships within and between fictional worlds with actor-network images.

This hybrid methodology has theoretical backing both from the humanities and the social sciences. As H. Aram Veerer writes in the introduction to *The New Historicism*, contemporary critical lenses of reading literature don't require the critic to choose between reading the text in isolation or reading the text in a network (Veerer 1989). While my literary analysis reads texts as networks of human culture and 'natural' earthquake disasters, my theoretical application of ecocriticism also considers text an actor within many that comprise a network of disaster culture.

## Results: Earthquake Literature from Japan & the Pacific Northwest

To communicate my results, I provide a narrative account of my analysis and findings. I discuss the texts grouped by the earthquake events they are most explicitly connected to. I include the most relevant aspects of my analysis. I do not replicate every close-reading or plot analysis, but only those which were the most relevant to answering my questions.

### The Kobe earthquake, Haruki Murakami, and *after the quake*

The earthquake that struck the Hyogo prefecture in January 1995 was the largest Japan had experienced since the Great Kanto earthquake of 1923. The official name of the event is the Great Hanshin-Awaji Earthquake Disaster, but outside of Japan the event is commonly known as the Kobe earthquake. The city of Kobe was hardest hit, absorbing about 71% of the estimated fatalities. The event was measured at Level 7 on the scale of the Japan Meteorological agency and 6.9 Mw on the moment magnitude scale, the equivalent of 7.2 on the Richter scale (Wisner et al. 2004). Between 5,500 and 6,500 people were killed, with injuries numbering over 40,000,

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<sup>13</sup> Rita Felski applies Latour's Actor-Network Theory to controversies in literary analysis: "The Latourian model of the nonhuman actor, moreover, presumes no necessary measure of scale, size, or complexity. It includes not only individual novels or films, but also characters, plot devices, cinematography, literary styles, and other formal devices that travel beyond the boundaries of their home texts to attract allies, generate attachments, trigger translations, and inspire copies, spin-offs, and clones. We are far removed, in other words, from an aestheticism in which art works are chastely sequestered from the worldly hustle and bustle, their individual parts relating only to each other" (Felski 2012, pg. 587)

and a displaced population estimated around 300,000. The earthquake exposed vulnerabilities in the Japanese earthquake infrastructure and the governmental disaster response was criticized as slow and ineffective. According to Wisner et al. the root causes of the differential vulnerability that resulted in such dramatic, tragic, and immense losses and outcomes were prejudice against ethnic minorities, unequal distribution of economic power, and a strong belief in modernization and science which gave citizens false confidence in the Japanese disaster systems (Wisner et al. 2004, 298).

Haruki Murakami is one of Japan's most beloved contemporary writers. Though he was born in Kyoto, he claims Kobe as his hometown since his family moved there when he was two (Wray 2004). Murakami's writing style is known for being enigmatic and bearing heavy influence from Western writers and culture. After rising to fame in the 1980s, Murakami left Japan to live more anonymously. It was in Boston where Murakami sat in front of his television in 1995 and watched Kobe crumble and burn. Two months later he watched the news coverage of the Tokyo subway terrorist attack where a religious cult released sarin gas into the underground. Murakami remembers the experience of watching the disaster unfold from afar:

I was shocked. And it made me feel that something was changing drastically in Japan. It was 50 years since the end of the war. And in these years Japan had been getting stronger and stronger, economically and socially. People got rich. But something was happening, and those two events were a kind of metaphor for all sorts of change. We had come to believe that the ground we stood on was stable, solid, hard. But when the earthquake comes, it's not stable any more, not solid any more. And we believed our society was safe; but when some terrorists attack a subway train, it's not safe any more. So we had a myth of solidity and safety, but it was destroyed, suddenly. And it was just after that the economic bubble burst, so that was a milestone in post-war Japanese history (Murakami in Brown 2003).

These two disasters stirred Murakami to respond. He returned to Japan determined to use his position as a writer to represent the condition of being Japanese in the unsettled post-disaster world.<sup>14</sup> In response to the sarin gas attacks, Murakami collected interviews with victims and published a nonfiction book called *Underground: The Tokyo Gas Attack and the Japanese Psyche* (Murakami 2001). In response to the Kobe earthquake, Murakami wrote six short stories

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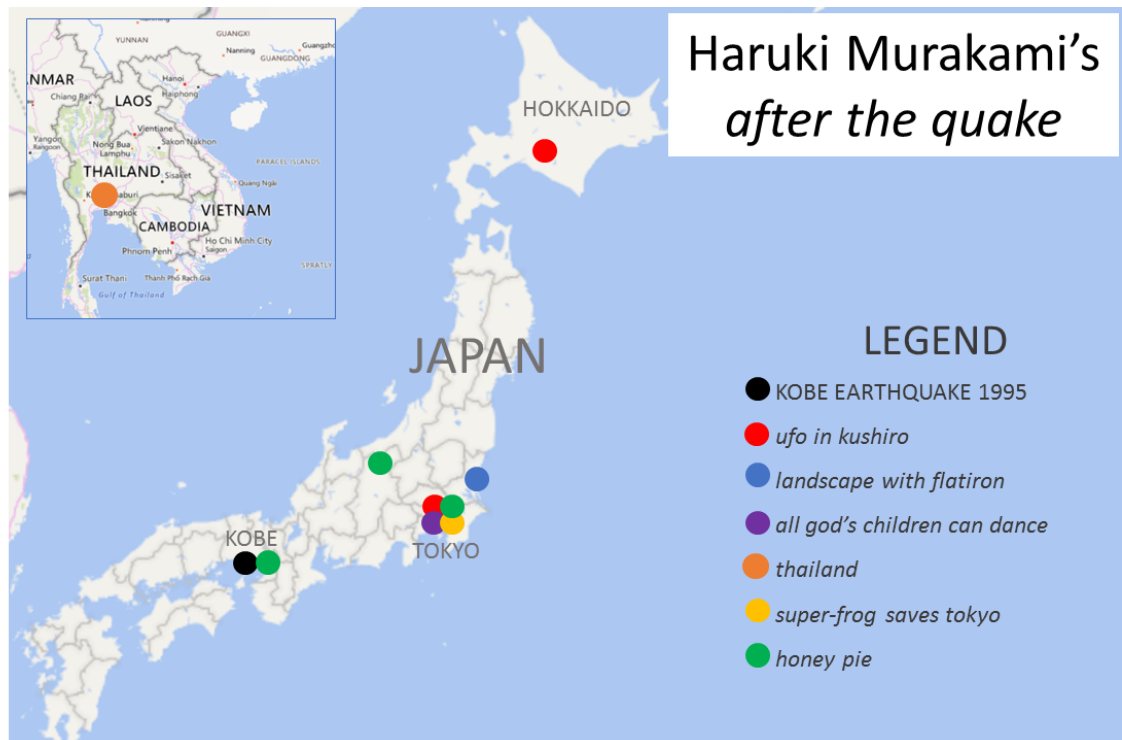
<sup>14</sup> "I'm trying to write about the Japanese. I want to write about what we are, where we are going, why we are here. That's my theme, I guess" (Murakami in Wray 2004)

in a collection titled 神の子どもたちはみな踊る *Kami no Kodomo-tachi wa Mina Odoru*, literally translated as "The children of the gods all dance" (Rubin 2002, 255). The English version, translated by frequent Murakami collaborator and translator Jay Rubin, was published in 2002 as *after the quake*. Here, I use Jay Rubin's translation of the stories and typographical conventions of that edition, where all titles are kept in lower case at Murakami's insistence (Rubin 2002).

### *The earthquake and its connections*

Though each of the stories takes place in the weeks between the earthquake and the gas attacks, the Kobe earthquake itself is peripheral to the stories. Mentions of the events appear on the television, in newspapers, and in the pasts and memories of the characters. Though several characters are originally from Kobe, only one seems to have strong ties to the place. The locations of the stories are spatially distant from Kobe, as shown in Figure 1. While several of the stories mention Kobe in passing, only *honey pie* depicts a character with strong ties to the place. Most of the stories take place north of Kobe, from Tokyo to Hokkaido. In both *thailand* and *honey pie*, characters travel outside of Japan. By mapping the locations of the stories

Figure 1



alongside the location of the earthquake, I visualize how indirectly the Kobe earthquake figures into the stories.

Because the Kobe earthquake is in the background rather than the foreground of Murakami's stories, it has a subtle character. The Kobe earthquake and other earthquake symbols are embedded within the texts in indirect and magical ways. The first place where Murakami shows the earthquake is in the news. The second place where the earthquake can be found is in the dreams and fantasies of the characters. The third place where the earthquake appears is in the visceral experience and human bodies of the characters.

Murakami has noted that his stories offer an alternative narrative to banal and sensational news coverage of disasters (Lewis 2013). In *ufo in kushiro*, the wife of the main character, Komura, spends the five days glued to the television watching “crumbled banks and hospitals, whole blocks of stores in flames, severed rail lines and express ways” (Murakami 2002, 1). Then, she disappears. Murakami emphasizes the destruction of infrastructure as covered by the news media. Hospitals, banks rail lines, all consist of transit, monetary, and healthcare structures that are necessary to a modern city. The television images in this story emphasizes how the earthquake guts a city, turning its systems to rubble. The wife's fascination with these images demonstrates the captivating quality disaster can have on witnesses. Though the story explains that the wife doesn't have connections to Kobe, it also suggests that the earthquake was magically related to her disappearance. Perhaps some sort of catharsis occurred in the visual experience of her witnesses to the earthquake on television, prompting the wife to leave.

This event is the very first paragraph of the very first story. From the outset of the collection, this establishes the narrative quality of the earthquake – narrated first through news media and second through Murakami's fiction. As Komura takes the train to Hokkaido to recuperate from his wife leaving him, he reads in the newspaper about how “the number of dead was rising” and how many survivors lacked water and electricity (Murakami 2002, 11) Komura notices the lack of depth in the details of the tragedy. In this first part of the story, the earthquake is everywhere in the media landscape of the represented Japan. The news is the only way for him to access the stories and experiences of the victims, but the news isn't emotionally and narratively equipped to do the story justice. While the news connects him with the traumatic

event in a different place in Japan, it also demonstrates just how disconnected he is from the actual experience of disaster.

Though the news reports and the television are some of the only places where the characters come into direct contact with the earthquake, Murakami demonstrates an undercurrent of emotion and intensity related to the earthquake by rendering it in dreams. The earthquake is embedded into the (sub)consciousness of the characters, despite them being emotionally and physically distant from the immediate feeling of shaking or the aftermath of disaster. The way that Murakami represents the news in the stories exacerbates the emotional and physical distance between the characters and Kobe.

While the news presents one narrative of the earthquake, the stories also include more subtle, metaphorical, or mythical earthquake narratives. *super-frog saves tokyo* is a comical, mythological story about a businessman named Katagiri who finds a giant, talking frog named Frog in his home after work one day. Frog asks Katagiri to cheer him on during a mortal battle with the earthquake-causing Worm in the underworld of Tokyo in order to prevent a massive earthquake from destroying the city. However, the evening that Katagiri is supposed to meet Frog for the battle, he collapses unconscious and wakes up in the hospital the day after the earthquake was due to occur. The nurse at the hospital tells him there was no earthquake in Tokyo and that he yelled “Frog!” a lot in his sleep. The premise of the story resembles the classic science fiction stories that Le Guin critiques. At the outset, the story seems to progress towards a descent to the underworld where giant animals do battle for the future of Tokyo.

However, Murakami subverts this expected narrative and places the climactic battle scene within a dream:

Did Frog really exist, and had Frog fought with Worm to put a stop to the earthquake? Or had that just been part of a long dream? Katagiri had no idea what was true anymore (Murakami 2002, 134).

Frog appears in the hospital room, assuring Katagiri that he came to the battle in his dream and was a great help in defeating Worm thus preventing the earthquake. The boundaries between the dream world where subterranean worms cause earthquakes and the world of the hospital room

are fluid.<sup>15</sup> This passage upturns the fantastical world of the story, where all the rules seem to suggest that there really is an earthquake-causing Worm and a heroic Frog. The hospitals and science of the ‘real’ world poke through the dream, making the fantastical elements of the Katagiri’s world closer to a representation of insanity than of a magical world. If we take Katagiri’s world in its dreamy symbolism, we see a version of the catfish myth of Japanese earthquake lore, a joke about the ability of animals to predict earthquakes, and a dream space where the Katagiri can access the mysterious workings of the earthquake.

Two other dreams dominate Murakami’s earthquake dream-scape in *honey pie* and *thailand*. In *honey pie*, a child is affected by nightmares after watching too much news coverage of the Kobe earthquake. Her mother, Sayoko, explains:

I think she saw too many news reports on the earthquake. It was too much for a four-year-old. She wakes up at around the time of the quake. She says a man woke her up, somebody she doesn’t know. The Earthquake Man. He tries to put her in a little box – way too little for anyone to fit into. She tells him she doesn’t want to go inside, but he starts yanking in her arm – so hard her joints crack – and he tried to stuff her inside. That’s when she screams and wakes up (Murakami 2002, 147).

The earthquake is animated within the dreams of the character as “The Earthquake Man” who threatens the girl in her dreams. Like the dream-world of *superfrog*, the boundary between awake and asleep is unclear. First, Sayoko says that the girl wakes up around the time of the quake, early in the morning. The girl reports that “The Earthquake Man” wakes her up, but then she wakes up again, screaming. The duplicated waking in this scene suggests that “The Earthquake Man” dream moves in between the world of dreams and the world of the present. While the personified earthquake permeates dreams, it also attempts to contain the girl in a space too small for her. These simultaneously paint the earthquake as a creator and breaker of barriers.

In *thailand*, the main character Satsuki visits a wise woman who informs her that there is a rock within her body. She tells Satsuki to expect to have a dream where she must catch a snake, compel the snake to swallow the stone, thereby removing it from her body (Murakami 2002, 102-03). While the stone in her body represents a grudge she has been holding against a man

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<sup>15</sup> See Rebecca Suter’s chapter “In Other Worlds” for an interpretation of Murakami’s dream spaces as metaphors for literature. Her reading of *super-frog saves tokyo* ponders the borders of reality and dream in the context of Western influence in modern Japan (Suter 2008, pgs. 140-80).

who wronged her (a man who lives in Kobe but survived the earthquake), the image of an internal rock that is only accessible in dreams also resembles an earthquake.

In this story, the Kobe earthquake originates from the female body of Satsuki. When she finds out that a man from her past survived the Kobe earthquake, she reflects:

She had hoped that he would die in agony. In order to bring that about, she had gone so far as to wish in the depths of her heart for an earthquake. In a sense, she told herself, I am the one who caused the earthquake. *He* turned my heart to stone; *he* turned my body to stone (Murakami 2002, 106).

Satsuki takes responsibility for the earthquake, acknowledging that her hatred actually caused the event. Though she blames the man from her past for turning her “heart” and “body” into “stone,” she unleashes the emotional turmoil of her thwarted love in an earthquake. Instead of being inert and powerless by being turned to stone, Satsuki’s petrification has the force and movement of an earthquake. Satsuki becomes destructively powerful, unlike many mythological scorned lovers who are turned to stone.<sup>16</sup> Attributing an earthquake to a woman scorned gives a divine power to the emotions of women and connects with Japanese myths that associate female *yin* energy with earthquakes.<sup>17</sup> The trope of blaming women for restlessness that causes earthquakes can be traced at least as far back as the 1923 Great Kanto earthquake (Weisenfeld 2012, 184-86). We must believe that she actually did create the earthquake, for those are the rules of Murakami’s fiction. Here, the earthquake is both accessible in a dream space and embedded deep within a female human body.

Throughout the stories, Murakami describes the bodies of his characters as harboring earthquakes within in them. Frequently, the connection between bodies and earthquakes is coded through sexuality and sexual encounters. In *ufo in kushiro*, the main character Komura watches the movements of a woman walking: “He had the strange impression that he was witnessing some moment from the past, shoved with random suddenness into the present” (Murakami 2002, pg. 14). In this moment of *déjà vu*, her body mimics the movement of plate tectonics where the physical tensions and strains that have been building up for years are “shoved with random suddenness into the present.” The ghost of a memory that underlies Komura’s gaze surfaces in a jarring sense of repetition. When Komura and the woman sleep together later in the story,

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<sup>16</sup> The imagery of being turned to stone invokes, but also inverts, the myth of Medusa.

<sup>17</sup> See Dil (2014) for a discussion of the historical trope of jealousy in Japanese literature regarding Satsuki’s hard feelings.



Komura is unable to perform sexually because he is distracted by the earthquake: “Images of it had come to him one after another, as if in a slide show, flashing onto the screen and fading away. Highways, flames, smoke, piles of rubble, cracks in streets. He couldn’t break the chain of silent images” (Murakami 2002, 25). These images of earthquake destruction are the same images from the news reports that open the story. Komura’s sexual encounter is imbued and ruined by the earthquake in his memory. Not only do the news images seem to have permeated the consciousness of the character deeply, but they are strongly associated with the Komura’s sense of intimacy. The earthquake is not just in the woman’s body, but stuck in the mind of Komura during his sexual experience. While the earthquake is intimately attached to human bodies, it also blocks this moment of physical intimacy between two people.<sup>18</sup>

Although the story *all god’s children can dance* is likewise saturated with sexuality (Dil 2014), a dance reveals the location and character of the earthquake. This surreal passage connects the movements of dancing with the unsettling instability of earthquakes:

And then it struck him what lay buried far down under the earth on which his feet were so firmly planted: the ominous rumblings of the deepest darkness, secret rivers that transported desire, slimy creatures writhing, the lair of earthquakes ready to transform whole cities into mounds of rubble. These, too, were helping to create the rhythm of the earth (Murakami 2000, 79).

Though some critics read this moment as a symbolic rebirth, this passage also locates the earthquake in a subterranean, mythic world.<sup>19</sup> Through dance, Yoshiya’s human body accesses the inside of the earth. Yoshiya is stricken with the clarity to feel beneath the earth into a “lair of earthquakes.” Yoshiya’s sense of the “rhythm of the earth” comes both from the visceral movements of his body in dance and from his connection to an underworld that harbors earthquakes and creatures. The earthquake, like in *super-frog saves tokyo*, is compared to “slimy” underground creatures that live in a “lair.” This invokes the mythology of the catfish.

The “earthquake lair” with “slimy creatures” beneath Tokyo is further developed and connected to *super-frog saves tokyo* by Yoshiya’s nickname:

Yoshiya’s girlfriend throughout his college years called him “Super-Frog” because he looked like some kind of giant frog when he danced. She loved to dance and

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<sup>18</sup> The earthquake also interferes with sex in *honey pie* when two lovers are interrupted by the child’s nightmare of the Earthquake Man (Murakami 2002, 178).

<sup>19</sup> See “All Shook Up” (Dil 2014) for a discussion of the religious and psychological significance of this passage to the character Yoshiya.

would always drag him out to clubs. ... As he let himself go and moved his body in time to the music, he would come to feel the natural rhythm inside him was pulsing in perfect unison with the basic rhythm of the world. The ebb and flow of the tide, the dancing of the wind across the plain, the course of the stars through the heavens: he felt certain that these things were by no means occurring in places unrelated to him (Murakami 2002, 77).

The myth of Yoshiya is that he is the child of God, although the story reveals this is obviously untrue. The moments of dancing where Yoshiya accesses the “basic rhythm of the world” connect him intensely not with God, but with the dangerous subterranean world lurking beneath Japan. Taken together, these two dancing passages indicate that earthquakes and the “ebb and flow of the tide” – tsunamis – are part of this “basic rhythm of the world.” While the dancing doesn’t create the earthquake, it senses earthquakes waiting to happen. Although the premise of the story collection responds specifically to the Kobe earthquake, the earthquake imagery in the stories reveals a cyclical, repetitive quality of earthquakes. The recent earthquake serves as a reminder of the constant threat earthquake pose to parts of Japan outside of Kobe.

In summary, earthquakes in *after the quake* are located in the news, in a subterranean world accessible through dreams, and within the human bodies of the characters. They are connected to female bodies and dancing and to the emotional trauma of thwarted love. The crisis of the earthquake isn’t a single event or the climax of the stories, but an underlying force that impacts interpersonal relationships, distances the trauma of Kobe from the rest of Japan, and reveals deep connections between human bodies and the earth.

#### *Relationships between texts and authors*

While Murakami’s depiction of the earthquake reveals connections between the earthquake and human characters, his stories also consider writers and stories in connection to the experience of the earthquake. In an interview with *The Paris Review*, Murakami reveals that he intends his fictional works to be self-consciously fictional and representational. He likens writing fiction to a movie set where everyone knows the setting is fake:

I don’t want to persuade the reader that it’s a real thing; I want to show it as it is. In a sense, I’m telling those readers that it’s just a story—it’s fake. But when you experience the fake as real, it can be real. It’s not easy to explain.

In the nineteenth and early twentieth centuries, writers offered the real thing; that was their task. In *War and Peace* Tolstoy describes the battleground so closely that the readers believe it's the real thing. But I don't. I'm not pretending it's the real thing. We are living in a fake world; we are watching fake evening news. We are fighting a fake war. Our government is fake. But we find reality in this fake world. So our stories are the same; we are walking through fake scenes, but ourselves, as we walk through these scenes, are real. The situation is real, in the sense that it's a commitment, it's a true relationship. (Murakami in Wray 2004).

This quotation emphasizes the fakeness of fiction, the representational quality that makes it fiction rather than non-fiction or fact or truth or reporting. While Murakami aims to render Japan in verisimilitude, he also wants to make sure that his texts revel in their status as renderings. Like Aristotle's emphasis on mimesis in drama, Murakami's notion of a story relies on "real" people encountering represented fictions. Another metaphor he employs to describe making fiction is video games, stating: "sometimes while I'm writing I feel I'm the designer of a video game, and at the same time, a player. I made up the program, and now I'm in the middle of it" (Murakami in Wray 2004). Here, Murakami describes both writing and reading fiction as the same world-building as coding video games. Like video games, Murakami's fiction is a virtual reality. Interestingly, Murakami considers the act of writing akin to creating the game while simultaneously playing it. These two actions seem to be inseparable and intimately tied to each other. The writer is embedded within the fictional world of his making.

The stories in *after the quake* include a metafictional acknowledgement of the writer. In this way, the collection not only represents the Kobe earthquake in a surreal story world, but also emphasizes the role of writing and fiction in the representations of disaster. In particular, *honey pie* draws connections between the earthquake event and the project of making fiction.

In the map (Figure 1), *honey pie* is the story that comes closest to Kobe. Junpei is the main character of the story and he greatly resembles Murakami. Though Junpei is originally from Kobe, his decision to become a short fiction writer in Tokyo rather than inherit the family business estranged him from his family. Murakami too is a fiction writer (though primarily of novels rather than short stories) originally from Kobe. Junpei's best friends are Sayoko, a literary scholar and translator, and Takatsuki, a news reporter, both of whom he met in college at Waseda University. Murakami also attended Waseda University. Though Junpei is in love with Sayoko, she and Takatsuki fell in love and have a child, Sala (the girl who dreams of the Earthquake Man). Takatsuki turned out to be a rotten husband, so he and Sayoko got divorced.

Junpei is still in love with Sayoko and helps her take care of Sala. The end of the story hints that they will get married. When the Kobe earthquake happened, Junpei was abroad in Barcelona accepting a prize for his fiction, and had to watch the news coverage on Spanish television. Murakami was abroad in the United States when the Kobe earthquake happened. Through the story of Junpei, Murakami comments on the relationship between writing fiction and the Kobe earthquake. By examining Junpei, we can understand how the enterprise of fiction and the writer factor into the narrative network of the Kobe earthquake.

Throughout the entire collection, Junpei is most directly affected by the earthquake. His dot on the map (Figure 1) overlaps with the Kobe earthquake. Though he takes no action to contact the victims of the quake or connect with his estranged family, it affects him deeply and reminds him of his past:

It was an echo from a past he had buried long ago. He hadn't set foot on those streets since graduation, but still, the sight of the destruction laid bare raw wounds hidden somewhere deep inside him. The lethal, gigantic catastrophe seemed to change certain aspects of his life – quietly, but from the ground up. Junpei felt an entirely new sense of isolation. I have no roots, he thought. I'm not connected to anything (Murakami 2002, 170-71).

The language of this passage is torn between the deep connection and the estranged isolation Junpei feels simultaneously in the wake of the Kobe earthquake. In terms of connection, the earthquake is a piece of his “past he had buried long ago” and exposes “raw wounds hidden deep inside him.” Like the subterranean world of earthquakes elsewhere in Murakami’s stories, the earthquake reveals a deep underground aspect of Junpei’s psychology where he is still connected to Kobe and to the tectonic violence of the quake. Though “quietly,” the earthquake alters his life. The phrase “from the ground up” describes the something from the ground – such as the earthquake – moving into Junpei’s body through from where his feet touch the ground, his physical connection with the Earth. On the other hand, Junpei reports feeling completely disconnected and isolated by the feelings invoked by the earthquake. While Junpei is connected to the past and the earth, he is also estranged from the Kobe from his past and the people there.

Though this simultaneous connection and disconnection is paradoxical, it’s significant that Junpei the writer is feeling these unresolved tensions. He feels the “raw wounds” while also feeling “an entirely new sense of isolation.” The earthquake comes at a moment where he is

unsure of how to pursue his romantic feelings for Sayoko.<sup>20</sup> Before the earthquake, he is passive and his feelings don't stimulate action. However, the intense feelings prompted by the earthquake stir him out of a passive stupor. Feeling wounded and isolated by the jarring event of the earthquake leads him towards a relationship with Sayoko and shifts his writing goals.

The story, and thus the collection, closes with an artistic manifesto:

I want to write stories that are different from the ones I've written so far, Junpei thought: I want to write about people who dream and wait for the night to end, who long for the light so they can hold the ones they love. But right now I have to stay here and keep watch over this woman and this girl. I will never let anyone – not anyone – try to put them into that crazy box – not even if the sky should fall or the earth crack open with a roar (Murakami 2002, 181).

While Junpei claims that he wants to “write stories that are different,” the story doesn't show him actually doing that. Instead, the end of the story postpones the act of writing by instead showing Junpei in an act of love. He resolves to marry Sayoko and demonstrates his love by “watching over this woman and this girl.” These two passages show Junpei awash with feeling – fear, pain, love, desire, resolve. As an author, Junpei is shown as an instrument of feeling. After the transformational feelings of the earthquake and of his expression of love, Junpei resolves to write stories that reflect those feelings. Junpei's authority as a writer comes from the feelings that he registers through his psychological and physical connection to the ground shaking in Kobe. Junpei's experience as a writer in the wake of Kobe represents Murakami's. The stories that Junpei wants to write are the stories that Murakami has just written (Rubin 2002, 262).

Further, the outcome of the love triangle between Sayoko, Takatsuki, and Junpei demonstrates the goals of Murakami's fiction. While at first Sayoko and Takatsuki are together, the story ends with Sayoko and Junpei together. Sayoko is a translator, a person who works to spread information across the world through different languages. Takatsuki is a news reporter, one who reports tragic stories in the banal tone of the news. When discussing his work, Takatsuki admits that he has seen so many tragedies that he “can see a corpse now and not feel a thing” (Murakami 2002, 161). Junpei is an author, an instrument of feeling. Consider Sayoko as the actor who spreads stories to wide audience and Junpei and Takatsuki as two competing

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<sup>20</sup> “His position was always passive... Junpei loved Sayoko, of course. About that there was no question... But Junpei couldn't help thinking things were just a bit *too* perfect. What was left for *him* to decide? And so he went on wondering. And not deciding. And then the earthquake struck” (Murakami 2002, 171-70).

narratives. Takatsuki's narratives are both banal and sensational (Lewis 2013). Junpei's stories represent intense feeling. At the end, Junpei's stories win over Takatsuki's, brought to a wide audience by Sayoko. This mirrors how Murakami hopes to revise the news narratives of the Kobe earthquake through fiction that registers the feelings of Japan. By being translated (as *after the quake* is), his stories are spread to a world audience. Murakami's literary revision of the Kobe narratives demonstrates how stories have the power to rewrite and direct the endings of the stories of disaster.

The metafictional elements of *honey pie* invite an interpretation of the work that considers the text as an actor in two different ways. First, understanding the author as an instrument of feeling makes a story the result of that feeling. Murakami's author characters are often in the "role of an interpreter of reality" (Suter 2008, 97). The author is like a seismometer that feels the tensions and movements of the human and nonhuman world.<sup>21</sup> The story is like the resultant seismogram that represents the author's feelings. The story represents the world as experienced and mediated by the author. Secondly, the story functions as an actor that moves through the world being read. While *honey pie* explicitly leads towards the first interpretation of text as actor, it only hints at the second. Frank Galati's stage adaptation of Murakami's stories demonstrates how they are mobile actors interpreted by the world.<sup>22</sup>

Frank Galati's stage adaptation is twice removed from Murakami's original work, being adapted from Rubin's 2002 translation. Frank Galati's play was originally produced by the Steppenwolf Theatre Company in Chicago, Illinois. It opened October 30, 2005 and was directed by Galati, who is well-known for his literary stage adaptations. In *after the quake*, Galati combines *honey pie* and *super-frog saves tokyo* in a similar dreamy aesthetic to Murakami's stories. Much of the dialogue of the play is verbatim from Jay Rubin's English translation.

The decisions that Galati makes in his adaptation greatly emphasize the dynamics of authorship in *honey pie*. In Galati, Junpei is the author of *super-frog saves tokyo*. This reinforces Junpei as a figure for Murakami by making Junpei the author of one of Murakami's stories. Galati also emphasizes authorship by including a narrator as a character, embodied as an actor on

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<sup>21</sup> Suter (2008) explains that Murakami's "texts respond to the same need to 'put order into chaos,' to which Euro-American modernists responded by rejecting positivist rationalism and turning to myth and the subconscious" (97).

<sup>22</sup> In addition to Galati's play, *all god's children can dance* has been adapted to the film of the same name (2008), set in Korea Town in Los Angeles.

the stage. The stage production simultaneously becomes a story being told and a play being acted.

Since Junpei's character is the storyteller for the *super-frog* parts of the play, there are moments where the narrator and Junpei take turns. For instance, examine these passages side by side:

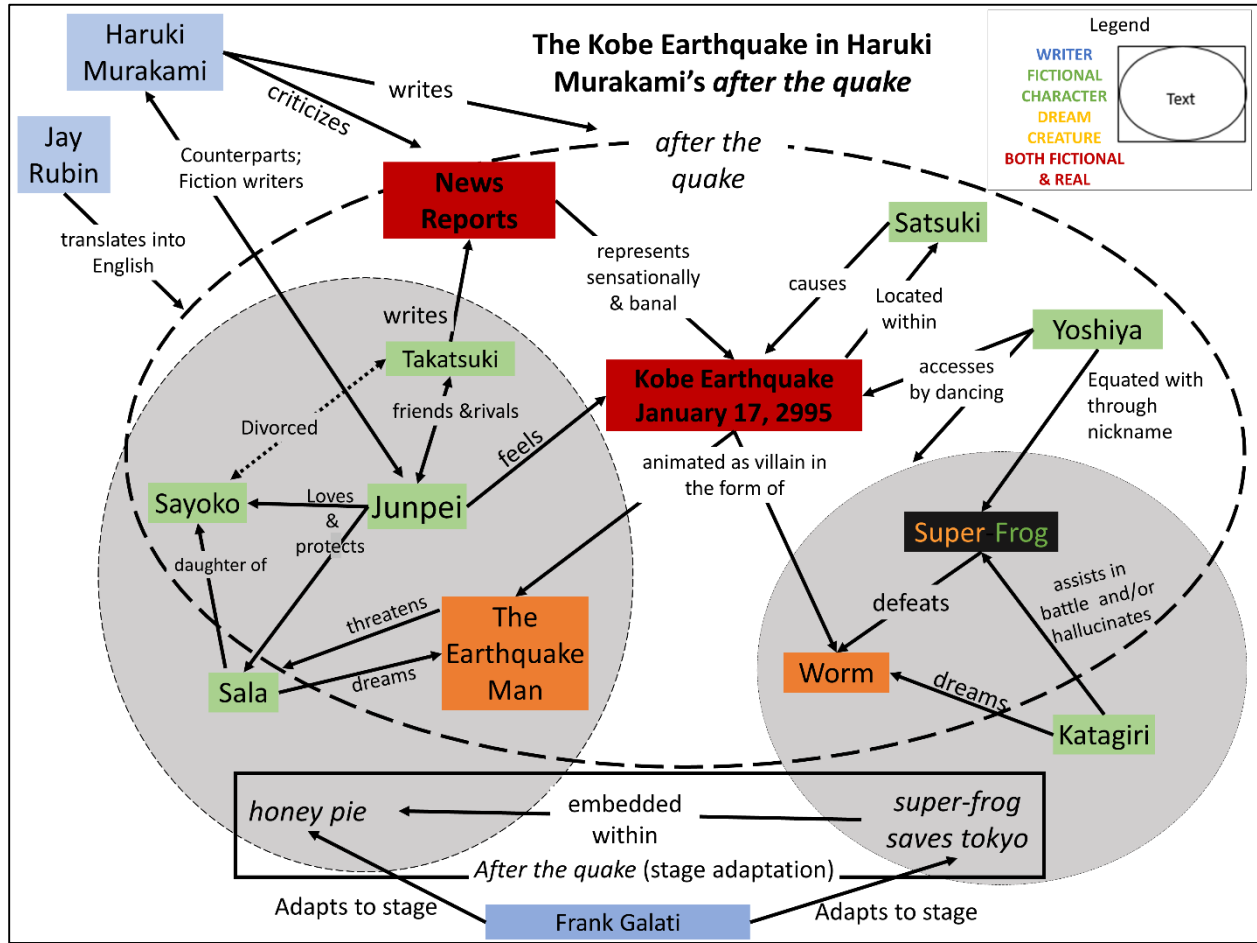
<i>Story</i>	<i>Play</i>
It was an echo from a past he had buried long ago. He hadn't set foot on those streets since graduation, but still, the sight of the destruction laid bare raw wounds hidden somewhere deep inside him. The lethal, gigantic catastrophe seemed to change certain aspects of his life – quietly, but from the ground up. Junpei felt an entirely new sense of isolation. I have no roots, he thought. I'm not connected to anything (Murakami 2002, pg. 170-71).	<p>JUNPEI. It was an echo from a past he had buried long ago.</p> <p>NARRATOR. He hadn't set foot on those streets since graduation –</p> <p>JUNPEI. – But still, the sight of the destruction laid bare raw wounds hidden somewhere deep inside him.</p> <p>NARRATOR. The lethal, gigantic catastrophe seemed to change certain aspects of his life</p> <p>JUNPEI. – quietly, but from the ground up.</p> <p>NARRATOR. Junpei felt an entirely new sense of isolation.</p> <p>JUNPEI. I have no roots. I'm not connected to anything (Galati 2009, pg. 29).</p>

The stage version retains the exact same words, except for eliminating the “he thought” tag from the final line. However, it also alternates the speech between Junpei and the narrator. The effect is that Junpei refers to himself in the third person, as if he is also the narrator of his own story. Murakami's original voice gets placed in Junpei's dialogue, collapsing the boundaries between writer and character. Like in Murakami's video game metaphor, the characters in this play are narrating their lives as they live.

As shown in Figure 2, not only are the boundaries between art and artist questioned, but the worlds of the fictional artworks likewise bleed into one another – both between the individual stories and between the play and the stories. Murakami's original text unites *super-frog saves tokyo* and *all god's children can dance* through the shared seismic underworld. Galati maintains this fluidity between the stories by embedding the playfully mythic *super-frog saves tokyo* within Junpei's authorship. To draw upon Le Guin's theory, the stories are each their own carrier bag within a larger carrier bag of the collection, which is within a larger carrier bag which includes the play. Like the dream spaces of Murakami's text, the stories in the play are interior containers

of narrative each spilling into one another. Like the dreams, the borders between what is real, what is fiction, what is dream, and what is narration are permeable.

Figure 2



Importantly, the most interior narrative embedded within the layers of other narratives – at least in the play – is *super-frog saves tokyo* and within that, the myth of the earthquake-causing malicious Worm. By placing the actual event of an earthquake at the very center of the narrative structure, Galati reminds us that despite the details of love, sex, ambition, and the structures of fiction, the unsettling and fear-invoking event of an earthquake remains at the heart of the art. In the network, all of the characters, texts, and authors are constellated around the central event of the Kobe earthquake. Besides greatly emphasizing the connections between the natural disaster and the process through which stories are both told and received, the embedded narratives can be unsettling, confusing, chaotic, even difficult to follow.<sup>23</sup> In this way, the form

<sup>23</sup> I did not see a production of the play, which limits my ability to analyze elements of staging and performance



of the play shifts the proverbial ground beneath the footing of the audience, maintaining an unpredictable movement between stories and characters.

As an interpretation of Murakami's original stories, Galati's play rearranges the characters in relation to one another and in relation to the audience – an American audience in Chicago. While the stories embed the real event of the earthquake into a fictional format, the art itself also becomes an actor barreling through space, impacting other writers and artists. It is altered, adapted, and shaped into new forms for new contexts and different audiences. Like Junpei's character in the play narrates and lives his life at the same time, Rubin and Galati are both reading and writing *after the quake* by translating it to a different language and adapting it to a different medium. This dynamism demonstrates a text essentially revising itself through different readings and readers.

### A Global Literary Response to the Tohōku Disaster

The Tohōku earthquake was the most powerful earthquake in recorded history to hit Japan, at 9.0-9.1 Mw. The earthquake happened at 2:46 in the afternoon on March 11, 2011. It was a megathrust earthquake caused by the subduction of the Pacific Plate, a recurrence of a subduction mechanism that produced massive earthquakes and tsunamis in the past (NOAA 2015). The tsunami that followed the earthquake reached 40 meters (133 feet) and traveled six miles inland. Reports confirm 18,453 deaths and 6,152 injuries, estimating 19,300 missing persons (NOAA 2015; Raffery and Fletcher 2016). Apart from the damage and terror caused by the force of the earthquake, the tsunami caused severe damage including nuclear meltdowns in the Fukushima I Daiichi Nuclear Power Plant complex. The Prime Minister called disaster of Tohōku the greatest disaster Japan has faced since World War II (Truchman et al. 2011). In a speech, Murakami described the event as Japan's nuclear attack on themselves, condemning a culture of nuclear tolerance and complacency (Murakami 2011). The earthquake caused Japan to move east – closer to North America by 13 feet – and accelerated the rotation of the earth (Chang 2011).

The nuclear disaster created by the earthquake and tsunami complicates the study of Tohōku as a natural disaster independent of human modification of the environment. This case study illuminates the multiplicity of disaster and the impossibility of separating a “natural event” from

its many contexts and resonances. I try to focus on the seismic characteristic of Tohōku but, of course, the nuclear catastrophe is deeply embedded in the remembrance and legacy of the disaster. This combination of “natural disaster with a man-made disaster,” as Rosenbaum writes in “Post 3/11 Literature in Japan,” presents an unprecedented collision within Japan’s disaster psychology (Rosenbaum 2014, 98). It’s difficult to separate the earthquake from the tsunami and the nuclear meltdown. The anthology *When the Tsunami Came to Shore: Culture and Disaster in Japan* (Starrs 2014) is organized into two parts. The first section presents “Cultural Responses to the Triple Disaster of March 2011” and the second section contains Japanese responses to earlier disasters. The organization of this volume reveals just how transformative Tohōku was for Japanese earthquake and disaster culture. Not only are there eight articles explaining different facets of the cultural response to Tohōku, but the event sparked remembrance of disasters past. Murakami, the Prime Minister, and Starrs each attempt to place Tohōku in a schema, related to the broader Japanese experience and culture of disaster.

#### *Literary actors in Tohōku’s aftermath*

Three collections of literature were published in the year after the Tohōku in direct response to the catastrophe. The proceeds of each were directed to relief funding and they promoted charitable donations. *2:46: Aftershocks from the Japan Earthquake* and *Shaken: Stories for Japan* were both created immediately after the event, being published in April and June 2011 respectively. *2:46: Aftershocks* was spearheaded by the Red Cross. It contains short pieces of nonfiction from writers in Japan and writers with connections to Japan watching from afar, such as Yoko Ono. It includes raw reactions, photographs of people crying with relief and despair, short letters and vignettes. The collection was sourced through Twitter and it was made available for download on Kindle in order to be instantly accessible (Rosenbaum 2014). The preposition “from” in the title reveals its audience: people outside of Japan who want to access a narrative of the disaster. *Shaken: Stories for Japan* was created by the Japan America Society of Southern California and includes predominantly the work of mystery writers.<sup>24</sup> It was also made available for download on Kindle. Being “for” instead of “from” Japan, *Shaken* was an American endeavor to raise funds for Japan’s benefit. These texts are examples of how literature and

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<sup>24</sup> Rosenbaum (2014) discusses at length the role of social media in organizing and publishing each collection, in particular through sourcing material from well-known artists across the world.

narrative can be a commercial actor in disaster networks. They arose quickly from the aftermath and attempted to give voice to Japan's victims, raise money for relief and rebuilding, and communicate the story of the disaster across the world. Their success or failure is a topic for another paper.

Published just one year after Tohōku, *March Was Made of Yarn: Reflections on the Japanese Earthquake, Tsunami, and Nuclear Meltdown* is another charitable collection of literature by well-known writers across the world (Luke and Karashima 2012). *March Was Made of Yarn* includes predominantly Japanese works that were translated into English. While the proceeds of the book also go to post-disaster humanitarian efforts, this volume is less instantaneous than the two previously discussed. Its subtitle labels it “*reflections*,” indicating that it contains a perspective of recovery and distance, rather than containing instant reactions like the other two. In this way, *March Was Made of Yarn* intends to not just promote humanitarian efforts, but connect the process of making art with the process of grieving and recovering from loss. The other two collections have similar intentions but I choose to focus on the artwork of *March Was Made of Yarn* as the primary text of this category.

The collection incorporates several genres from short story, nonfiction, poetry, and manga in an amalgamation of artistic responses to the Tohōku disaster. Many of the pieces specifically grappled with the nuclear disaster and with the tsunami, rather than the earthquake shaking. Nevertheless, *March Was Made of Yarn* is significant for two reasons. The first is its status alongside *Shaken* and *2:46* as a commercial, monetary actor within a global Tohōku disaster network. Secondly, it contains several pieces of short fiction that comment on connective fabrics of crisis, including the ocean waves of the tsunami.

The titular story, “March Yarn” by Mieko Kawakami, represents the earthquake in a similar way to Murakami: as a peripheral event, seemingly unrelated to the immediate daily events of the story but importantly underlying the key tension. “March Yarn” follows a couple on a vacation to Kyoto in the last term of the wife’s pregnancy. The two have stale conversations and are both afflicted by an overwhelming tiredness. The wife dreams of her childbirth, but the entire world including the child and the people and the ocean are made of yarn:

When something unpleasant or dangerous happens, things suddenly come apart. They go back to just being yarn, they wait it out... They’re yarn after all. Sometimes the yarn turns into sweaters, or mittens, and that’s how they protect themselves.

When something scares them, that's how they get through it (Kawakami M. 2012, 63).

As she explains the dream to her husband, the woman eventually reveals that “even March was yarn” (Kawakami M. 2012, 64). This revelation is never explained, despite the husband's confusion about how a segment of time can be made of a material such as yarn. This metaphor, created by the dream space of a pregnant woman, describes a world which is resilient to danger by virtue of its flexibility. Dreams allow for a space of healing, of grieving, of understanding loss in the story. Murakami's notion of a fake world resonates with the craft material of Kawakami's dream space. A world made out of yarn is flexible and soft, rather than stiff and hard. Unlike Satsuki's petrified body, the people in the yarn dream are made out of a soft material rather than a strong one. In an earthquake, yarn would continue being yarn. By envisioning a world by its mutable material rather than by its current form, the metaphor embraces unpredictability and puts faith in the substance of the world. In the dream, the world turns to yarn – unformed, flexible, awaiting safety in order to form again – in the event of danger. While a loss of form upturns the status quo and destroys a sense of permanence, a world of yarn accounts and prepares for constant change. The yarn dream literally reconstructs the world. If everything is made out of yarn, even time and people, everything is connected to everything else. If disturbed, the same yarn that once formed a child or a mitten could transform into time or a sweater.

Though “March Yarn” has a melancholy tone, the resiliency of the yarn dream and the anticipation of the child give the story a note of hope. Other stories, such as *all god's children can dance* and *thailand* from *after the quake* and “Pieces” (Kakuta 2012) from *March Was Made of Yarn*, mourn the losses of miscarriage and express anxiety around the reproductive abilities of the female body in a world at risk of disaster.<sup>25</sup> Indeed, the loss of the child in “Pieces” seems to be a parallel for the losses suffered by the earthquake and tsunami. Pregnancy and reproduction have an important role in creating human time. While human lives have beginnings and ends, the time of the female body is distinctly cyclical. Like earthquakes, birth and fertility can be recurrent. Placed in juxtaposition with an earthquake's role in the human understanding of time, the stories represent the uncertainty, fragility, and potential strength of human futures contained within the female body.

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<sup>25</sup> Nuclear accidents also raise this fear. In *thailand*, Satsuki is a thyroid expert, which also invokes the health consequences of radiation.

Because Tohōku's tsunami produced such devastation, several of the stories in *March Was Made of Yarn* focus on the ocean. Barry Yourgrau's "A Dream from a Fisherman's Boat" (2012) follows the course of the tsunami in the dream of a fisherman afloat on the sea in his boat. "Ride on Time" by Kazushige Abe (2012) is narrated by the collective voice of a surfing community awaiting a legendary wave that is forecast to arrive on Friday afternoon, March 11, 2011. While Yourgrau's story has magical, dream elements, the dreamer sees the aftermath of the tsunami as crying children, upturned vending machines, and other scenes of destruction. "Ride on Time" anticipates the tsunami as a special surf wave, a challenge, a competition to successfully catch and ride a monster wave. These texts represent the power of the ocean to both cause destruction and inspire sublime awe.

In the narrative of Tohōku, the Pacific Ocean is the biggest force of destruction. The tsunami caused the most deaths and the most damage, in particular the Fukushima nuclear disaster. Though the effects of the earthquake and tsunami were most acute in Japan, the tsunami traveled across the Pacific Ocean to cause damage on other Pacific Coasts.<sup>26</sup> As these three charitable collections of texts demonstrate, the Tohōku event played out in a global arena. While these three works facilitate the movement of both capital and narrative between Japan and the rest of the world, the Pacific Ocean physically moved the disaster from Japan across the world.

### Bridging Transpacific Disaster: Ruth Ozeki's *A Tale for the Time Being*

In the story of how *A Tale for the Time Being* came to be, author Ruth Ozeki reports that she wrote the manuscript before the Tohōku event. However, the manuscript was struggling to become the story that she imagined and she wasn't sure what to do. Even though she was dissatisfied with the manuscript, she submitted it to her agent anyways. Then the earthquake happened:

It was one of those catastrophic moments that sort of stops time. It was very clear to me that I had written a pre-earthquake, pre-tsunami, pre-Fukushima book. Now we were living in a post world, the book was no longer relevant (Ozeki in Rothenfluch and Rosman 2014).

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<sup>26</sup> Hawaii suffered \$30 million in damage and there were deaths caused by the tsunami in California and Papua, Indonesia (NOAA 2011).

While Murakami and many of the authors from the charitable collections wrote literature and made art in response to the earthquakes, Ozeki's novel was transformed by Tohōku.<sup>27</sup> The world that existed before Tohōku and Fukushima had been altered by the event of disaster. Ozeki felt that the novel she was writing about Japan must reflect that significant change. So, she rescinded the manuscript, threw half of it away, and wrote a novel grappling with Tohōku's catastrophes from across the ocean (Lee 2013).

*A Tale for the Time Being* is an artifact of the earthquake culture in the Pacific Northwest because it was written in British Columbia, Canada, but contends with the earthquake and disaster culture of Japan. While Murakami's text depicts connections between Earth, the human body, and text, Ozeki's text depicts intimate connections between people and places despite their separation in place and time. The novel begins when a woman on a coastal island in British Columbia discovers a package on the beach. The package contains the personal diary of a young girl in Japan and several other objects and texts. The discoverer is a writer named Ruth suffering from writer's block. Like Junpei, Ruth is a character who represents the author of the novel, Ruth Ozeki. For clarity, I will use the name Ruth to discuss the character and Ozeki to discuss the author. Like Murakami's stories, Ozeki's characterization of herself offers a statement on the conditions of authorship. The novel is guided by the relationships between authors, readers, and the texts that pass between them. Not only does Ozeki put herself into the novel as the reader of the diary, but the writer of the diary – a Japanese girl called Nao – often ponders the powers and limitations of writing.

In interviews, Ozeki discusses the novel as exploration of how she could respond to catastrophes such as Tohōku and Fukushima as a fiction writer even as the full scale of the disaster was “still unfolding” (Ozeki in Hall 2013). Her novel reflects its split origin as a text written both before and after the earthquake. Nao's diary is set in the early 2000s in Japan, while Ruth's reading is set in 2011 in British Columbia. Other diaries in the package take Ruth and Nao as readers – and us as readers of their reading – back as far as World War II. This movement between Ruth's world of reading and Nao's worlds of writing and reading exemplifies

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<sup>27</sup> Hiromi Kawakami also revised a work she had written – and published – before Tohōku. In her revision of “God Bless You” (1993), she turned the setting into a post-nuclear meltdown landscape and renamed the piece “God Bless You, 2011” (Kawakami H. 2012). Both versions were published together in *March Was Made of Yarn*. The events of Tohōku and other disasters might revise other artworks in ways we don't yet know

transportation theory. The concentric texts represented in the novel are each deeply connected to the places they were written. The novel emphasizes the shared oceanic and tectonic border of Japan and the Pacific Northwest as simultaneously a force of destruction and a conduit for connection. Ozeki's novel wrestles with natural disaster by exploring – and rupturing– the borders between fiction and reality, Japan and the United States, and time before and time after Tohōku. Though written mostly in English, the novel is peppered with phrases in Japanese and several other languages including French. There are also typographical experiments where words form images or bleed into one another to mimic the experience of being in time (Ozeki 2013, 228, 349).

As shown in Figure 3, *A Tale for the Time Being* spans the Pacific Ocean. Nao lives in Tokyo, writing in her diary in a café in Akihabara Electricity Town, but travels to Sendai to spend the summer at her grandmother's temple. Sendai was the major city closest to the epicenter of the Tohōku earthquake. Ruth lives in Whaletown, British Columbia on Cortes Island. Nao spent her childhood in Sunnyvale, California because her father worked as a computer programmer until he was fired and her family had to move back to Japan. The settings

Figure 3



of the novel form a rim around the Pacific Ocean. As an important conduit, the ocean brings Nao's diary from Japan to British Columbia, likely by the tsunami waves from Tohōku. The diary and its Pacific transmission emphasizes the connection between Japan and the Pacific Northwest as both physical and textual.

The disasters in the novel – World War II, Tohōku, intense bullying and suicidal thoughts that plague Nao – each produce intimacy across time and space, particularly through text. Across space, the novel ponders many different connections between Japan and the Pacific Northwest. Because Ruth is Japanese American, she is attuned to moments where the two cultures meet and exchange.<sup>28</sup> One moment remarks on the presence of a Japanese oyster species in the waters of British Columbia. Ruth and her husband, Oliver, walk along the beach and notice the oyster shells among the rocks:

[Oliver said] 'It's just that *Crassostrea gigas* originally came from Japan. From Miyagi, actually. In fact, the other name for them is the Miyagi oyster. Isn't that where your nun is from?'

'Yes,' [Ruth] said, feeling the wide Pacific Ocean suddenly shrink just a little.'  
(Ozeki 2013, 187)

The “nun” is Nao's grandmother Jiko, who's temple sits on the Sendai coast. As Ruth and Oliver walk along the same beach where they found the texts that had come from Sendai, they realize that other things in the shore came from Japan as well – the oysters underfoot. When Ruth feels the ocean “suddenly shrink just a little,” this indicates that she feels closer to Japan in that moment. After Tohōku, the Pacific Ocean truly did shrink suddenly by thirteen feet. While this moment invokes the physical changes of the earthquake, the closeness also reveals how the transpacific exchanges have shaped the lives and environments of both places. Later, Oliver notes that he and Ruth would never have met if it weren't for World War II. Nao's diary only exists because her father was fired and she had to move back across the Pacific Ocean to Japan. Each world of the novel is entirely underlain with subtle and overt connections between Japan and North America: physically, fictionally, ecologically, generationally, and informationally. This comprises the overall concept of place in Ozeki's novel – a collapsed distance between Japan and the West Coast of North America across space, culture, and communication.

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<sup>28</sup> On her own heritage, Ozeki says: “My father was Caucasian-American and my mother was Japanese-naturalized-American. I'm Caucasian-Japanese-American-naturalized-Canadian. The taxonomies get messy because some of these categories refer to race and some to nationality” (Ozeki in Palumbo-Lui 2014).



While the physical distance between Japan and the Pacific Northwest shrinks, the time before Tohōku is fractured from the time after. A major theme of the novel is making up for lost time.<sup>29</sup> By jumping closer to the Pacific Northwest, the Japanese earthquake also shortened Earth days, prompting Ruth to wonder: “how much time did we lose?” (Ozeki 2013, 203). This is both a comment on the physical alterations upon the earth by Tohōku and a more sentimental query regarding lost lives, lost potential, and the time lost in the process of rebuilding. Nao too mourns the time she and her family have lost by moving to Japan from California. They must rebuild their lives and adjust to life in Tokyo. Lost time forms a rift between Japan and the West Coast of North America and between Ruth and Nao.

While there is a rift in the time periods of the novel, the movement of readers and characters between these time periods demonstrates how fiction permeates across time barriers. The novel itself unfolds in a non-linear fashion. It jumps from 2011 to 1945 to September 11, 2001 to the Dotcom bubble in the 1990s. The most phenomenal temporal breach in the novel occurs when Ruth actually travels back in time to alter the world of Nao’s diary and save the lives of both Nao and her father (also called Haruki #2). One evening, Ruth opens the diary to find that the words on the page have disappeared. The pages that were once filled with Nao’s handwriting have magically and tragically become blank. That night, Ruth dreams:

What does separation look like? A wall? A wave? A body of water? A ripple of light or a shimmer of subatomic particles, parting? What does it feel like to push through? Her fingers press against the rag surface of her dream, recognize the tenacity of filaments, and know that it is paper about to tear (Ozeki 2013, 347).

In the beginning of the dream, Ruth moves through the substance of paper, breaking through its material. This movement destroys the “separation” the dream sequence opens with. While the material through which Ruth moves is “paper,” in a sense it is also a “wall,” a “wave” and “a body of water.” The point is that in her dream, she is able to break through all these boundaries: the paper that separated her from Nao, the water that separates the Pacific Northwest from Japan, and the wave that separates the pre-disaster time from the post-disaster time, and that time itself.

After she breaks through the “paper” she finds herself in Japan and sees Nao’s father sitting on a bench preparing to kill himself. Ruth intervenes, telling the tragic secrets that Nao has divulged to her in the diary and sends him on his way to retrieve her. When Ruth wakes up,

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<sup>29</sup> An inscription on the cover of Nao’s diary reads *À la recherche du temps perdu*, or “In Search of Lost Time.”

the diary is full of language again. It tells the story of how Haruki #2 comes to save Nao. As a reader, Ruth is literally and physically transported across time and space to Nao's world and changes it out of compassion. This moment reveals the power that textual intimacy has for Ruth and Nao. Like Murakami's stories and *March Was Made of Yarn*, this moment of access to a previous time and distant place occurs in the context of a dream. The dream space is corroborated as true and real by the rules and events of the story world.

While Ruth is able to save Nao and her father from suicide, she never knows what happens to them in the Tohōku event. Being unable to confirm their existence anywhere on the internet makes her question whether Nao and her story are real. Even though Ruth knows and believes the diary is real, it seems fictional. As a writer, Ruth finds the world of fiction familiar:

When she was writing a novel, living deep inside a fictional world, the days got jumbled together, and entire weeks or months or even years would yield to the ebb and flow of the dream. Bills went unpaid, emails unanswered, calls unreturned. Fiction had its own time and logic. That was its power. (Ozeki 2013, 314)

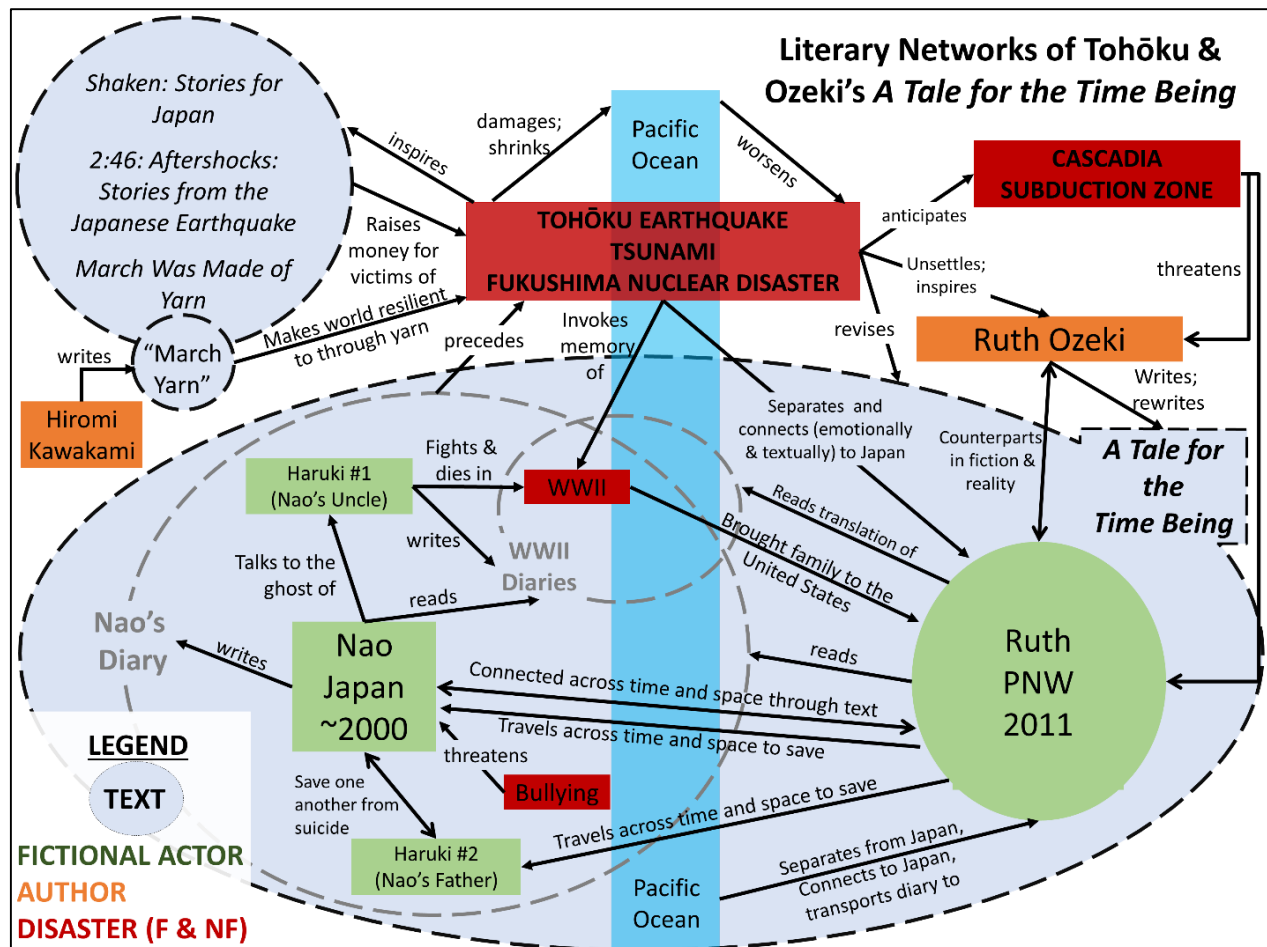
Like Murakami, Ozeki describes writing fiction like a "dream." The "fictional world" has a depth the writer inhabits. This rearranges the space of the world, as Ozeki demonstrates with Japan and the Pacific Northwest. It also rearranges the temporal structures of the world, where time behaves differently in both the writer's experience and within the structure of the fictional narrative. Ruth attempts to read the diary at the same pace that Nao writes, stating "that way she wouldn't end up with an overly compressed or accelerated sense of the girl's life and its unfolding" (Ozeki 2013, 38). Ozeki intensely deconstructs the process of both writing and reading spatial-temporal narratives. She questions the way that art and fiction imitate life by drawing attention to how fiction necessarily manipulates the pace of life for the experience of reading. Moreover, she describes the potency that fictional worlds can have to consume writers and readers.

Through the novel was written in response to Japanese disaster, it is set simultaneously in Japan and the coast of the Pacific Northwest, another place in the world at risk for enormous earthquakes and tsunamis. Though most of the disaster content relates to Tohōku and Fukushima, the Cascadia Subduction Zone makes one direct appearance. Oliver, Ruth's techie artist husband, finds a Japanese app that is supposed to issue early warnings for earthquakes. Looking at the app, he says: "That's cute. We should have that here. We are due for a big one

here. I wonder if it will work in Whaletown” (Ozeki 2013, 199). Upon further exploration of the app, Oliver discovers it only gives information for Japan. Ruth wonders out loud: “I thought Canada was safe” (Ozeki 2013, 202). In this small bit of dialogue, Ozeki includes Cascadia and draws a connection of seismic risk between the two places. Here the novel reveals information about British Columbia seismic hazard through a comparison with Japan. This parallels the way that the study on the Orphan Tsunami of 1700 (Atwater et al. 2005) corroborates and confirms Cascadia’s history through a partnership with Japan. While Ruth’s connection with Nao through the diary doesn’t necessarily save either of them from an earthquake, it does help Ruth realize that her home isn’t as safe as she had previously thought. By forging a deeper connection with Japan, Ruth also becomes more connected with the history and hazards of her own place on Earth.

Although Ozeki’s novel takes up many topics, disaster is the thread that connects the entire thing, in its many parts. Figure 4 demonstrates the nested texts in Ozeki’s novel within the

Figure 4



greater network of literary actors responding to Tohōku. While the novel engages with the Japanese culture of disaster through its World War II narrative and the Tohōku earthquake and tsunami, Ruth bears witness to these disasters as a reader and a viewer from across the ocean. Ozeki's own story of writing demonstrates how the Japanese disaster transformed her creative work. Within the novel, the connections regarding disasters are contingent upon the role of fiction to facilitate human connection. One of the first things we learn about Nao is that she is writing the diary *to* someone. She exclaims: "It feels like I'm reaching forward through time to touch you, and now that you've found it, you're reaching back to touch me!" (Ozeki 2013, 26). This is precisely what happens in Ruth's dream. It also happens when Nao reads the WWII diaries written by her ancestor (Haruki #1) and is inspired by his strength and sacrifice. His story contributes to her decision not to end her life. Ozeki shows the magic of fiction that facilitates human connection across distances of time and space to be truly transformative and life-saving. In the spaces of fiction and dreams, which have parallel functions for many of the authors, impossible connections are made. Within the fictional and textual networks of Ozeki and within the yarn world of Kawakami's short story, intimate connections and the material of artifice (such as yarn and words) make people resilient and help them survive.

Figure 4 demonstrates the plethora of connections Ozeki's novel draws between readers, writers, places, and disasters. *A Tale for the Time Being* contains two concentric texts that move from Japan to the Pacific Northwest across the ocean. The connections within the novel breach time, space, and text. By considering texts and characters as actors alongside authors and disasters, this actor-network reinforces how the representational space of fiction can offer resilience and connection. Ozeki's text models the powerful network that arises when fictional texts and characters are intimately connected to real places, events, and people.

### Science Fiction and the Future Cascadia Earthquake

While the *after the quake* and each of the literary responses to Tohōku respond to earthquakes and tsunamis, many of the stories also mention the threat of future earthquakes. In *super-frog saves tokyo*, there is an impending quake under Tokyo. In *A Tale for the Time Being*, the Canadian Pacific coast is at risk for a big earthquake. "March Yarn" describes a dream world that is resilient to events akin to Tohōku. These prospective elements of responsive earthquake

stories recognize that earthquakes are often recurrent events.<sup>30</sup> Tracking the recurrence interval of earthquake events along subduction zones allows scientists to understand the history of the plate boundary and estimate the future behavior. Regarding the Cascadia Subduction Zone, the recurrent intervals of past events, studied by Goldfinger et al. (2012), indicates that the Pacific Northwest is due for another major earthquake and tsunami.

Predicting earthquake probabilities, magnitudes, effects, and vulnerabilities plays a huge role in disaster preparation on all levels. Preparing for anticipated disaster is the work of government agencies, scientists, public health officials, engineers, and citizens. Scientists and officials in Japan have undertaken these tasks with great seriousness and relative success on many levels, in particular after the shock of Kobe. However, while Japanese society has the benefit of historical memory, records, and recent past events to help guide their efforts, the agencies in the Pacific Northwest lack all baseline knowledge for how an earthquake will affect specific infrastructures, systems, and elements in the miles of built environments from Northern California to British Columbia. Since the recent recognition of the hazard, scientists and officials in the Pacific Northwest have conducted studies and begun to envision the different risks from a large Cascadia Subduction Zone earthquake in the urban core, on the coast, and in rural surrounding areas (Wang et al. 2012; OSSPAC 2013).

### *Adam Rothstein's speculative fiction*

Adam Rothstein, a writer living in Portland, Oregon went through many stages of denial and acceptance of the Cascadia Subduction Zone when he first discovered his hometown would likely experience a monstrous earthquake in his lifetime. After reading Kathryn Schulz's *New Yorker* piece that went viral in 2015, he became fascinated by the history of how contemporary scientists discovered the subduction zone and its seismic history (Schulz 2015). Despite the detailed account of the seismic and scientific history of the Cascadia Subduction Zone, Schulz's piece stops at the earthquake. In conversations with his friends and others in Portland, Rothstein

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<sup>30</sup> The final story of *March Was Made of Yarn*, called "After the Disaster, Before the Disaster" ends with a character's response to the 1923 Great Kanto Earthquake. The character hears the official report that the 1923 earthquake stopped after four minutes, but he "did not believe the official record. Ryūnosuke believed the earthquake would never stop. He believed the disaster was still to come" (Peace 2012, 206).

realized that, although people began to expect a giant earthquake, no one really knew what to expect in the minutes, days, and months *after* the event.<sup>31</sup> Partly out of curiosity and partly to quell his own fear, Rothstein began intensive journalistic research about the predicted outcome and fallout of an earthquake scenario in Portland. He read hundreds of pages of reports, official documents, scientific papers, statistics, and other studies meant to delineate the aftermath of an unprecedented earthquake in the modern Pacific Northwest.

The outcome of this research was *After the Big One*, a series of five installments translating the overwhelming quantitative scholarship into a literary narrative. He writes a first-person account of what it would be like, according to scientific information, to be in Portland after ‘the big one.’ Rothstein’s scenario is of a 9.0 magnitude earthquake, roughly the same magnitude as Tohōku. Though a massive earthquake, this number is an average of different scenarios in the scientific reports Rothstein studied. Rothstein focuses on the impacts in Portland, the urban center of Oregon. Everything scientists and officials know about what will happen to the city after minutes of shaking are only probabilities. Nothing is certain and the scenarios of each study differ slightly. Rothstein claims his narrative scenario is a blend of these studies and is “as plausible as it could possibly be” (Rothstein in Merchant 2016). In order to discuss events happening outside of Portland and outside the street view of his own perspective, Rothstein adopts an omniscient perspective on and off. While this allows him to represent more information from the scientific reports to cover a breadth of post-earthquake experiences, it also breaks the first-person narrative of the event.

The installments were published on Terraform, an outfit of VICE’s science subsite Motherboard that publishes futuristic fiction. An interviewer described the genre of Rothstein’s piece as “reported speculative fiction.” It is reported because it is researched in a journalistic way and seeks to translate a mass of scientific data and analysis to a popular audience. It is speculative fiction because it imagines a future scenario alongside other pieces of fiction on Terraform that create fictional futures. Rothstein’s speculative fiction, a look towards the probable and plausible future of Portland, Oregon, is as much a work of science as it is fiction. In this way, it might also be classified as hard science fiction.<sup>32</sup>

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<sup>31</sup> In an interview with Brian Merchant, Rothstein remembers wondering if it would be like a nuclear bomb went off (Merchant 2016).

<sup>32</sup> “Hard” science fiction relies heavily on the actual science prevalent in the storyline (Cramer 2007).

The earthquake itself enters before the first installment and most of the story discusses the aftermath. The tagline reads:

Over the course of five minutes, one piece of the earth's armor grinds underneath another, and the reverberation of this tectonic motion project outwards for hundreds of miles through the core of a human culture living above it (Rothstein 2016).

Already, the story is situated in the “core of a human culture.” There is a subterranean world, not animated like Murakami’s, but described in realistic, if imaginative, language. The earthquake is at the beginning of the installment and the narrative bears witness to its after effects. The earthquake happens somewhere else: underground and under the Pacific Ocean. While the earthquake occurs underneath Portland, it also occurs in the immediate past of the story rather than in the uncertain future. Rothstein includes aftershocks in his narrative, as well as the huge number of emergency situations that materialize immediately after the event: people trapped in buildings, fires, car crashes, people stranded on bridges. He describes the experience of shaking as the experience of watching a city crumble around and the deafening roar of human structures.

He writes: “By the time that the five minutes have elapsed, Portlanders find themselves transported to an entirely different city” (Rothstein 2016, Part 1). This transportation is not spatial – although the earthquake may alter space in the similar way to Tohōku – but temporal. The city where Portlanders had been five minutes ago is an “entirely different city” than the one they find themselves in after the earthquake. Like Tohōku in Ozeki’s novel, the earthquake in Portland is an event that severs time into a distinct before and after. The premise of the piece is that the “before” is non-fictional whereas the “after” is fictional. The “before” world is the exact same world as the world of the reader. The transportation of Rothstein’s story not to a different part of the world, like Ozeki’s, but to any time in the future. He aims to transport his reader to a fictional place which could be only five minutes away.<sup>33</sup>

The piece has a complex conception of transformative time. The entire narrative is written in present tense and first person:

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<sup>33</sup>Rothstein technically sets the piece in April, although he includes information about what would happen if the earthquake were to happen at a time with different weather. This April could be any April (Rothstein 2016).

Along with many others, I set out on foot, through the Rose Quarter, looking for a math<sup>34</sup> around the freeway collapses, which have come a labyrinth we now must wander (Rothstein 2016, Part 1).

Instead of a futuristic tense ('we would wander') or past tense ('we then wandered'), the choice of present tense creates the illusion that the events of the narrative are happening at the moment of reading. It describes a future aftermath as if it is occurring in the present. This requires temporal gymnastics on the part of readers to transport themselves first to the future, then to another world in that future, and then pretend as if they are currently in that place. However, the ability of the reader to remain in the present is contradicted by various changes of the narrative perspective. While technically first person, the perspective moves into a collective first-person and omniscience in order to report the scientific knowledge of the entire city. Events that are happening elsewhere in space are described in present tense as well, even if the first-person narrator would have no way of actually knowing things such as: "A propane storage facility is on fire in East Portland. There is a Hazmat spill at the Airport" (Rothstein 2016, Part 1). By moving between these different modes of literary narration and scientific reporting, Rothstein's piece doesn't maintain the fictional illusion of the first-hand experience of the earthquake

Despite the fictional status of the "after," Rothstein's future world is also based on scientific knowledge. This hybrid perspective and temporal multiplicity allows the piece to cross multiple tones and genres. Rothstein erases boundaries of fact and fiction by setting both in the future and merging them in the same story. The rules of the fictional Portland are the same rules that scientists believe govern Rothstein's present-day Portland.

*After the Big One* has an instrumental motive that contrasts the motives of retrospective earthquake fictions studied above. Rothstein's piece is meant to inspire people to prepare not only for the moments of earthquake, but for the predicted challenges that the city will face after the event. In response to the apocalyptic resignation Rothstein noticed in his circle, he aims to spread awareness that many, many people will survive the initial shaking. These survivors will be tasked with a prolonged emergency response in neighborhoods. "Instead of trusting in luck or throwing up our hands to fate," Rothstein wants to engage future survivors of Cascadia with a

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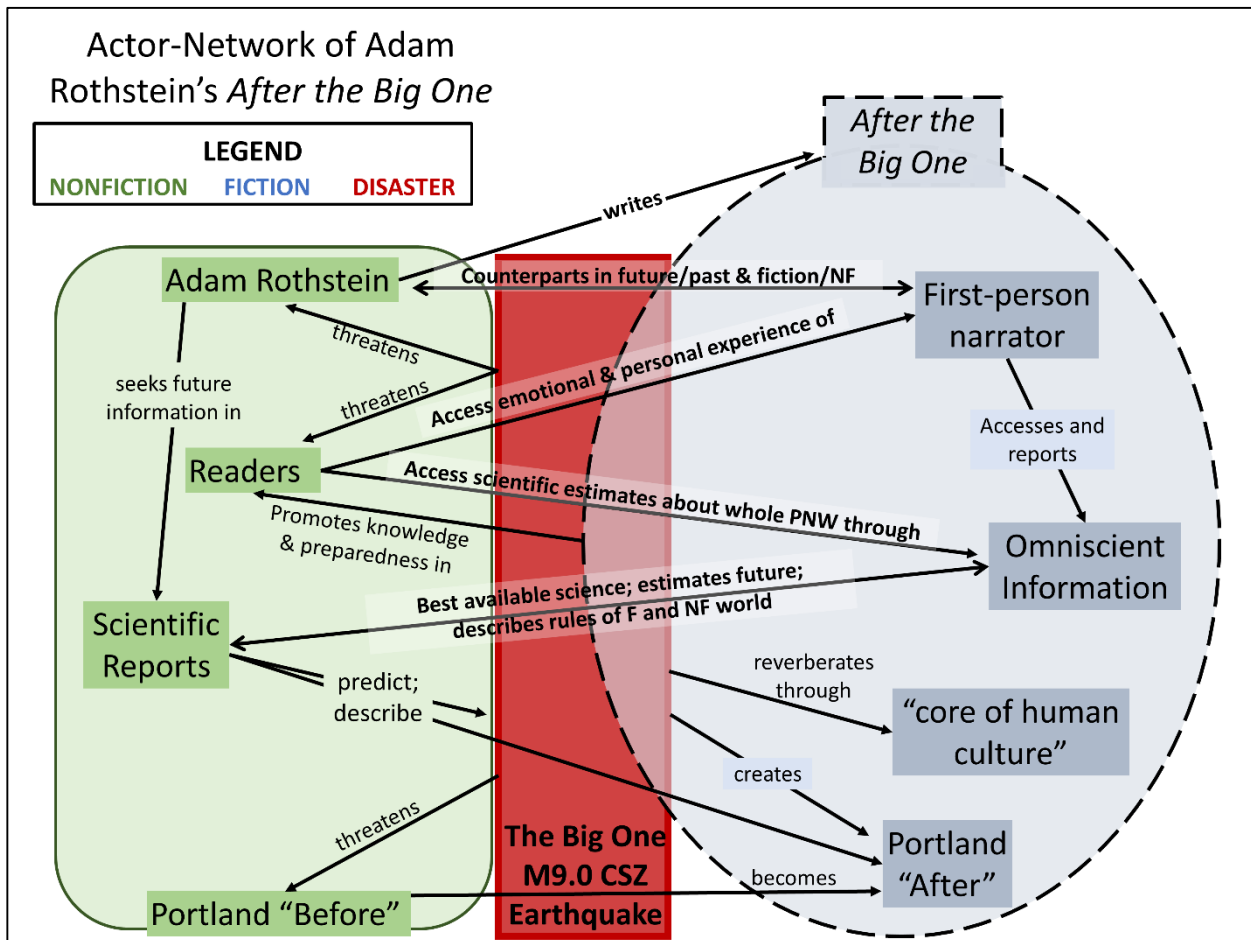
<sup>34</sup> Math (n.) – A mowing; the action or work of mowing; that which may be or has been mowed; the portion of a crop that has been mowed (*Oxford English Dictionary*).



coherent, readable description of what they might expect to experience (Rothstein 2016). The underlying hope is that Rothstein’s narrative will change readers’ behavior. The effectiveness of *After the Big One* in this endeavor may yield future studies.

The relationships between real and fictional actors of Rothstein’s story are demonstrated in Figure 5. In green on the left, the present-day world of Portland where Rothstein lives is threatened by an earthquake that could happen at any time. In blue on the right, Rothstein’s piece represents what will happen when that earthquake does happen. Rothstein, readers, and scientific information move across the temporal boundary of the earthquake (and thus the fiction) to imagine what the experience will be like. The connections between earthquakes, human culture, science, and fiction is most profound in Rothstein’s manipulation of time. Rothstein’s fictional world exists in a predicted future that may happen anytime. While Rothstein’s fiction is an example of hard, hyper-realistic science fiction, it also demonstrates a narrative method of communicating highly technical science to a non-scientific audience.

Figure 5



## Discussion

### Patterns Across Texts

These results show several different ways that fiction represents worlds of the past, present, and future. By examining each text as a network, I've demonstrated how these authors use fiction to rupture boundaries of fact, fiction, and time. The results have shown earthquakes in many different characters – hyper-realistic, subterranean, peripheral, bodily, connective, and animated. The literary actor-networks of each disaster demonstrate permeable barriers between the representative worlds of the fiction and the world where readers and writers live. Three patterns emerge across the three major texts in this study: the representation of aftermath, the inclusion of writers and texts within the frame of the stories, and dreams.

Japan and the Pacific Northwest both anticipate large earthquakes, which is different from the anticipation of climate change or overpopulation because humans cannot mitigate the hazard (only the risk). Despite the future earthquakes in Japan and the Pacific Northwest, most of the stories take place after major earthquakes.<sup>35</sup> Throughout most of the stories, the earthquake occurs either at the beginning of the story or before the story occurs. In this way, the stories contend with physical and social relationships in fictional worlds impacted and, often, significantly altered by the event of an earthquake. Even in the most prospective of the stories, Rothstein's *After the Big One*, the earthquake occurs at the very beginning and the actual story unfolds in its aftermath. In *A Tale for the Time Being*, while Ruth's story is situated before Cascadia and Nao's story before Tohōku, each story in the novel contends with unfolding traumas – World War II, Nao's bullying, the Tohōku disasters. By imagining the worlds of post-earthquake in both realistic and magical ways, these stories represent human experiences of disaster by depicting how crisis alters relationships. Murakami shows human relationships fracturing and shifting in the aftermath of disaster, such as when Komura's wife leaves him, when Satsuki's anger surfaces, or when Junpei decides to act on his feelings of love. Ozeki's novel brings people together through texts carried on tsunami waves. The diaries on the beach are like carrier bags full of fragile relationships, carried by the ocean into the hands of Ruth the

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<sup>35</sup> By the cyclical nature of earthquakes, they are of course also set before major earthquakes in the future. However, by taking place immediately after disasters each of these texts demonstrate how disasters can reassemble social and physical relationships.

reader. Ozeki's novel is too like a carrier bag that holds texts, readers, writers, and disasters in a particular relationship that emphasizes fiction and disaster each as conduits for human connection.

Rothstein's piece shows the altered post-world of disaster most explicitly. He provides statistics and narrative accounts that describe the aftermath of a scientifically accurate Portland earthquake. Precisely because this event has not happened yet, Rothstein utilizes the representational mode of fiction to transport readers to the world he believes they should prepare for. Rothstein's piece, by rendering disaster in fiction, is intentionally instrumental. Like the philanthropic collections of Tohōku, *After the Big One* is meant to act upon readers in a specific way. The philanthropic collections utilized the commercial market of fiction and literature. The instrumentality of *After the Big One* is not commercial but rather fundamentally educational. According to an interview, Rothstein hopes that his piece helps readers comprehend and prepare for "a potentially far-off and difficult future" (Merchant 2016). Here, the art of fiction is instrumental for the purpose of digesting scientific information and for convincing people of risk. The installments of *After the Big One* are accompanied by other nonfiction pieces that list recommended items for survival kits and other prescriptive information. While some believe Rothstein's fiction to be incredibly effective, its success in changing readers' behavior is a topic for another study (Walker 2016).

Dream space spans each of the major texts. While Murakami, Kawakami, and Ozeki rely heavily on dream space for the pivotal images of their pieces, even Rothstein includes an earthquake dream in his installments. During an aftershock, the narrator reports: "The rumbling feels like a memory, and for a moment I think I am dreaming of the original earthquake, until I realize I am out in the yard" (Rothstein 2016, Part 3). Even in the most scientific piece, the earthquake exists in the memory of the narrator like a dream. This reveals something deeply psychological about the earthquakes across these fictional representations. The earthquakes resonate through the memories and minds of the characters, even after the shaking has stopped, even when the characters don't actually experience the event first-hand. In the connection between earthquakes and fiction, the dream space across these texts resonates with the theories that compare reading to accessing a dream space. The earthquakes in these texts seep into the consciousness of the characters and unsettle them from within, perhaps in a similar way to fiction.

## Instrumental Potential

Rothstein's piece is the most obviously instrumental for its actual readers. However, the represented readers in Ozeki are transformed by their reading as well. Ruth actually travels into the story she reads and saves Nao's life on the other side. Nao finds inspiration from her uncle's World War II diaries to survive, despite the extreme bullying she endures. Ruth's preoccupation with the earthquake in Japan leads her to a deeper understanding of the seismic hazards in her own life. *A Tale for the Time Being* represent instrumental functions of text to actualize empathy and to educate readers. However, the novel itself isn't sold alongside earthquake kits nor do its proceeds benefit the victims of Tohōku. Ozeki describes the decision to write the novel as a sort of experiment in how to grapple with disaster as a fiction writer. Psychological or economic studies would potentially offer answers for how the novel effects readers or functions in a world market.

Murakami's collection, like Ozeki's novel, wasn't published with as explicit an instrumental motive as Rothstein's. However, Murakami's career shifted after the Kobe earthquake and the Tokyo sarin attacks and he felt a "growing responsibility as an artist to address contemporary social issues" (Galati 2008). Murakami's re-imagination of Japan in *after the quake*'s magical world is a statement of artistic responsibility to a nation both torn and connected by grief. In both *after the quake* and *Underground*, he began his endeavor to write the voice and voices of Japan. Murakami turned his talent and celebrity into actions of social responsibility to Japan. After the Tohōku earthquake, tsunami, and Fukushima nuclear disaster Murakami made several public appearances to discuss the tragedy. Upon the occasion of his reception of the International Catalunya Prize in Barcelona, Murakami gave an acceptance speech condemning nuclear technology and professing the power of his fiction to unite people across borders. Speaking to the people of Catalonia, Murakami calls for a spiritual response to disaster that transcends boundaries:

If all of you in Catalonia, and all of us in Japan, could become "unrealistic dreamers," if we could come together to create a "spiritual community" that unfolds beyond the limits of borders and cultures, what a wonderful thing that would be. I believe that would be the starting point for the rebirth of all of us who have passed through assorted terrible disasters and terrors of unmitigated sadness over recent years. We should not be afraid to dream dreams (Murakami 2011).

The title of the speech is “Speaking as an Unrealistic Dreamer.” *after the quake* embodies the unrealistic dreams Murakami calls for. The unrealistic dreams of “March Yarn” and *A Tale for the Time Being* likewise imagine spiritual connections between the material of the world, people across physical limits, and fiction. While the commercial and persuasive functions of Rothstein and the philanthropic collections connect to instrumental possibilities outside the confines of the actual fiction, Murakami and Ozeki suggest that the actual fiction has power in the face of disaster. Murakami believes that art and fiction, even magical or unrealistic, is a “starting point for rebirth” of communities out of disaster, as he attempted to piece together for Japan in his writings. This metaphor of “rebirth” brings up the female reproduction featured in both “March Yarn” and *after the quake*. Through dreams, Murakami believes that people recovering from disaster can find new life and be connected with hope in the future while still mourning the past.

While Murakami’s speech suggests a healing power of fiction, his fiction remembers the cyclical quality of earthquake disasters. *super-frog saves tokyo*, for instance, evokes the threat of future earthquakes. Additionally, being set in between the earthquake and the Tokyo sarin attacks, *after the quake* imagines possibilities for healing within cycles of destruction and disaster. *A Tale for the Time Being* is set both before and after Tohōku. While the outcome of Nao’s story in regards to the 2011 earthquake is uncertain, the novel ends with her successful healing in the wake of emotional turmoil. Ruth’s realization of seismic risk in Canada is another example of how grappling with past crises can promote education or preparation for when disasters recur. In the final installment of Rothstein’s piece, he discusses the material process of rebuilding:

This is the lifecycle of cities. The scars of disasters of these magnitudes are borne by cities, mingling with an aging flesh. Until one day, the scars appear as normal, and the skin is ripe for more damage to find it (Rothstein 2016, Part 5).

While this passage doesn’t specify how Portland might rebuild in ways to better prepare for future earthquakes, he mentions the cyclical behavior of disasters at large. The built environment of Rothstein’s future Portland bears the marks of crises past. In *A Tale for the Time Being* as well, Nao notices inscriptions of where past tsunamis reached are scattered on the coast of Sendai, an omen for the thirty-foot waves that inundated the area in 2011 (Ozeki 2013). While the texts represent the aftermath of real disasters and are therefore distinct from narratives that anticipate future world-ending apocalyptic crisis, they also feature cycles of disaster where

healing can occur in between. Unlike the linear narratives critiqued by Le Guin and Latour, these stories are rounder. They do not anticipate the end of the world or the triumph of man over nature. Rather they meditate the processes of adaptation and adjustment between disruptions and tragedies and the possibilities for healing despite the potential for future disasters to upturn the world again.

The texts in this study accomplish more than just catharsis on the part of the reader or the writer. The philanthropic texts, in particular *2:46: Aftershocks*, come closest to a cathartic intention, intense release of emotion under the weight of tragedy. However, Murakami, Ozeki, and Rothstein move beyond catharsis to imagine the role of literature in earthquake culture. While catharsis is contained within the text and follows the trajectory of the plot, the self-conscious fiction in this study imagines itself in a broader context that is outside its own confines. In a way, each of these authors uses fiction to seek the inaccessible: the workings of the earth, the past, the future, an author on the other side of a story. It is by crossing these boundaries that fiction helps us survive.

This project reveals the instrumental potential of fiction posed by their authors and by the content of the texts themselves. Except for the philanthropic texts and adaptations on Murakami, I don't speculate on the actual reception of the texts by audiences. This would require a different critical lens of reader-response and implicates psychological studies about reading. Of course, to establish an instrumental function for disaster fiction, the next step would be empirical studies of reader response and perhaps a more qualitative study of distant reading. Literary or narrative disaster preparedness and mitigation efforts are usually undertaken in a collaboration of government officials, advertisers, social scientists, and geologists. There are several disaster communication campaigns that utilize fiction or popular culture. For instance, FEMA uses footage from Dwayne "The Rock" Johnson's work in *San Andreas* and Disney's *Big Hero Six* in their disaster preparation public service announcements. In the Pacific Northwest, emergency management officials have collaborated with Dark Horse Comics to create stories for children about the earthquake and tsunami in Oregon (Barlow et al. 2014, 2016). These efforts incorporate fields of education-entertainment, which utilize film, television, and other forms of entertainment to communicate social messages (Singhal et al. 2003; Singhal and Rogers 2002; Slater and Rouner 2002; Singhal and Rogers 1999).

## Place and Earthquake Culture

Murakami, Ozeki, and Rothstein blur and disintegrate this border the borders between fiction and reality. Each of these authors include a version of themselves in their fictional world: Murakami's Junpei, Ozeki's Ruth, and Rothstein's first-person narrator. Rothstein does so by blurring his own reality with a fictional, but realistic and scientifically accurate, future. Murakami and Ozeki both insert a surrogate writer character in their fictional worlds to explore how writers function in psychological and social disaster worlds. Each of these writers ask what fiction writers can do for disaster.

Transcendence of the barriers of fiction and reality occurs simultaneously as the texts transcend cultural and physical barriers between Japan, the Pacific Northwest, and the world looking in. From Murakami's viewing of the Kobe earthquake from afar, he reminds us that disasters in one place travel across the world through many avenues. As demonstrated by Jay Rubin's 2002 English translation of the stories and Galati's American stage adaptation, the literature of disaster is likewise folded into other cultural pockets. *March Was Made of Yarn* and the other charitable works source funding and artistic material from the global arena that bears witness to Tohōku. Ozeki collapses both time and space to demonstrate just how poignantly the Japanese disaster of 2011 can resonate into both the future and the past on either side of the Pacific. Earthquake culture is dependent upon place as the relationship between seismic activity and humanity.

However, even though these texts respond to a specific earthquake impacting a specific location, the international and transpacific perspectives of the literature seem to indicate that earthquake culture is not strictly bound. Ruth's witness of a Japanese earthquake transforms her knowledge of seismicity in the Pacific Northwest. Murakami's speech "Speaking as an Unrealistic Dreamer" addresses a Spanish audience. In a world where disasters become international news, defining earthquake culture by nation or region doesn't account for the cultural and scientific knowledge that moved around the world. Ozeki's novel and the discovery of the Cascadia Subduction Zone are examples of earthquake culture flowing between the Pacific Northwest and Japan. While their connection has unique circumstances such as a shared ocean, this study suggests that disaster cultures can evolve through international exposure. People looking in from the outside, such as Murakami and Ozeki, can impact the culture of the affected

place. Likewise, Ozeki depicts that stories from affected places also transform the cultures looking in.

The international scale of this project draws connections between geographic categories. The transpacific scope of my study enters disputed territory in literary studies. Felski discusses the labels that tie literature to time period and place:

Period, in other words, serves much the same function as nation; we assign texts and objects to a single moment of origin in much the same way as we tether them to a single place of birth. Both period and nation serve as a natural boundary, determining authority, and last court of appeal. The literary work can only be a citizen of only one historical period and one set of social relations; border guards work overtime and any movement across period boundaries is heavily policed (Felski 2012, pg. 579).

The title of this thesis compares “Japanese” literature with “Pacific Northwest” literature, tethering the works of my study to a single place of origin. These labels don’t reflect the hybrid perspectives contained in the texts – Murakami’s perspective in Boston, the international vantage of the philanthropic texts, Ozeki’s heritage (Cutter 2013). My study doesn’t generalize about “Japanese” literature or “Pacific Northwest” literature as some sort of genre with common characteristics. It would be presumptuous to extract something about “Japanese literature” from my reading of a translated version of Murakami’s collection. This could require a much fuller understanding of Japanese literary history than I possess.

Just as Starrs questions the concept of a national disaster culture, this study acknowledges the shortfalls of discussing literature “of” a nation. By discussing specific works of literature, situating around the texts, I allow the identification of text to be hybrid and multiple (Beaugard 2015). My seismic lens incorporates place, nationhood, and time period, but is not limited by those categories. My study is limited by my own narrow knowledge of Japan and perspective looking west from Portland, Oregon. At the same time, I’m certainly not trying to argue that by studying literature through the lens of seismicity, national borders are rendered invisible or unimportant. National origin and period do unite texts in important ways. But my study suggests that aspects such as seismicity *also* unite texts across such borders as national origin and period. That my study implicates the concerns of comparative and world literature is worth interrogating and exploring further.



My study touches on issues of classifying texts. As Felski discusses, period and place categorize texts most frequently in the academic world. In literary fiction, genres such as romance, historical fiction, science fiction, memoir, and young adult fiction often create the blueprints of bookstores. In particular, Rothstein's installments resist generic classification because he bridges science, fiction, reporting, confession, and non-fiction and falls somewhat uncertainly in "speculative fiction." Indeed, by placing herself in *A Tale for the Time Being* and utilizing the form of a diary for much of the novel, Ozeki too resists distinguishing her work as any one thing. Murakami's resistance to form comes through in the resonances between disparate stories and the life of *after the quake* in the greater world. The major and minor texts alike deliberately cross their own generic and formal boundaries while they traverse the lines separating fiction from non-fiction through their seismic realities. Perhaps by questioning assumed separation between humans and non-human nature, environmental literature also questions the ways that we catalogue language and stories. While the texts represent various states of characters and places being all mixed up, the texts themselves are all mixed up as well, united only by my label of "earthquake fiction." While the genre-crossing of these texts falls outside of typical literary studies, I've shown how classifying texts in ways beyond period and place may generate new understanding of the way literature in turn makes connections beyond time and space.

### Implications for Ecocriticism and the Humanities

By exploring earthquake literature, my study broadens the field of ecocriticism. While the fundamental task of ecocriticism is to reimagine the contours of nature and culture, the assumptions of human culture separated from and dominating nature still underlie much of the work. This study shifts the conceptions of what is and isn't out of human control in the context of environment and disaster. Instead of examining works where human cultures and systems impact some conception of nature, this study examines works where earth systems impact human cultures, and the art of those human cultures responds to those impacts. In the works studied, human culture only takes the blame for the nuclear disaster at Fukushima nuclear disaster.<sup>36</sup> As a

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<sup>36</sup> Though in *thailand*, Satsuki takes the blame for causing the earthquake out of anger. Because this is a magical event, it speaks more to the deep connections between the earth and her human body that to the actual cause and effect of the event. Perhaps it also speaks to the role of human action in mitigating the social side of natural disasters.

whole, this study demonstrates the inseparability of nature and culture without assigning blame or grieving the separation of the two. The fault of the crises in this study is not as simple as being anthropogenic or non-anthropogenic. The texts don't attempt to estimate which cause is, was, or would be more to blame for suffering. The authors focus on the human cultures unfolding around disaster and on their own role in this unfolding. While ecocriticism has many facets and motivations, this study reconsiders the undercurrents of environmental crisis the field inherits from classical environmentalism. There is value in studying, through ecocriticism and the humanities, the experience of crisis as it related to human relationships with the environment.

As a contribution to ecocriticism, this study examples a rich examination of texts across the world. Buell predicts that ecocriticism is moving towards a postcolonial moment, and there are components of this study that are illuminated by such a perspective. For instance, in *A Tale for the Time Being*, several moments remind Ruth of the colonial past (and name) of Cortes Island in British Columbia.<sup>37</sup> In addition, westward expansion silenced historical memory of the Cascadia earthquakes of the past. *A Tale for the Time Being* is the most explicit text that grapples with imperialism – both of the United States and of Japan (Ozeki 2013). While this aspect doesn't come through in my study of interconnection and seismicity, there is potential for future studies to examine Ozeki's text specifically for the connections drawn between seismic danger, anthropogenic violence and suffering, and the traumatic changes set in motion by the process of colonization. The strong presence of World War II and, of course, Fukushima in the novel offers interesting material for studying Ozeki's depiction of seismic and nuclear cultures in Japan. Similarly, and with particular resonance with nuclear fears, the importance of women and female bodies across several of the works in this study – “March Yarn,” *A Tale for the Time Being*, and *after the quake* – offers rich material for future environmental and feminist inquiries, and especially informed by the feminist overtones of Le Guin's carrier bag theory of fiction.

On a theoretical level, my study seeks to make meaning out of ruptured barriers between fiction and reality alongside ruptured plate boundaries rendered in fiction. My study brings Le Guin's theory of fiction in conversation with Latour's social analysis of actor networks. My three actor-networks of the disaster/text relationships consider texts, writers, readers, disasters, and

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<sup>37</sup> See Beauregard 2015 for a discussion of *A Tale for the Time Being* in the context of Canadian literature, transnational space, plurality, colonial awareness, and race.

fictional representations of all of these. In a clarifying follow-up article on Actor-Network Theory, Bruno Latour discusses an application of ANT to semiotics, the study of meaning-making and signs:

If one now translates semiotics by path-building or order-making or creation of directions, one does not have to specify if it is language or objects one is analyzing. Such a move gives a new continuity to practices that were deemed different when one dealt with language and "symbols", or with skills, work and matter. This move can be said either to elevate things to the dignity of texts or to elevate texts to the ontological status of things. What really matters is that it is an elevation and not a reduction, and that the new hybrid status gives to all entities both the action, variety and circulating existence recognized in the study of textual characters and the reality, solidity, externality that was recognized in things "out of" our representations. What is lost is the absolute distinction between representation and things - is exactly what ANT wishes to redistribute... (Latour 1996, pg. 375)

My study attempts to both "elevate things to the dignity of texts" and "elevate texts to the ontological status of things" by demonstrating how "texts" and "things" are nested in one another. My maps attempt to represent this in actor-networks, where texts are simultaneously objects and fictions, thus acting while representing. This simultaneity helps diminish the "absolute distinction" between representation and things. Once we acknowledge this distinction is weak and see how texts and events can pierce through the boundaries that attempt to maintain distinction, we enrich the literary endeavor of understanding fiction, the sociological endeavor of understanding modernity and its disasters, and the ability of the humanities to participate in the human endeavor of survival. This project methodologically and theoretically extends ecocriticism towards further conversations with social and literary theory, as Oppermann calls for. The texts in this study, as revealed by the networks I used to explore them, cross thresholds between experience and representation. By the fictional works being so closely related to science, history, or other experiences of reality, representation and experience, things and symbols, subjectivity and objectivity cease to be clear binaries and instead become networks of relationships.

One thing I have not addressed is the merit of any of these works of fiction. Are these stories any good? How might the instrumental value of art impact its quality? Murakami is a best-selling author, holding has many awards both for his individual works and for his career as a whole. Before adapting *after the quake*. Galati won a Tony Award for his adaptation of Steinbeck's *The Grapes of Wrath*. *A Tale for the Time Being* was a finalist for the Booker Prize

in 2013 and Ozeki's other works have been the subject of feminist and ecocritical scholarly inquiries. Both Murakami and Ozeki are recognized in scholarly and popular discourse. Rothstein's piece operates in an online reporting world rather than the literary fiction world where Ozeki and Murakami are located. Though sourced by famous authors and artists, the charitable collections also have different places in the literary world than *after the quake* and *A Tale for the Time Being*. The reputations and merits of these works varies, but does that have anything to do with whether or not we should read them, study them, or employ them for instrumental means? Of all of the works in my study, Ozeki and Murakami are the least explicitly instrumental and are considered among the best pieces of art by a literary fiction world. I personally found Ozeki and Murakami the most fun to read, the most interesting for studying the inherent qualities contained within their fictional worlds, and the most theoretically rich. Does this mean than literature that is, like *After the Big One* or *March Was Made of Yarn*, published with an agenda is somehow intrinsically worse than literature that is published for the sake of itself? Is it more important to have art that is considered *good* or to have art that can *do good*, if you had to choose? Though this study reveals a middle ground between these instrumental and inherent camps, questions regarding the quality of artworks ask what art and stories can **and should** afford a world unsettled by change.

While Rothstein and the charitable works have stated instrumental intentions for readership, Ozeki and Murakami each express personal intention for themselves as authors grappling with crisis. Does literature with an instrumental value for the author differ from literature with an instrumental value for the reader? Does it matter how many people are affected by a work of fiction? Part of a thorough instrumental exploration of these texts would be to track their publication, distribution, and readership to see precisely where and to whom they might have instrumental impacts. Though I address this briefly with my discussion of Rubin's translation and Galati's adaptation of Murakami, the transference of text and of disaster culture between places is indeterminate. To what extent can the Pacific Northwest learn from Japan in regards to disaster response or preparation through cultural artifacts like stories? Considering the audience asks what art and stories can offer **to whom** in a world unsettled by change. While these evaluative questions are missing from this study, studying the instrumental function of art and literature invokes questions of objectivity and subjectivity in the philosophy of art.

## Conclusion

This study engages with core questions regarding the value of the humanities and liberal education for people faced with acute tragedies and uncertain futures. In navigating instrumental and inherent values of the humanities, I find both in a study of earthquake literature. Applying ecocriticism to specific works of earthquake literature, I question underlying, mythological assumptions of environmental crisis prevalent in literary studies of the environment. I bolster my application of ecocriticism with social and literary theories, demonstrating how the field might incorporate theory and methods from contemporary environmental discourse. Instead of looking to the roots of environmental crisis, I use fiction to uncover contemporary experiences with natural disaster. I find that, through fiction, readers and writers alike access the rhythms of the earth, the intimate experiences of others, and future worlds of crisis.

By examining earthquake literature under a framework of ecocriticism, I establish the potential for literature to promote survival and resilience in crisis by representing and forging intimate connections and ruptured boundaries between earth systems, stories, and humans. While the texts represent how stories can promote human survival, I also want to acknowledge how the texts themselves are perpetuated. What does it mean to survive? The legends of the Japanese catfish and of Cascadia's thunderbird and whale inform contemporary fictions from Japan and the Pacific Northwest. They survive. Japan has often embraced the experience of disaster as a definition of culture. Versions of the dust covers of *after the quake, 2:46: Aftershocks*, *March Was Made of Yarn*, *Shaken*, and *A Tale for the Time Being* display the design of the Japanese flag, perhaps a statement of national dedication. Through stories, the literary world suggests the identity of Japan survives. Even Rothstein spends his five installments outlining the parts of Portland that survive the future quake. The survival of mythology, of nationhood, and of a literary tradition are part of the greater endeavor of human and cultural survival threatened by all matter of environmental and unjust futures.

The crisis experiences that are rendered in the earthquake fiction of my study reveal ways that disaster is world-altering, rather than world-ending. These fictional works show disaster transforming human lives in monumental and subtle ways. The writers pondering survival from every angle, evening turning their gaze to their own artistic acts. These authors, their works, and

us, their readers, act in networks where fictional dream worlds contain and revise even the starkest matters of the nonfictional waking world.<sup>38</sup>

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