

Redrawing the End of the World:
Children's Animation as Informal Environmental Education

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A Thesis
in
The Mel Hoppenheim School of Cinema

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Arts (Film and Moving Image Studies)
at Concordia University
Montreal, Quebec, Canada

January 2024
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CONCORDIA UNIVERSITY

School of Graduate Studies

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Children's Animation as Informal Environmental Education

and submitted in partial fulfillment of the requirements for the degree of

Master of Arts (Film Studies)

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ABSTRACT

Redrawing the End of the World: Children's Animation as Informal Environmental Education

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This thesis examines the potential for environmental animated media to be used as an informal educational tool for children. Through an examination of key animated works and their cultural contexts, I analyze the shifting ideologies within children's environmental media and investigate how animated films contribute to shaping children's perceptions of environmental issues and their agency in addressing them. Through studying the animation, production history and didactic storytelling techniques of *Captain Planet and the Planetears* (1991), *Ferngully: The Last Rainforest* (1992), *WALL-E* (2008) and *The Lorax* (2012), I explore how animated media has historically failed to create meaningful environmental discourse. In analyzing the spatial and non-didactic storytelling of the 2019 film, *Weathering With You* (2019), I argue that the film's non-didactic and vernacular (familiar, of the people) storytelling provides space for the exploration of alternative environmental education, through map-based and site-specific learning.

Acknowledgments

To my supervisor, May Chew, thank you so much for all of your research assistance and generous feedback throughout this thesis writing process. Thank you for your commitment to me throughout all the abrupt changes I made. Thank you for your patience and kindness.

To my reader, Marc Steinberg, thank you for all your wonderful comments. Thank you for getting me interested in the field of animation, a topic that I never imagined would be the topic of my MA thesis at the beginning of this degree.

Thank you to Max and Jess for the wonderful writing (and emotional) Zoom support. To my father, Larry, my sister, Katya, and my good friends Emma, Olivia, Rachel, Delia, Harper and Anna, thank you for being there for me during the last four years. I'm lucky to be surrounded by so much love.

To Alice, thank you for putting up with me reading my entire thesis out loud, interrupted by many, many personal anecdotes. I'm so happy to have been able to share this MA experience with you.

To my mother, Sandra Chang Kredl, thank you for always pushing me to reach my full potential. Your dedication to both me and to your work is an endless source of inspiration. (And thank you for answering all my frantic late night calls about qualitative research methods.)

To Katia, thank you for every time we talked each other down from environmental fear. Thank you for helping me feel hopeful about the future. I love you. I will always remember to think about the river.

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Introduction

In 1942, Walt Disney Productions released their fifth feature-length animated film, *Bambi*, portraying the life of the titular anthropomorphic deer and his forest friends. The film was celebrated for being “culturally, historically and aesthetically significant,” and added to the National Film Registry in 2011 (King). Perhaps the film’s most memorable scene portrayed a young Bambi and his mother running away from a hunter. A stark gunshot can be heard—Bambi’s mother dies. In “‘I Never Saw a Show as Good as Nature Show Before:’ Walt Disney, Environmental Education, and the True-Life Adventures,” Charles Dorn writes that “Disney had entered the American conscious as a conservation advocate with the release of *Bambi*, a film some have called ‘perhaps the single most successful and enduring statement in American popular culture against hunting’” (Dorn, 22). Since its beginnings, Walt Disney Productions has been engaged in the exploration and appreciation of the natural world. The company has pursued this subject through various angles, such as the 12-part *True-Life Adventure* series (1948), portraying the natural world and the creatures who inhabit it, with the ultimate goal of environmental education. In the decades following the release of *Bambi* and *True-Life Adventure*, animated representations of nature have changed drastically, alongside popular understandings of the environment and its relationship to humanity.

The emergence of the Industrial Revolution in the 18th century marked a critical moment in both geological and human history: the beginning of the Anthropocene (Steffen)¹. The proposed term was popularized in the 1980s, referring to a time in history in which the impact of human activity began to have a significant impact on the natural environment. In explaining the

¹ The start of the Anthropocene is debated amongst researchers, claiming that this period may have started as far back as the mid-Holocene, or late as the 1950. Will Steffen argues that this geological period occurred in the Industrial Revolution, but was greatly accelerated in the 1950s (Steffen).

history of human presence in environmental history, Dipesh Chakrabarty explains that “environmental history, where it was not straightforwardly cultural, social, or economic history, looked upon human beings as biological agents” (Chakrabarty 205). He explains that while humans have always been biological agents, “we have reached numbers and invented technologies that are on a scale large enough to have an impact on the planet itself” (Charkabarty 206). Simultaneously, the 1980s brought forth significant changes to Western media and economic sectors through the implementation of neoliberal politics and mass privatization, which subsequently led to the formation of major corporate conglomerates and the creation of stark socio-political and economic inequality throughout multiple parts of the globe. This significant shift transformed the political landscape of media and economics as we know it today. In many ways, this decade also altered how climate change was addressed and understood.

A 2008 report from the Intergovernmental Panel on Climate Change (IPCC) asserts that human-driven, greenhouse gas (GHG) producing activities, such as the burning of fossil fuels, have resulted in increases in ocean and air temperatures worldwide. Additionally, these activities have contributed to rising sea levels and the melting of ice (IPCC). As climate change continues to worsen, there has been a rise in adverse affective reactions to the environmental crisis, encapsulated by terms such as eco-anxiety, eco-doom and solastalgia. While these terms touch upon different emotional specificities, they collectively underscore a shared reality: adverse emotional responses elicited by climate change. In a climate of heightened and polarizing media coverage regarding the climate crisis², it is nearly impossible to avoid the issue. In "What to do With Climate Emotions," Jia Tolentino writes: "when it comes to climate change, the brain's

²According to a 2020 study, since 2011, "coverage of climate change began featuring more polarized partisan discourses than coverage in preceding years" due to the polarizing opinions on the topic between democrat and conservative factions in the United States (Chann)

desire to resolve anxiety and distress often leads either to denial or fatalism: some people convince themselves that climate change is not a big deal, or that someone else will take care of it; others conclude that all is lost and there's nothing to be done" (Tolentino). These forms of denialism signal a lack of discussion regarding the mediation of negative affective reactions to environmental crises.

The field of environmental education serves as a promising platform for the examination and management of concerns related to eco-anxiety. Global warming is a multifaceted and sensitive topic. The emotional reactions associated with the subject, such as fear and urgency, underscore the necessity for nuanced approaches to address the issues at hand. Environmental education can be both formal and informal. Formal environmental education generally relates to didactic, classroom-based educational frameworks, which often involve textbook-based lectures and assessments, including homework and examinations centred around the content covered in these lectures. Alternatively, informal education can be associated with the educational aspects of engaging with arts, culture, and entertainment. While methods and frameworks of informal environmental education vary greatly, the consumption and discussion of media with both didactic and non-didactic environmental messaging is undoubtedly a prevalent approach. Since the popularization of environmental activism, depictions of environmentalist narratives in mainstream children's animated media have become tools for informal education. Western media companies such as Disney, Comcast and TBS have produced numerous narratives warning against the dangers of anthropogenic climate change, with films and television shows such as *Captain Planet* (1990), *WALL-E* (2008), *The Lorax* (2012) and *Moana* (2016). Since the 1980s, there has also been a rise in Japanese animated media content addressing these issues, for

example with *Nausicaa of the Valley of the Wind* (1984), *Princess Mononoke* (1997) and *Weathering With You* (2019).

Through its inherently malleable form, the medium of animation lends itself to portraying human interactions with natural environments in innovative and imaginative ways. For this thesis, I question how environmental media can be used as a tool for informal environmental education. How does the methodology surrounding storytelling and learning vary between cultural contexts and networks of communication? How have contemporary politics and education models shaped these narratives and the animation techniques they mobilize? This thesis investigates didactic and non-didactic approaches to environmental animation, emphasizing the potential for animated media to serve as a tool for informal education through its ability to create flexible understandings of human-nature relationships. This thesis will investigate two case studies. First, I examine the shifting portrayal of capitalism and environmental issues through mainstream environmental animation created between the 1990s and 2010s through *Captain Planet* (1990), *Ferngully* (1992), *WALL-E* (2008) and *The Lorax* (2012). Second, I explore the non-didactic, vernacular storytelling and mapping techniques of Shinkai Makoto's 2019 film, *Weathering With You*, as a springboard for alternative, vernacular environmental education.

Neoliberal Environmental Policy and Ecocriticism

Widespread American fears around environmental crises in popular culture can perhaps be traced back to the 1962 publication of Rachel Carson's *Silent Spring*. This influential text caught the attention of American readers for its sobering investigation of the harmful effects of the pesticide, DDT, on both the environment and the human population. Carson's book initiated

mainstream environmental activism in America. In 1970, this momentum led to the establishment of the Environmental Protection Agency and the inaugural Earth Day was celebrated (xviii Lear).

While the environmental movement sustained widespread public and political momentum throughout the 1970s, the election of Ronald Reagan as president of the United States and Margaret Thatcher as Prime Minister of the United Kingdom in the 1980s saw a stark transformation in worldwide environmental policy and activism, alongside a mainstreaming of neoliberal policies and ideologies. The neoliberal policies of the 1980s saw a rise in privatization, as well as cuts in taxes, public services and the budgets of regulatory organizations, such as the Environmental Protection Agency (EPA) (Steger et. al 30). Additionally, "deregulation measures were applied to key industry sectors such as communications, transportation, and banking," causing monopolization within these sectors (Steger et. al 31). These shifts in policy, alongside the rise of corporate conglomerates, transformed the contemporary political landscape of media and economy.

Alongside these measures came changes to environmental activism, with a shift in focus from grassroots organizations to larger organizations, such as Greenpeace and Environmental Action. In "The American Environmental Movement: Surviving Through Diversity," Stacy Silveria explains that "these mainstream organizations formed the "Group of Ten" (G10), comprised of the CEOs of the ten largest environmental organizations," which "sought to exclude groups conducting, supporting, or advocating direct action against polluters, whalers, the military, and, even more troubling, against corporations" (Silveria 510). The corporatization of mainstream environmentalist discourse appeared to mimic that of corporate conglomerates.

However, independent grassroots organizations, as well as new literary and academic movements, also began to rise out of the new political landscape.

In his 1978 text, "Literature and Ecology: An Experiment in Ecocriticism," William Rueckert coined the term ecocriticism, defined as "the application of ecology and ecological concepts to the study of literature because ecology (as a science, as a discipline, as the basis for human vision) has the greatest relevance to the present and future of the world" (Rueckert 107). Since the publication of this text, the field of ecocriticism has grown exponentially, spawning a wealth of interdisciplinary research surrounding environmental studies, literature and other forms of media. Addressing the aesthetics of environmental discourse, Timothy Morton's *Ecology with a View: Rethinking Environmental Aesthetics* argues that human understandings of nature and its aesthetics are not in line with the values of environmentalist thinking, stating that "putting something called Nature on a pedestal and admiring it from afar does for the environment what patriarchy does for the figure of Woman" (Morton).

Beyond aesthetic considerations, many ecocritical texts consider negative affective reactions to the climate crisis and the ways these feelings can be confronted through the study of eco-literature. In *Slow Violence and the Environmentalism of the Poor*, Rob Nixon argues that environmental slow violence is difficult to prevent and remedy at a political level due to "last in, first out" thinking about the issues; climate change is treated as "urgent, but not yet critical" (Nixon 9). Politicians are not interested in their efforts benefitting those decades or centuries down the line. The idea that little can be done to change the outcome of the climate crisis, both at an individual and political level, within the current power systems in place is inherently disheartening. The duality of overwhelm and powerlessness leaves younger generations vulnerable to feelings of despair in relation to environmental activism. Furthermore, in

“Solastalgia: The Distress Caused by Environmental Change,” Glenn Albrecht proposes the term solastalgia, which he defines as "an intense desire for the place where one is a resident to be maintained in a state that continues to give comfort or solace" (Albrecht 45), stemming from “the lack of support and the alienation caused by political powerlessness" in the struggle to preserve the physical environment from the impacts of climate change (Albrecht 52). Anxious and fatalist reactions to the environmental crisis have become mainstream, seeping into how environmental issues are fought over and discussed. Through this thesis, I seek to explore how children's environmental animation, functioning as an avenue for informal education, engages with and confronts fatalism in the face of environmental catastrophe. Furthermore, in dialogue with my chosen texts, I will interrogate how neoliberal politics have shaped the narratives of environmental animated children's media and the ways in which this media has evolved alongside the ever-changing political landscapes surrounding environmentalism.

Environmental Animation History and Aesthetics

In "Film as Experiment in Animation," Gertrud Koch writes that "[life] is nature animated, and the film is the experiment that exposes this" (Koch 104). The field of animation theory contributes significantly to our comprehension of how animation's inherent formal flexibility facilitates aesthetic experimentation regarding portrayals of life, nature, and the subjects that embody it. Of these theories, especially helpful is the concept of plasmaticness, coined by Sergei Eisenstein in a 1941 essay, "On Disney," in which he writes that in animated forms, "we have a being represented in drawing, a being of a definite form, a being which has attained a definite appearance, and which behaves like the primal protoplasm, not yet possessing a 'stable' form" (Eisenstein 21). Eisenstein's understanding of the malleability of animation

highlights the medium's ability to formally innovate but also opens up discussions about what these innovations and experiments say about animation's relationship to automation. In "Plasmatic Nature: Environmentalism and Animated Film," Ursula Heise elaborates on this debate, writing that some scholars, such as Rey Chow, emphasized the dystopian nature of "mechanized body whose automatization is only the outward sign of its complete subjection to powers it cannot control" (Heise 311). Other scholars, such as Sianne Ngai, believe in the medium's "possibility of inhabiting social roles and the power structures they embody in innovative and liberatory ways" (Heise 311). In this thesis, I sketch a dialogue within animation scholarship concerning the plasmatic and adaptable nature of animated forms and their historic utilization in relation to narrating environmental themes. I will also apply these theories to the textual analysis of my chosen media.

In highlighting animated film's connection to environmental filmmaking, Nicole Starosielski outlines three important movements in the realm of animated environmental films in the West in "Movements that are Drawn." Firstly, the late 1960s to early 1970s featured works like *The Lorax* (1972), "[portraying] environmental transformation, typically an unseen process unfolding over long periods, as a dynamic visual phenomenon" (Starosielski 147). Secondly, the late 1980s and early 1990s emphasized the environment as entwined with social and political dimensions, "building on the strengths of earlier environmental animation in representing it as an elastic, potentially interactive space" (Starosielski 147) with films such as *Nausicaa in the Valley in the Wind* (1984) and *Ferngully* (1992). Finally, in the early 2000s, environmental animations, such as *The Simpsons Movie* (2006), received less attention for their potential to drive environmental change, receiving less attention from policy-makers (Starosielski 147). Starosielski's timeline, published in 2011, functions as a historical and contextual guide for my

research. Furthermore, I use this timeline as a springboard for my discussion of films released in the late 2000s and early 2010s, focusing on human-technology relationships within environmental narratives in the films *WALL-E* (2008) and *The Lorax* (2012).

Preceding the Western popularization of the technological debate in children's animated media in the late 2000s and 2010s, Hayao Miyazaki's *Castle in the Sky* (1986) explored the nature of technology and technological growth within an environmentalist framework. Miyazaki's films are foundational to the study of animated environmental media, especially in a Japanese context. In the foundation animation text, *The Anime Machine*, a comprehensive study of Japanese anime production and culture, Thomas Lamarre notes that *Castle in the Sky*'s discussion of technology "[implies] a *technological condition* rather than a *technological problem*," (Lamarre 50). Here, Lamarre underscores the importance of seeing technology as deeply integrated into the fabric of society, influencing behaviour and relationships in complex ways, instead of treating technology as a distinct problem with clear solutions. While my research will not delve into Miyazaki's work, I will engage with the crucial concept of technological condition vs technological problem in my discussion of human-technology relationships in *WALL-E* and *The Lorax*.

Miyazaki's *Nausicaa in the Valley in the Wind* (1984) and *Princess Mononoke* (1997) are equally recognized as significant environmental works. In *Environmentalism and the Animated Landscape in Nausicaa of the Valley of the Wind (1984) and Princess Mononoke (1997)*, Melanie Chan outlines the creation of animated landscapes within the two films, stating that "*Nausicaa* and *Princess Mononoke* invite us to consider the landscape as animated, as alive and as part of an interdependent web of life" (Chan 97). Subsequently, Chan explores the films' use of animism or the ascription of life to non-living entities. She notes that "[a]nimism continues to

play an important part in contemporary Japanese culture, particularly in terms of conceptualizing the relationships between technology and living beings" (Chan 98). I seek to engage with animism within the discussion of animated nature and technology in my analysis of *Weathering With You* in Chapter Two.

Environmental Education

In 1948, the Conference for the Establishment of the International Union for the Protection of Nature (IUCN) was held in Paris, marking an important milestone in the field of environmental education. This conference established a dire need for the protection of natural habitats, as well as the necessity of scheduling subsequent conferences as a means to foster growth within the fields of environmental protection and education (Carter et. al 4). In the decades that followed this conference, environmental education has transformed into a vital, interdisciplinary field of study, spanning a diverse array of age groups and levels of formality.

While the study of nature and the environment might be present within most formal North American education systems, the study of climate change remains controversial. In "Reshaping our World: Collaborating with children for community-based climate change action (2019)," Carlie D Trott writes that, in an American context, "climate change education in the formal classroom is often neglected, misrepresented, or underemphasized and few opportunities exist for children to engage meaningfully in action related to their education" (Trott 2). A 2022 study of science textbooks in the United States found that sentences referencing actionable climate change solutions decreased from 15% to 3% between the 1990s and 2020s (Ansari et al.) In understanding this decrease, Renee Cho posits that this issue may stem from American gas and oil companies' involvement in the creation and distribution of educational science textbooks,

providing biased information regarding environmental issues (Cho). Furthermore, Cho suggests that the increasing political divide on the subject of climate change has caused a decrease in environmental education in Republican states (Cho).

Regardless of whether schools offer environmental education, the didactic approaches often employed in education systems frequently overlook the diverse perspectives and experiences of its students. Didactic learning refers to the organization of teaching-learning-evaluation methods, prioritizing the dissemination of information and instructional delivery (Marius-Costel 26). While didactic learning may provide students with fundamental knowledge transferable to various contexts, it often excludes them from participation in the learning process. In "Imagining Participatory Action Research in Collaboration with Children: an introduction (2010)," Regina Day Langhout and Elizabeth Thomas write that "children are often not consulted or even asked to participate in civil society, nor in research that is about their lives. These omissions are likely the consequences of researchers' views of children, which are informed by societal beliefs" (Langhout et al. 2). Given the prevalence of widespread environmental anxiety, the inclusion of lived experience as a component of environmental education seems crucial. The concept of vernacular learning provides a promising alternative to standard educational didacticism with regard to the environment.. Vernacular education can be defined as place-based learning, which incorporates and values intergenerational knowledge and personal experience (Selby 9). Methods of incorporating vernacular learning vary from hands-on experiences with nature to mapmaking and storytelling. In Chapter Two, I seek to explore the ways in which vernacular storytelling in animated children's films can be studied and applied to practical environmental education activities. Moreover, this thesis aims to analyze both didactic

and non-didactic filmmaking approaches to environmental children's animation in order to better understand their potential application in informal environmental education practices.

Methodology

In 1978, Laurence Buell defined the term ecocriticism as "an umbrella term used to refer to the environmentally oriented study of literature and (less often) the arts generally, and to the theories that underlie, such as culture practice" (Buell 168). I use ecocriticism as an overarching theoretical framework through the use of environmental texts as a base for the analysis of my chosen media's production history, thematics and narratives. While, as Buell states, ecocriticism often refers to the study of literature, this thesis explores the ways in which the study of environmentalism can be studied through the medium of animated media. In light of the interdisciplinary nature of ecocritical writing, this thesis uses an interdisciplinary approach to studying the ways in which the medium of animation and the messages it produces link to the production and dissemination of environmental education.

In conjunction with ecocriticism, I use cultural studies to frame my research. In *What Is Cultural Studies Anyway?*, Richard Johnson describes cultural studies as a study of the "circuit of the production, circulation and consumption of cultural products" (Johnson 46). Johnson outlines this methodology using a diagram (figure 1.1), representing its multiple facets, stating that "[each] moment or aspect depends upon others and is indispensable to the whole" (Johnson 46). As the diagram proposes, the circuit of cultural studies first addresses the context of production and political economy of a text to better understand the motivations of media producers. Secondly, these texts can be read through various theories and lenses. Next, audience reception must be considered to better understand the ways in which the text is read at a wider scale.

Finally, the wider cultural impact of the text is considered, addressing how the text may impact the cultural production circuit in generations to come (Johnson 46)

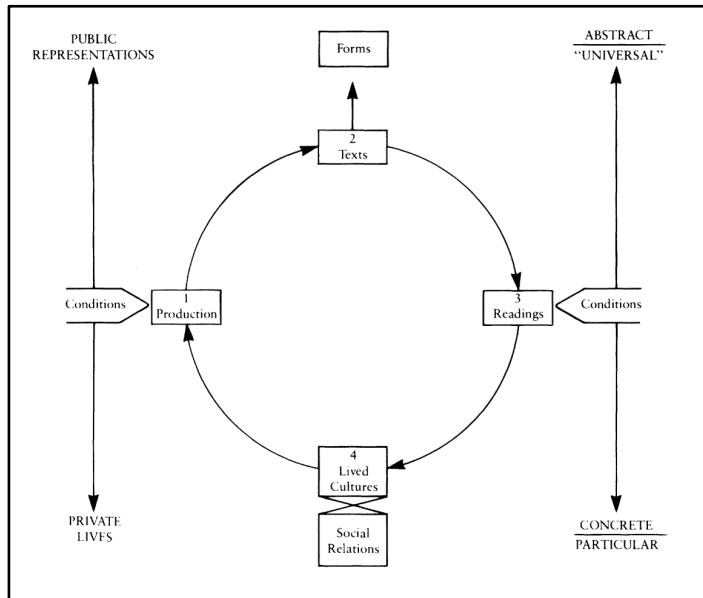


Figure 1.1: Cultural studies chart from "What is Cultural Studies Anyway?" (Johnson 46)

Much like ecocriticism, my application of cultural studies requires a multidisciplinary approach. Focusing on animated children's environmental film and television as my textual objects of study, I investigate the production and the political economy surrounding this media. I subsequently apply theories of animation and environmental education in order to inform the potential social ramifications of these media products, specifically with regard to how the latter impart environmental knowledge to their viewers.

As a throughline, I use narrative analysis as a means to better understand visual symbolism within my chosen media. Furthermore, I also apply theory surrounding animation, political economy and environmental education to inform and shape my research and analysis.

Through this multidisciplinary approach, I seek to create a richer understanding of the ecosystem of animated children's environmental media, from its production to the dissemination of its messaging through didactic and non-didactic means.

Chapter Structure

Chapter One interrogates the didactic nature of non-formal environmental education through a focus on popular American children's animation of the 1990s and late 2000s to mid-2010s. More specifically, I argue that between these two periods, there is a shift from individualistic to collective understandings of climate activism. I use the television series *Captain Planet* (1990) and the film *Ferngully: The Last Rainforest* (1992) as case studies of individualistic messaging and learning. These case studies view climate activism through the lens of neoliberal and guilt-based politics, utilizing animation techniques such as anthropomorphization as a means to break down environmental themes. I then contrast this approach with the shift in the late 2000s and early 2010s, where I use the films *WALL-E* (2008) and *The Lorax* (2010) to discuss this era of eco-animations which attempted to critique capitalist ideals, presenting superficial solutions without challenging the underlying structures which exacerbate global warming. Using ecocriticism, animation theory and political economics of communications as frameworks, this chapter argues that, despite the popularity of these eco-animation films, they failed to effectively convey the complexities of anthropogenic climate change and the human-nature relationship. I suggest that approaching these films with critical media literacy can offer valuable cultural insights for educating children about environmental issues.

Exploring the intersection of vernacular environmental education, human perception of space, mapping and the impact of climate change, Chapter Two examines *Weathering With You*

(2019) as a pedagogical reimagining of approaches to environmental learning. Furthermore, I explore how childhood experiences of climate anxiety and the imposition of personal responsibility can be challenged through animated children's media. Through the analysis of the film's vernacular storytelling and its portrayal of human-nature relationships within changing built and natural landscapes, this chapter argues that non-linear, vernacular pedagogy may foster a deeper understanding of climate change among school-age children, offering innovative frameworks for environmental education. Further, I approach this topic through the framework of mapping, as a tool for both analysis and education, as it applies to *Weathering With You*.

Chapter 1: “The Power is Yours:” The Burdensome Human Experience of Anthropogenic Climate Crisis

My childhood during the late 1990s and early 2000s was marked by a strange sense of existential dread. I was seven years old when my teacher played an environmental documentary in class, which ended with the claim that humanity will be extinct by 2050. After this formative encounter, every conversation, every piece of media I consumed, and every future plan was punctuated with a harsh realization: climate change will eventually end my life—unless I made some drastic changes. I would continue to watch environmental media for years to come, especially films like *Ferngully* (1992) and *Once Upon a Forest* (1993), which portray the sobering death of adorable animals, mass climate destruction and sludgy ruin. A lunch monitor would pull a carton of milk out of the garbage can and shame our class, scolding us by saying, “don’t be a litterbug. Be the change you want to see.” Environmental destruction became an everyday fear that would follow me well into my adult years.

While awareness of the environmental crisis in popular cinema dates back to the 1960s and 1970s, with the release of eco-conscious thrillers, such as *Soylent Green* (1972) and *The China Syndrome* (1979), popular children’s animation of the 1990s in America was marked by an increased production of environmentally-oriented content. The films and television shows in this latter period set out to both administer a sense of immediacy regarding the ongoing environmental crisis, as well as embed viewers with a sense of responsibility to create change. In the tradition of animated representations of the natural environment, these works utilized anthropomorphic non-human characters. Notably, many of these films and television shows, such as *Ferngully* (1992), *Once Upon a Forest* (1993), *The Rescuers Down Under* (1990) and *Captain Planet and the Planetears* (1990), employed anthropomorphic depictions of pollution as

a means to make environmental harm more tangible. These cartoons also mobilize the seemingly empowering messaging that the viewer, as an individual, holds the power to change the outcome of the environmental crisis.

Since the popularization of environmental children's animation in the 1990s, there has been a shift in discourses surrounding how children can and should react to climate change. In the late 2000s and early 2010s, films like Disney's *WALL-E* (2008) and Universal Studios' *The Lorax* (2012), moved away from the discussion of individualistic solutions, instead problematizing systems of capitalism and technological dependence as a whole. These films call on their audiences to criticize the ways in which capitalist systems understand humans as consumers first and people second. This is made clear through both the films' plots and the homogenization of the animation style in the human characters. Given this shift in discourses, it is essential to remember that the films and television shows discussed in this chapter were created within neoliberal, green capitalist frameworks reinforced by media conglomerates, such as Disney and Comcast. While these films are popular subjects within discussions of environmentalism and children's popular culture, being critical of the ways these companies mobilize their messages—and to what means—is essential when discussing the potential of these films as educational tools.

This chapter examines the evolving environmental messaging in children's animation from the 1990s to the late 2000s, emphasizing the transition from the presentation of individualistic solutions to critiques of capitalist systems and technological dependence. I argue that studying the relationship between *Captain Planet*, *Ferngully*, *WALL-E* and *The Lorax*, in relation to the corporations that produce them, can be an effective springboard for media literacy education as it relates to corporate activism and environmental education. To do this, I will first

map out the ways in which the animated children's environmental media of the 1990s utilized neoliberal politics and the anthropomorphization of villains to create guilt-based understandings of environmentalism for children. I will then discuss how films of the late 2000s and early 2010s shifted their focus to problematizing capitalist tech-utopias, in films like *WALL-E* and *The Lorax*, providing children with bandaid solutions instead of challenging the structure of the systems they superficially problematize. Finally, through understanding the ways that these popular eco-animation films do not effectively create an understanding of anthropogenic climate change and the relationship between humans and nature, I argue that approaching these films through the lens of critical media literacy may offer invaluable cultural knowledge for the environmental education of children.

The 1990s: Nostalgic Sludge Monster

Anthropogenic climate change can be defined as climate change caused by the burning of fossil fuels and other human-related activities stemming from the "Anthropocene," the proposed name for the epoch in which the impact of human activity has significantly affected the natural environment (Issberner et al.). While the concept of the Anthropocene suggests that human activity will greatly accelerate environmental destruction and the potential for environmental apocalypse, many mainstream solutions provided by media outlets and governments, such as the reduction of personal waste, have historically been co-opted by large corporations, such as BP. In a 2021 *The Guardian* article, "The forgotten oil ads that told us climate change was nothing," Geoffrey Supran and Naomi Oreskes explain that "the fossil fuel industry has perpetrated a multi-decade, multibillion-dollar disinformation, propaganda and lobbying campaign to delay climate action by confusing the public and policymakers about the climate crisis and its

solutions" (Supran and Oreskes). The authors highlight the history of these events, from BP's creation of the individual carbon footprint to corporate greenwashing by companies such as ExxonMobil (Supran and Oreskes). It can be argued that the corporatization of the environmental movement at the hands of the fossil fuel industry has shaped the ways the climate crisis is addressed and understood by the public. Subsequently, these understandings have influenced the production of popular children's environmental media revolving around fears of environmental catastrophe, from this media's environmental messaging to its character licensing.

While popular environmentalist discourse, and the children's media stemming from it, have been undoubtedly shaped by large corporations, early children's environmental media nevertheless managed to instill a significant sense of awareness within the movement. In 1971, one year after the first Earth Day took place, Dr. Seuss published the children's picture book, *The Lorax*, a cautionary tale about the environmental dangers of the logging industry. The book depicts The Once-Ler's rags-to-riches tale of success, achieved through the cutting down Truffula trees to create the multi-use product known as a "sneed." Ignoring warnings from the Lorax, a small forest critter who "speaks for the trees," the Once-ler's journey to success leaves the forest in a state of environmental disarray. The book ends with the quote: "unless somebody cares, the situation will not improve. The Once-ler then gives the boy the last Truffula seed and urges him to grow a forest from it, hoping that the Lorax and the animals will return" (Seuss 64). This quote effectively echoes the sentiments of the environmental movements of the 20th century. Patricia Bromley et al. state that through a

"shift to notions of the human individual as an empowered actor, themes and rhetoric in environmental education moved away from passive approaches

emphasizing factual knowledge, such as naming birds and trees, toward a more active pedagogy emphasizing, for example, making concrete lifestyle changes to reduce waste” (Bromley et. Al., 522)

These “concrete lifestyle changes,” include encouraging individuals to reduce waste, stop littering and conserve energy.

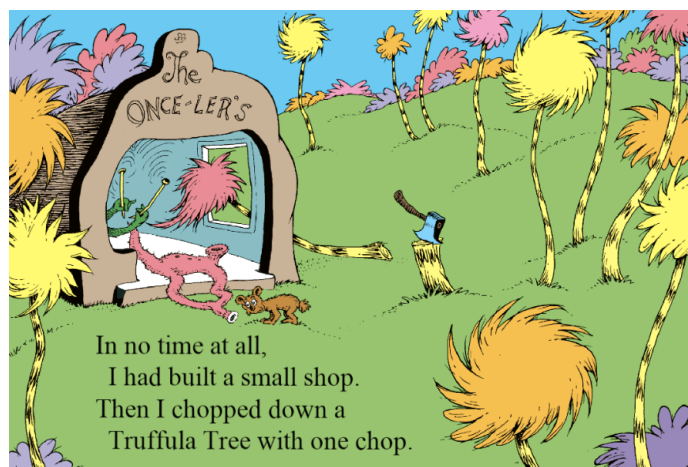


figure 1.2: the Once-Ler turns truffulas into sneeds

In 1953, a group of American corporations, including Coca-Cola and PepsiCo, founded the nonprofit, Keep America Beautiful Inc. (KAB), which sought to "bring the public and private sectors together to develop and promote the idea of national cleanliness and litter prevention," according to their website, keepamericabeautiful.com. In actuality, the creation of KAB stemmed from fears on the part of major plastic and waste-producing corporations, which were threatened by the creation of new legislation to curb pollution. These included a 1953 Vermont reusable packaging legislation, which was successfully blocked with the help of a public service announcement (PSA) created by the nonprofit, claiming that waste and litter were consumer-based issues, instead of a corporate one (Davis). Since the early days of environmentalism, major corporations have been at the forefront of environmental PSAs and greenwashing tactics, seeking to hide their agendas under the guise of activism.

In 1971, KAB, released the infamous “People start pollution. People can stop it” television PSA. The commercial depicts Espera Oscar de Corti, an actor of Italian American descent, as an Indigenous man, standing on the side of a road, shedding a tear as a passer-by throws litter out their window. While the sentiment of environmental campaigns and media were effective in mobilizing environmental movements and widespread sustainability-related ideas, the concept of the individual environmental agency, in many ways, backfired on the movement. The choice to cast de Corti as the Indigenous man also points to a lack of willingness to consider legitimate Indigenous experiences of climate change, creating a narrative that benefits the corporations behind KAB. In 2023, the rights to “People start pollution. People can stop it” were transferred from KAB to the National Congress of American Indians (NCAI), leading to the cessation of circulation of the PSA (The Associated Press). While the PSA is no longer in circulation, the campaign was wildly successful³, leading to the proliferation of the idea that climate change is the sole responsibility of the consumer in the years to follow its release.

Other large industries also caught on to the effectiveness of displacing environmental responsibilities from the producer to the consumer. In the 2021 *New York Times* article, “Worrying About Your Carbon Footprint Is Exactly What Big Oil Wants You to Do,” Auden Schendler writes that, in 2004, “BP hired the public relations firm Ogilvy & Mather to improve its image, in part by conveying the message that consumers of oil and natural gas bear the responsibility for their greenhouse gas emissions (...) the result was BP’s ingenious carbon footprint calculator” (Schendler). Although the personal carbon footprint may be useful in understanding one's greenhouse gas emissions, it also hinders public understanding of

³ The advertisement was so widely broadcast that in the mid 70s, Ad Council administrators claimed that “TV stations have continually asked for replacement films' of the commercial, 'because they have literally worn out the originals from the constant showings” (Dunaway).

environmental activism, through its further emphasis on individualization and the normalization of corporate-led activism. Fears arising from the concept of anthropogenic climate change and its implied sense of personal responsibility were present in the years leading up to the creation of the personal carbon footprint, notably in the eco-animated films of the 1990s.

1990s: Nostalgic Sludge Monsters

Captain Planet was created in 1990 by then-Vice President of Environmental Policy at TBS, Barbara Pyle, and media mogul Ted Turner. The series revolves around five “planetees,” a group of teenagers who each possess superpowers related to one of the five natural elements: wind, air, fire, water and heart. These planetees, along with the occasional helping hand of superhero Captain Planet, are tasked with defeating a group of reoccurring “eco-villains,” humanoid creatures who take pleasure in causing environmental harm. In a 2021 interview with *Grist* magazine, Pyle stated that the show's mission was to "inspire and to educate the next generation of environmental activists" (*Grist*), elaborating that many of the show's themes and characters were based on both "The Global 200 Report to the President," commissioned by the Carter administration in 1980, and many real-life global environmental activists, such as Chee Yoke Ling and Paulinho Paiakan (*Grist*).

While these characters were inspired by environmental activists, they were also designed and animated to portray certain messages to their audiences. To understand these messages, we must first understand the context of the animation styles mobilized in eco-animated films. In “‘Movements That are Drawn’: A History of Environmental Animation From The Lorax to Ferngully to Avatar,” Nicole Starosielski maps out the history of animated depictions of environmentalism from the late 1960s until the 2010s, defining this animated subgenre as:

“a genre of environmental media that uses animated form (and its strengths of abstraction and simplification) to deliberately construct knowledge about the social and ecological processes that affect us and/or the character and therefore assist in the creation of environmental subjectivities” (Starosielski 146).

Here, the environment exists not only as setting but as a subject with agency, through techniques such as anthropomorphization, the assigning of human-like characteristics to non-human entities, which allow for further and more direct interactions between human and natural subjects.

Furthermore, pollution itself becomes not only a subject, but a primary villain.

Anthropomorphized pollution villains exist as imposing threats on the natural landscape that protagonists were required to destroy in order to restore the well-being of the land. In *Captain Planet*, these villains are oftentimes humanoid creatures, such as Verminous Skumm, a humanoid rat, and Hoggish Greedly, an obese man with pig-like features.

Pyle's character creation, based on the lives of the individual climate activists, is also important to consider in the discussion of the show's politics, as *Captain Planet* very prominently mobilized an “us vs. them” mentality, in which the “them” is the eco-villain, standing in for a complex system interwoven with larger systemic issues. Instead of unpacking some of these larger systemic issues, or even presenting these issues as being complex, this show relies on its oftentimes one-dimensional villains. Starosielski touches on the criticisms that the show faced for its simplistic depiction of the global environmental crisis, quoting Donna Lee King's idea that “through its contradictory promotion of both conservation and consumption and by exposing children to huge complex environmental problems but providing them only with simplistic solutions, *Captain Planet* and the liberal environmental ethic provide salve but little substance for avoiding future environmental disaster” (qtd. in Starosielski 148). Through this intentionally

mixed messaging, viewers become less able to grasp their role within the fight against climate change, which ultimately benefits the institutions and corporations that create this media.

Much institutional and corporate environmental activism is based on neoliberal conceptions of environmentalism. In "Neoliberal Environmentalism, Climate Interventionism and the Trade-Climate Nexus," Christopher Dent explains that neoliberal environmentalism "offers a non-radical, less disruptive approach to addressing important challenges like climate change based on established policy conventions, including the continued pursuit of economic growth and capitalist accumulation albeit in 'greened' forms" (Dent 3). While the ideology of neoliberalism highlights the importance of individual liberties, the imposition of individual responsibility is also reinforced. While providing base levels of environmental education, popular environmental media and ideologies remain rooted in the aim to shift blame from major waste producers to the individual consumer; this is no different in the case of *Captain Planet*. The creation of these neoliberal ideologies embedded within the series reflects its production—the show was created by media mogul and billionaire Ted Turner, known for founding the cable channels CNN and TBS. Turner is also recognized for his involvement with environmental philanthropy,⁴ with his creation of the Captain Planet Foundation for Environmental Education in 1991 and the United Nations Foundation in 1998, which sought to assist the United Nations in their quest to aid humanitarian and environmental issues (Philanthropy Impact).

In *Last Stand: Ted Turner's Quest to Save a Troubled Planet*, Todd Wilkinson details Turner's grappling with the connection between environmentalism and capitalism, from his position as a media mogul and billionaire. Turner comes to terms with the maxim, "capitalism isn't the problem, it's how we practice capitalism" (Turner IX). He discusses his previous

⁴ Many articles published about Turner's philanthropy are published on CNN's website, as well as the webpages of Turner's own non-profits, leading to questions about the ethics and validity of Turner's philanthropist claims

admiration for Ayn Rand, who created the philosophy of Objectivism in the 1940s, "advocating the virtues of rational self-interest—virtues such as independent thinking, productiveness, justice, honesty, and self-responsibility" (Biddle 7).⁵ Similarly, in *Captain Planet*, capitalism is not the problem; it's instead Verminous Skumm, the mutant sewer rat, obsessed with "urban disease." It's also Hoggish Greedly, the cartoonishly overweight pig-like man who is greedy and a not-so-subtly reference to the image of a "fat cat." These villains convey how capitalism has never been the problem; the problem has simply been those who practice it poorly. This ideology protects Turner as a multi-billionaire. He remains fit and generous like a planeteer, bearing no resemblance to those we understand as the actual eco-villains.

The representation of eco-villains as malevolent human-animal hybrids can be problematized even further when examining Pyle and Turner's other characters. Sly Sludge's most notable quality, much like Hoggish Greedly (figure 1), is his obesity, which stands in for the idea of corpulent greed and malevolence. Dr Barbara Blight (figure 2), conversely, is a "snarky" and beautiful scientist, sporting an overtly sexual body suit. The caricature-esque attributes of these characters reflect the intentions and ideological inclinations of the show's creators. Gerry Canavan emphasizes that the "hyper-individualistic sense of personal responsibility can be found in the villains in the series as well: they pollute the world not because of the political-economic world order from which they originate but because they are deranged psychopaths" (Canavan 6). The gendered and fatphobic renditions of the show's eco-

⁵ Turner eventually declares a change of stance when it comes to Rand and targets her brand of libertarian self-interest as the core issue of capitalism (Turner XI).

villains further shift the blame of capitalism and environmental destruction on the consumers—those who succumb to the allure of systems designed to seduce.



Figure 1.3: Hoggish Greedly



Figure 1.4: Dr Barbara Blight

In *Captain Planet*, the Planetegers are presented as inherently good and giving. They live to serve the environmental cause and remain positive and motivated in the face of environmental destruction. The characters, each of whom represents a continent, are animated to be youthful, slim and conventionally attractive, especially in relation to their villainous counterparts. Each character possesses a unique ability tied to their continent of origin, yet the interactions of the characters are seldom discussed. Character traits are primarily based on cultural stereotypes and generalizations and the show misses the opportunity to further explore the dynamics of global relations. For instance, Kwame, the earth Planeteger representing Africa, pragmatically approaches tasks. Conversely, Wheeler, the fire Planeteger from America, embodies impulsiveness and occasional laziness, yet remains ultimately loyal and endearing.

This dichotomy between Kwame and Wheeler mirrors very real dynamics present between countries in the Global North and South. In the introduction to *Slow Violence and Environmentalism of the Poor*, Rob Nixon writes on former World Bank leader Lawrence Summers' advocacy of exporting and dumping toxic waste in Africa, under the guise that it

would "help correct an inefficient global imbalance in toxicity" (Nixon 1). Here, Nixon discusses this proposal as a key example of top-down, Global-North thinking. He argues that the connections Summer drew between "aesthetically unsightly waste and Africa as an out-of-sight continent" (Nixon 2) amounted to little more than a strategy to appease Global North environmental concerns. That Wheeler is an endearing yet challenging and impulsive member of the group is telling of the show's understanding of American environmental activism, yet it remains an unexplored subtext within the show's narrative. While *Captain Planet* points to the importance of respect and cooperation amongst global nations, it fails to draw attention to the ways in which Global North countries have historically worsened conditions in the Global South through environmental displacement. Instead, the creators choose to depict a utopian scenario where all characters have the same intentions and contribute equally.

Beyond the animation of the show's characters and character dynamics, the show's focus on individualistic solutions is presented quite forwardly in the show's opening credits. Here, Captain Planet proclaims: "*The power is yours!*" While this sentiment intends to empower viewers to find ways to make environmental changes, the show unfairly presents the task of changing the outcome of this global crisis as something achievable through enough individual actions and willpower. In "Things are Getting Worse on Our Way to Catastrophe: Neoliberal Environmentalism, Repressive Desublimation, and the Autonomous Ecoconsumer," Alex Stoner writes that, in the United States, individuals are often "convinced of their autonomy through consumerist activity" (Stoner 4). Furthermore, through the production of products related to environmental activism, consumers are given the "freedom" to make "ethical" and environmentally conscious decisions.

With *Captain Planet*, TBS turned an additional profit from licensing and merchandising its characters. In *Power Play: toys as popular culture*, D Fleming discusses the toys produced for *Captain Planet*. In her breakdown of their various merchandise, she focuses on the character of Sly Sludge, a character who proudly dumps toxic waste for his own pleasure. Fleming describes the plastic toy rendition of the character as a “grossly overweight, drooping-jowled man in industrial overalls, with a huge drum of ‘sludge’ (which can be mixed up from a packet provided!)” (Fleming, 49). The toy represents the concept of excess in more than one way: through its connotations, which Fleming describes as that of “a corpulent figure who uncontrollably and gleefully leaves his excremental sludge all over the place,” and second, by being made into a plastic toy as part of the effort to combat excess. He is metaphorical sludge. Harkening back to Canavan’s idea of eco-villains as “deranged psychopaths,” the corporate activism depicted in the show has inadvertently perpetuated exactly what Turner aimed to combat. However, it is also fundamentally misunderstood that environmental violence is a systemic issue, rather than a conflict between individuals. The caricaturization of the eco-villains also works to further blur viewers' understanding of what corporate greed may look like. While mass polluters may come in the form of individuals such as Sly Sludge, they also come in the form of moguls like Turner, who use environmental activism to mask their destructive activities.

Similarly to *Captain Planet*, the American-Australian co-production, *Ferngully: The Last Rainforest*, caught the attention of the environmentalist movement in the 1990s. Starosielski explains that, following its release, *Ferngully* “was shown during the groundbreaking UN Earth Summit in Rio de Janeiro. [The film] was written up in select policy reports as recommended viewing and was adopted as the ‘FernGully’ allegory in some anthropology texts” (Starkosielski 147). The film was created by Disney animator, Bill Kroyer, who quit the company to work on

his own projects, alongside his wife, Susan Kroyer, through the animation studio, Kroyer Films. A *Vanity Fair* article, "*FernGully* at 25: How an Upstart Disney Rival Created a Millennial *Silent Spring*," maps out the production of *FernGully*, stating that the concept of the story came from Australian producer, Wayne Young's, wife, Diane Young, who wrote bedtime stories for her children taking place in the Australian rainforest. Young states that, while these stories were written in the 1970s, "[they] had to wait until Hollywood star power got behind the environment" (Tattoli). Staroksielski explains that the release of *FernGully* in 1992 marked an important step forward for the fields of both animation and environmentalism, as it became the first feature-length film to be presented at the United Nations General Assembly Hall (Staroksielski 147) and garnered significant recognition as an influential environmentalist work. It even earned the moniker, "millennial *Silent Spring*" (Tattoli).

The film follows Krista, a fairy, native to the rainforest, FernGully. When a group of loggers enter the forest, cutting down many of the trees, they accidentally unleash the anthropomorphic eco-villain, Hexxus, who begins to wreak havoc on the land. Meanwhile, Krista has accidentally shrunk Zac, a logger, down to the size of a fairy. As they begin to get to know one another, quickly forming a romantic connection, she must show him the impact of harmful human interactions with nature. Here, the audience is presented with a dichotomy of environmental activism: individuals are experiencing the immediate impacts of climate violence, residing in environmentally threatened conditions, and those who only become environmentally conscious after experiencing the trauma of apocalyptic environmental destruction, particularly those living in areas less frequently affected. Krista feels a connection to nature, while Zack must see the burning forest and toxic fumes to restore it.

Krista's tasks here are threefold. Firstly, she must teach Zac about destructive human behaviour at an industrial level. Secondly, she must teach Zac how to treat nature with respect as an individual. Finally, she must destroy Hexxus to restore balance and order in the rainforest. While the first two tasks seem far less daunting than the single-handed elimination of a monster that essentially stands in for all pollution, this film places an incredible amount of responsibility into the hands of a single person. Digging deeper into the ways in which animation is used as a medium to portray anthropogenic climate violence, the use of the anthropomorphic eco-villain Hexxus, coupled with the characters of the loggers standing in as villains holds significance. This approach confronts audiences with a tangible portrait of anthropogenic destruction.

Hexxus, as a character, is frightening in the way he moves through the sets of the film, constantly moulding and transforming. He is malleable and has both human and monstrous features. The anthropomorphism and plasticity of nature are discussed in Ursula Heise's "Plasmatic Nature: Environmentalism and Animated Film." Here, Heise explains the tradition of malleable and ever-changing non-human entities and natural environments within animated films. Defining the plasmatic quality of non-human subjects, Heise quotes Eisenstein, who writes: "here we have a being represented in drawing, a being of a definite form, a being which has attained a definite appearance, and which behaves like the primal protoplasm, not yet possessing a 'stable' form" (qtd. in Heise 310). In "Plastic Man and Other Petrochemical Fantasies," Daniel Worden elaborates that Eisenstein believed this plasmaticness of nature could be "a return to world of complete freedom" from "of a society that had completely enslaved nature" (qtd. in Worden 98). Worden goes on to argue that, from "our contemporary vantage point, the plasmatic and its ex-pressive fluidity seems less of an expression of primal nature than an expression of the midcentury emergence of plastics as consumer goods" (Worden 98).

Through the slithering, ever-changing and plasmatic nature of Hexxus, one might consider the sinister plasmaticness of plastic itself. As an example, an Environmental Science and Technology study found the average American ingests and inhales approximately 74000 microplastic particles annually (Cox et. al A). The plasmaticness of Hexxus can be read as a stark reminder that pollutants themselves are pervasive, subtly infiltrating human bodies and the environment.

Taking these ideas into consideration, it is interesting to consider the role of eco-villains within children's environmental content of the 1990s, as they are inherently linked to human activity and the idea of humanity "enslaving nature," from an Anthropogenic standpoint. Hexxus, for example, is a creation of humanity—a product of human invention that has reached a scale at which humans have become geological agents. He is free and fluid, yet he represents human's reliance on plastics and petroleum. In the song *Toxic Love*, performed by Tim Curry, Hexxus states: "greedy human beings will always lend a hand with the destruction of this worthless jungle land and what a beautiful machine they have provided to slice a path of doom with my foul breath to guide it." While the tangible monster is the primary target to potentially end climate violence here, there is also much less of an emphasis on capitalist greed as a case-by-case issue—no matter the individual at the top, we are all complicit in environmental destruction.



Figure 1.5: Hexxus performing *Toxic Love*, *Ferngully*

The animation of Hexxus' song is confusing—Hexxus' plasmaticness transforms him from frightening, to handsome, to predatory. Furthermore, Tim Curry's portrayal of Hexxus, alongside the character's slimy, fluid animation, creates a hint of sexual transgression. Although reminiscent of Curry's portrayal of Dr Frank N. Furter in *The Rocky Horror Picture Show* (1975), the intentions of this sexualized spin on the character are unclear. Curiously, Zac's relationship to Krista is considered "pure," and grants them the ability to save the forest, whereas falling for Hexxus' charm would be seen as "unnatural." This dichotomy is intriguing, given Hexxus' queer-coded portrayal as flamboyant and formless. It could be argued that the film's homophobic undertones assume an inherent view of homosexuality as deviant, therefore attaching a sense of deviance to the act of pollution itself. Hexxus tantalizes the humans at the worksite, claiming "ooh you'll love my ah ah ah toxic love." The temptation of corpulence and greed in the song mimics the intentions of the eco-villains in *Captain Planet*, through a notably more fetishized lens. Those who would fall victim to Hexxus' charms are all at once complicit and not—they have created a monster so strong that they can no longer control its actions. Yet, it is Krista and Zack's sole duty to break his spell.

A study conducted by Kim-Pong Tam at The Hong Kong University of Science and Technology, presented in "Anthropomorphism of Nature, Environmental Guilt, and Pro-Environmental Behavior" focuses on the human experience of images of climate crisis when the non-human subjects are anthropomorphized. Characters like Bambi can be understood as creating a sense of guilt in their audiences, through the act of killing off characters with tangibly human-like characteristics. Through the tangibility and individualization of the eco-villains, *Ferngully* and *Captain Planet* create a sense that these larger, more complicated issues can be solved rather simplistically through one-off combat (Tam 3). The viewer's sense of guilt would

then stem from the impossibility of this task, as environmental violence is a complex and multifaceted issue. While the audience is led to feel personally responsible for creating changes, the solutions they are offered through these films and television shows are either minute, such as recycling, or wholly impossible, like harnessing the magic of natural elements.

These films seem to not only sidestep larger issues such as capitalism and colonialism but also play into them. In “Unless Someone Like You Cares a Whole Awful Lot: Apocalypse as Children’s Entertainment,” Gerry Canavan states that children’s cautionary environmental films “find children hailed simultaneously and paradoxically as the consumers of impending catastrophe and as the potential political force that must be called on to prevent the disaster” (Canavan 4). It has become incredibly obvious in the decades since the release of the aforementioned media that this fabricated sense of personal responsibility and misrepresentation of capitalist greed has had negative effects on the movement as a whole. While Tam concludes that “the experience of environmental guilt [is] associated with engagement in pro-environmental behaviour” (Tam 1), the guilt itself remains within the individual, the consumer.

The 2010s: Tech Dystopias and the Return to Nature

Since its inception, Walt Disney Studios has been at the forefront of popular children’s nature-related media and the ways in which the corporation discusses human-nature relationships have had to shift alongside these developments. The company, known for its portrayal of delicate ecosystems, such as the forest in *Bambi* (1942), has in more recent years portrayed futuristic technological landscapes in films like *WALL-E* and *The Lorax*, perhaps relaying 21st-century anxieties about technological growth.

With increasing access to information as well as communities of like-minded individuals, new media platforms can create the illusion of wide-reaching, affirming spaces for community activism. While this is certainly a best-case-scenario view, digital culture is not immune to the grip of neoliberalism. It can be argued that neoliberal new media has shaped how contemporary communities learn and think. In *Updating to Remain the Same*, Wendy Chun discusses “the power of our imagined technologies and networks,” and the ways that they “ground and foster habits of using” (Chun, 4). She goes on to state that, in the world of neoliberal new media, “Habit + Crisis = Update [which] makes clear how networks do not produce an imagined and anonymous ‘we’ (they are not, to use Benedict Anderson’s term, ‘imagined communities’) but rather, a relentlessly pointed yet empty, singular yet plural YOU (...) through habits, users become their machines” (Chun, 6). As a culture, ideas of individuality and community are conditioned by learned behaviour. New media communities do not necessarily emerge through the genuine creation and merging of ideas and values. Instead, we are often led to accept information and communities algorithmically selected for us as individuals, which can create a false sense of agency.

Similarly, in the last 30 years of filmmaking, there has been a shift from focusing on what children can do as individuals to the ways in which they can work as a community. Computer-generated animated films like *WALL-E* (2008) and *The Lorax* (2012) focus on characters fighting unjust systems run by greed and capitalism. While *Captain Planet* and *Ferngully* focus on preserving and protecting Earth from environmental catastrophe, *WALL-E* and *The Lorax* are both set in post-nature environments, exploring a societal overdependence on technology and a need to return to nature. While the environmental issues portrayed in the 1990s could easily fit into the "us vs. them" conflict structure, the conflicts in *WALL-E* and *The Lorax*

appear to be more communal. These narratives also suggest that, as a species, we have strayed too far and must revert to "traditional" ways of life.

Both films follow similar premises—a protagonist finds cracks in the system of a futuristic tech utopian society, completely disconnected from the natural world. The protagonists then convince their respective communities to return to nature. In *WALL-E*, the titular robot, who has inhabited a barren, polluted Earth, finds a single seed—a sign of natural life—and uses it to convince the masses on the spaceship, The Axiom, to return to Earth and start anew. The 2012 adaptation of *The Lorax* follows a twelve-year-old citizen of Thneedville, Ted, who lives in an insular community, in which nature is commodified and sold back to his people. With the help of the Once-ler, he uses a single Truffula tree seed to convince the people of Thneedville to return to nature.



Figure 1.6: The Once-ler's sneed factory, surrounded by truffula trees

These films differ from the earlier environmental animated films in the way that they seemingly target systems at large, as opposed to individuals. While individual characters like WALL-E and Ted are still burdened with some sense of individualized responsibility, the later acts of the films forefront the importance of community efforts and technology and capitalism as

systemic issues, rather than issues of individual greed. In the age of late capitalism and big tech, overconsumption and over-dependence on technology no longer seem to be warnings, a message that is made clear through the post-nature narratives of *WALL-E* and *The Lorax*. While the scenarios in these films are certainly exaggerated, they also serve to diffuse the message that we are not far off from being the agency-less consumers portrayed on screen.

While these films have clear pro-environmental messaging and are critical of capitalist systems, they are produced by Disney and Comcast, two of the largest media conglomerates in America. In 2005, Bob Iger became the CEO of The Walt Disney Company, leading to the swift acquisition of companies such as Pixar in 2006, Marvel in 2009 and 21st Century Fox in 2019 (thewaltdisneycompany.com). During this time, *WALL-E* was produced through Pixar, post-Disney acquisition. Two years later, Illumination Studios was founded by Chris Meledandri, ex-president of 20th Century Fox Animation. The studio was founded as the family entertainment division of NBCUniversal, a subsidiary of Comcast. In 2012, Illumination released a feature-length adaptation of *The Lorax*.

Through this new generation of environmental animation, new questions arise about how we understand corporate environmentalism and how it targets the children who consume this media. How do these companies sell these community-driven environmentalist animations in order to both question and maintain the status quo of new media neoliberalism under the guise of "ethical" media and consumption? How does the reality of new media neoliberalism seep into the narratives of both *WALL-E* and *The Lorax*? I argue that, through using these films as tools for corporate branding and activism, these films can maintain a twofold relationship with their audiences: they directly create a message about the audience's role as a consumer while less

directly creating carefully crafted discourses to maintain their status quo as leading media corporations, through pro-environmental corporate branding and greenwashing.

When it was released in 2008, *WALL-E* was met with praise from both critics and audiences. The film, portraying America as a helpless, obese society, blissfully living in a technological world without the need for thought or agency, was seen as a bold cautionary tale about technological dependence and environmental concern. In a *New York Times* review of the film, A. O. Scott praises the film for its ability to portray its environmental message without scolding its human characters, and therefore, its audience, writing that the residents of The Axiom "[are] us, in other words. And like us, they're not all bad" (Scott). This quote highlights the general sentiment of viewers tired of seeing themselves generalized as the cause of anthropogenic climate change, given the larger forces at play, including large corporations and rapid technological development.

In *WALL-E*, the titular character's existence consists primarily of labour. He is a trash compactor by trade. He is also the only hope for humanity to reclaim the land that they have destroyed. Furthermore, regarding the technological shift of the early 21st century, he is also a transitional object and subject. In "Animation and automation, or, the incredible effortfulness of being," Vivian Sobchack discusses *WALL-E* as a transitional subject within the narrative of the film, stating that his purpose here is "easing humanity from the 'mature' stage of electronic sloth and dependency to an earlier stage in which visible effort and physical labour become the privileged qualities that generate autopoiesis" (Sobchack 388). The film is paradoxical in its attempt to provide a solution to the systemic issues at hand. To elaborate on this idea, in "Labor as 'Nature,' Nature as Labor: 'Stay the Course' of Capitalism in *WALL-E*'s Edenic Recovery Narrative," Michelle Yates writes that "though WALL-E breaks the social alienation constituted

by communications technology and re-connects humans with each other and 'nature' physically, he nevertheless also re-incorporates humans into the alienated structure constituted by labour, the very structure at the root of human alienation from nature in material reality” (Yates 533). Nevertheless, in the universe of the film, WALL-E becomes a symbol of change, hailed as the Greta Thunberg of his own universe.

WALL-E's character is somewhat paradoxical. Vivian Sobchack argues that WALL-E functions as both animated and automated, whimsical and hard-working (Sobchack 385). Through this reading, she posits that “movement [animation] and work [automation] are figured as self-generating, producing (or reproducing) curiosity, adaptability, emotion, desire and (dare I say) ‘intersubjectivity’” (Sobchack 385). WALL-E's inclination toward both work and movement imbues him with the most human-like quality in the film, paradoxically positioning him as a revolutionary, but more so as a traditionalist. As a transitional object, WALL-E is left to piece together the past and present on his own. In his time on Earth, he becomes enthralled by the romance of the 1969 musical film, *Hello, Dolly!*. He is alone on the post-apocalyptic planet, yet he yearns for a return to form, seemingly both of nature and societal norms. The nostalgic qualities of *WALL-E*, alongside its seeming desire for traditional life and values, are not conducive to thinking of future-oriented planning for environmental activism and conservation. Instead, through this return to form, the film's universe predicts a cyclical return to environmental ruin.

The final scene in *WALL-E* is particularly curious. Here, the trash compactor brings the people of the Axiom back to Earth, where they plant the seed, which begins to sprout. Nostalgic music then begins to play. A fast zoom-out reveals thousands of green buds growing, pointing the way to a hopeful future and a comforting return to form. As previously stated, environmental

films of the last 20 years focus on stories taking place in the future with “return to nature” narratives. *WALL-E* takes place in a dystopian future in which the natural environment becomes a commodity within a capitalist society wherein humans forfeit agency for convenience. The film relies heavily on the false notion of “nature healing.” Once made aware of the consequences of anthropogenic climate change and the beauty of nature, the humans in the film decide to make a conscious decision to return to nature. When this decision has been made, nature begins to heal and the once-dystopian society transforms into a natural utopia. This narrative conclusion is interesting, as humans reside outside of Earth on a spaceship, Axiom, and it is only when they return that nature begins to heal.



Figure 1.7: Nature healing on Earth in *WALL-E*

The environmental apocalypse narrative is linked to the romanticization of nature healing, as explained by Ursula Heise in *Sense of Place and Sense of Planet*. She argues that "many (though not all) environmental apocalypses continue to hold up, implicitly or explicitly, ideals of naturally self-regenerating ecosystems and holistic communities in harmony with their surroundings as a countermodel to the visions of exploitation and devastation they describe" (Heise 142). The concept of nature healing is often co-opted by large corporations and big oil as

a tactic to reduce momentum in environmental movements, as explained by Rob Nixon in *Slow Violence*. Nixon states that “The deep-time thinking that celebrates natural healing is strategically disastrous if it provides political cover for reckless corporate short-termism” (Nixon 22). It is interesting to consider *WALL-E* in the context of this quote, given Disney's less-than-favourable history of environmental activism.

In January 2023, *The Guardian's* Patrick Greenfield investigated Verra, a carbon offset standard for major corporations, such as Disney. The study found that "more than 90% of their rainforest offset credits – among the most commonly used by companies – are likely to be 'phantom credits' and do not represent genuine carbon reductions" (Greenfield 2023). Furthermore, the article, "Disney's pollution of America may also be literal," maps out a 2012 report from the Environmental Protection Agency, which found that the relatively archaic air-conditioners at the Burbank Walt Disney Studios location were responsible for releasing carcinogens into the local groundwater (Bump). Disney responded to the allegations, stating that they were baseless (Bump). The corporation's celebration of its overstated goal of carbon neutrality, alongside its traditional values and glamourization of labour, creates a link between Disney and the narrative of *WALL-E*, one that unintentionally pulls the rug out from underneath them.

The concept of "returning to nature," and more broadly, returning to better times, points to Disney's greater role as a "nostalgia machine" in the American popular imaginary. Disney, in many ways, is the transitional object for those who seek the nostalgic comfort of their childhoods, or the desire to move backwards in time to cope with the present. Much like the human's return to labour, however, *WALL-E* equally functions as a return to neoliberal politics. In *Disney, Pixar and Neoliberal Nostalgia*, Joseph Zornado writes that: "*WALL-E*, in that it calls

attention to the problem of consumerism, offers the subject-viewer a way to continue consuming, but now in an 'enlightened' way(...) It is as if *WALL-E* offers the subject a sort of psychic-offsetting narrative to justify and ameliorate the inevitable social practice of consumerism before, during, and after the film" (Zornado 183). Coming back to A.O. Scott's appreciation of the film's relatability, it is clear that Disney has responded to the criticism of '90s environmental animation, sharply placing the blame and responsibility on the viewer. Through *WALL-E*, Disney creates an easy way to offset this sense of responsibility through consumption (of its media).

In "Post-Apocalyptic Nostalgia: *WALL-E*, Garbage, and American Ambivalence toward Manufactured Goods," Christopher Todd Anderson explores the film's paradoxical understanding of material goods as both nostalgia and trash. He explains that, in the beginning of the film, the Earth is depicted as a heap of garbage but "when a specific, recognizable item comes into focus, a change in tone takes place, subtly shifting focus away from the superficial warning about environmental pollution and introducing a nostalgic look back at twentieth-century culture" (Todd Anderson 269). Disney cannot create a world in which consumerism is inherently harmful, as this would be detrimental to their business model; the company made 6% of their 2023 profit, or 5.4 billion dollars, off of consumer products, according to *Trefis*. Nostalgia therefore must become the driving point of the company's pro-consumerism propaganda.

The 2012 film adaptation of *The Lorax* also explores the concepts of environmental nostalgia. The film introduces a new character, Aloysius O'Hare, a man who has found a way to profit off of selling air. The characters reside in Sneedville, of which O'Hare is the mayor. To ensure profit from his air business, Sneedville is nature-less. Here, plants are coloured lights and

a sealed, painted dome surrounds the area, separating it from the apocalyptic ruins of the outside world. While the original Dr Seuss story saw the character of the Once-ler overcome by greed, cutting down forests of Truffula trees and destroying the natural environment to turn a profit, his journey was more of a cautionary tale. The 2012 film transforms the story into a one-on-one fight between the greedy capitalist and the budding eco-hero. In this film, twelve-year-old Sneedvillian, Ted, seeks out a Truffula tree to present to his love interest. In doing so, he discovers the environmentally devastated land beyond the borders of Sneedvilles and, with the help of the Lorax and the Once-ler, restores nature within Sneedville and the rest of the film's world.

The film differs greatly from its source material. The inclusion of O'Hare, Ted and the fabricated town of Sneedville complicates the simplistic cautionary tale about capitalism quite drastically. According to the narrative logic of 2012 *The Lorax*, the environmental apocalypse that fell upon the Dr Seussian land, caused by the Once-ler, only occurred a couple of generations earlier than the film is set, a fact that is made clear by Ted's grandmother's recounting of the Truffula trees. If knowledge about trees and the outside world is, to an extent, common knowledge, this begs the question: why is the outside world not common knowledge or of interest to more characters within the universe? Much like in *WALL-E*, the 2012 *Lorax*'s characters are presented as impressionable and unbothered by the idea of personal agency, a pattern broken by Ted's sudden interest in Truffulas trees. Aloysius O'Hare is hailed as a hero of sorts, providing his town with breathable air, regardless if it comes with a price tag. It is only when Ted presents the Truffula seed to the community that they begin to question their society. Furthermore, Ted's decision to seek out the mythicized Truffula tree stems from his desire to please his love interest, Audrey. At the beginning of the film, Audrey tells Ted about the lore of

the Truffula trees and how, if a boy were to find her one, she would have to date him. Hearing this, Ted sets out on a mission to find Audrey a tree. Much like the air in the film, the tree becomes a commodity, through the form of a gift. Even when Ted and the community find out that trees provide a natural source of oxygen, their main concerns are the fact that the trees are physically beautiful and the fact that the oxygen is free. There is no further discussion of the tree's greater relationship to nature; in Sneedville, it primarily exists to serve humans.

Like WALL-E, Ted's motivation in *The Lorax* to create change is also driven by nostalgia. Ted's grandmother's understanding of Truffula trees is not based on grief, but instead on wistful nostalgia, creating some dissonance from many psychological understandings of environmental and natural nostalgia, which is inherently linked to grief over place. In "Solastalgia: The Distress Caused by Environmental Change," Glenn Albrecht argues that, in the time of global environmental crisis, both geographical and temporal definitions must be taken into consideration when discussing the feeling of nostalgia for a land that is undergoing rapid transformation. Albrecht proposes the term "solastalgia" to understand this feeling of "the homesickness you have when you are still at home" (Albrecht 45). I will return to this concept in relation to climate grief in Chapter Two. While *The Lorax* takes place only two generations after the environmental apocalypse, there is no outward sense of grief and trauma found within the insular community, as the Thneedvillians were masking their trauma by returning to business as usual.

While *The Lorax* can be likened to the eco-animated films of the 1990s, in the sense that O'Hare can be classified as an eco-villain, the film greatly differs in the way that O'Hare's character has motivations beyond that of pure evil and chaos. In a flashback scene depicting the rise of The Once-ler's empire, a young O'Hare can be seen admiring the Once-ler's work,

swearing that he too will climb to the top of the capitalist ladder. After creating his air empire, O'Hare is regarded as a hero within the town of Sneedville for his generosity in providing a safe community full of resources. He is portrayed as a character with good intentions but is ruled by greed. The chain between The Once-ler and O'Hare points to systemic issues, as opposed to the "one bad apple" narrative of Ted Turner, yet physically, O'Hare is still portrayed as corpulent through his animated body, one that is short and overweight. Curiously, The Once-ler, who was portrayed as faceless in the original book and animation, is portrayed as a tall, thin, handsome man, making his character appear more sympathetic.



Figure 1.8: The Once-Ler



Figure 1.9: Aloyius O'Hare

The Lorax portrays The Once-Ler's ascent to power as a trajectory he views as beneficial for his personal advancement, as well as the economy. When introducing the song, "How Bad Can I Be?", The Once-Ler reacts defensively to The Lorax's claim that he is in the wrong. He

retorts "but I'm the good guy," before breaking out into song. This scene animates the Once-Ler's rise to power by portraying his body gradually expanding until he towers over the sneed kingdom he has created, culminating in the song's final moments. While the Once-Ler is certainly portrayed as menacing, his boyish charm notably diverges from this characterization, begging the question: if an animated villain is portrayed as attractive, how bad can they possibly be?

A common thread between *WALL-E* and *The Lorax* is an emphasis on discovering a world beyond our common tech-centric routines. At the same time, the influence of human characters in the media can be linked to the intentions of the corporations producing these films. While technology can be used as a tool to persuade and control, consumers and users are not inherently ignorant; they are conditioned by their learned habits. In the introduction of *Pattern Discrimination*, Clemens Apprich defines homophily as something "which grounds the breakdown of seemingly open and boundless networks into a series of poorly gated communities, a fragmentation further fostered by the agent-based market logic embedded within most capture systems" (Apprich xi). The people of The Axiom and Sneedville are representative of neoliberal homophily at their core—communities of individuals presented with a false sense of selfhood and agency, presented to the audience as one large entity of sorts. For example, the passengers on The Axiom are animated to look almost homogenous in their appearance, with strikingly similar features, outfits and goals. Their decisions are curated and unquestioned. At an extremely superficial level, this is a helpful way for children to understand systems of capitalism and new media consumption as a springboard for discussion. Chun states that "rather than mutual ignorance, apathy, or revulsion, what is needed is engagement, discussion, and yes, even conflict, to imagine and perform a different future" (Chun 86). What complicates this task is

what this engagement, discussion and conflict involves: engaging and questioning the source of the media itself.

Disney and Comcast create content that is nostalgic, comforting and easily digestible. The messages of *The Lorax* and *WALL-E* are fairly simple: put down your phone, stop eating fast food, and take care of nature. The issue is in the cycle that these companies create: watch a Disney movie, give yourself a good look in the mirror, praise Disney, appreciate nature, buy Disney merchandise, and watch the new Disney movie. In 2012, Universal, a subsidiary of Comcast, faced controversy after using the likeness of the Lorax for a Mazda commercial. In response to the criticism, the president of Universal partnerships and licensing, Stephanie Sperber, stood by this decision, claiming that the car was "a really good choice for consumers to make who may not have the luxury or the money to buy electric or buy hybrid. It's a way to take the better environmental choice for everyone" (Rome). Instead of taking accountability for this hypocrisy, the company decided to position this business decision as one that supports the environmental movement, once again forefronting consumerism in its narrative. Perhaps the cyclical nature of the beast itself, present in both the cinematic and corporate narratives of these companies, is what must be focused on in the demystification of capitalist systems when discussing them with children. Instead of merely questioning the connection between the characters in the film and one's own experiences with technology and nature, it is essential to also consider one's relationships with the companies involved with the creation of this media.

The concept of using children's media as a means of advertising is nothing new. In "Children as Consumers: Advertising and Marketing," Sandra L Calvert explains that this often occurs in two ways: branded characters are licensed in advertising and product placements are used within the children's media (Calvert 209). While these advertisement tactics often rely on a

sense of excitement (Calvert 209), the marketing of corporate environmentalism is primarily rooted in a sense of responsibility to the Earth and the environmental movements. In *The Effects of Advertising on Children and Adolescents*, Matthew Lapierre et al. write that "young children respond equally favourably to both gain- and loss-framed content (ie, messages that emphasize the negative repercussions of not taking action)" (Lapierre et al. 5). Helping guide children to understand their relationship to the media and its product seems essential for breaking this heavily emotionally-driven cycle of induced pleasure and liability.

Overall, a shift in the ways that environmental activism is understood by children is important. Exposure to non-corporate and youth-led environmental movements may have the potential to help children better comprehend the role of corporate activism espoused in the media they consume, something that requires further study in the field of children's environmental education. The films discussed in this chapter highlight how didactic messaging in children's environmental content can evoke feelings of confusion and alienation due to the presentation of conflicting ideologies. Despite the professed intent of the mass media corporations to impart knowledge and encourage actionable change, their economic motivations often present a conflict of interest. In countering the conflicting and often troubling ideologies produced through the didactic and blame-inducing nature of these films, a less didactic approach to the study of this media can be taken. The implementation of media literacy, alongside an exploration of the production and cultural influence of these works, may facilitate more reflective learning. While the media discussed in this chapter might not be inherently harmful to the children who consume them, teaching children media literacy opens doors for more meaningful and critical engagement in order to disrupt the often-unquestioned cycles of capitalism and corporate activism created by corporations like Disney, Comcast and TBS.

Chapter 2: "This Strange World:" Mapping Climate Change and Animated Landscapes in *Weathering With You*

My relationship to space has always been one of unease: walking around Montreal's downtown, confused by street layouts. Navigation, in a multitude of senses, has never been one of my strong suits. I find myself constantly lost in thought, as I turn left instead of right. I misunderstand the weather radar and am often soaked by the time I reach my destination. My mother always told me that I had inherited her inability to read maps, which were central to our understanding of place and the ways it is navigated. I have always felt somewhat incompetent. The city landscape is created to be a convenient set of systems: networks which allow humans, nature and built spaces to interact with ease (Chase-Dunn and Jorgenson).

In the most traditional and cartographical sense, maps are tools that impose understandings of space, which do not often reflect more nuanced human relationships to space. In thinking about the subject of place and maps within children's education, one might think of the memorization of maps, city capitals and the history of place from a linear historical perspective, imposed by government-mandated curriculum. Through my experience in the Quebec education system, my experience of learning about place was very similar to this: the landscape of Quebec and Canada as a map of regions with histories of wars, treaties and successes. These basic ideas of land, maps and our relationship to them are complicated by histories of natural and human violence, which are oftentimes overlooked within didactic and progress-oriented learning systems. The didactic tactics of my early humanities education left me with a rather flat understanding of space.

With rapidly changing landscapes due to climate violence, the ways we think about and look at natural space have had to evolve significantly. When looking at a map of Antarctica, it is

hard to separate the land's two-dimensional presence on a globe from the melting ice caps that inhabit it. Relationships with natural and built landscapes can indeed be centred on emotions. Affective relationships to anthropogenic climate change are hard to address, as climate change itself feels inherently unnatural and uncanny—manifesting as a strange feeling of discomfort within your own home, for example. What adds to this eeriness is the fact that humans physically register climate change. In “On the relationship between personal experience, affect and risk perception: The case of climate change,” Sander Van Der Linden writes that: “an increasing amount of research has shown that people can (to some extent) accurately detect changes in their local climate and relate this perceptual experience to climate change” (Van Der Linden 430). The material experience of climate change may trigger adverse emotional responses, shaped by climate risk perception.

Climate change and the negative emotions that stem from it have become a pervasive issue. In The New York Times article, "What to do With Climate Emotions," Jia Tolentino writes that:

"In a 2021 survey of Gen Z-ers, fifty-six per cent agreed that ‘humanity is doomed.’ And the worse things get, the less we seem to talk about it: in 2016, almost seventy percent of one survey’s respondents told researchers that they rarely or never discuss climate change with friends or family, an increase from around sixty per cent in 2008" (Tolentino).

Tolentino continues to explain that, in situations of environmental crisis, "the brain’s desire to resolve anxiety and distress often leads either to denial or fatalism" (Tolentino), both of which are not necessarily productive. While bandaid solutions provided by corporations, institutions and the media that they produce keep climate activism at bay, it can be argued that climate-doom discourse exists as the other side of this coin, flattening the multifaceted realities of climate

violence and activism. In the context of 21st-century climate change, which affects understanding of place, the didactic flatness of how we map needs to be expanded on.

Alongside perceptions of space, the temporality of climate change and the ways in which it affects our responses need to be considered. In 2011, Rob Nixon defined slow environmental violence as “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (Nixon, 2). In the age of techno-late capitalism, Nixon argues that, as we are constantly overwhelmed with information and new images of violence and destruction, the slow effects of long-spanning environmental destruction, such as global warming, often fade into the background.

While Nixon explores the slowness of environmental violence, Wendy Chun uses the fast pace of neoliberal new media to argue that in the online age, this pace may have increased even more. In “Updating to Remain the Same: Habitual New Media,” Wendy Chun writes: “neoliberal subjects are constantly encouraged to change their habits-rather than society and institutions-in order to become happier, more productive people (...) we are forever trying to catch up, updating to remain (close to) the same: bored, overwhelmed and anxious all at once” (Chun 12). While the temporality of climate change might be inherently slow for some, the ever-looming threat of human extinction and feelings of solastalgia are increasingly present, if not constant. Articles with titles such as “It is Absolutely Time to Panic About Climate Change” (Sean Illing) and “Climate Change: IPCC Report is 'Code Red for Humanity’” (Matt McGrath) are constantly gaining attention. In generations that grew up consuming content related to the effects of global warming, environmental catastrophe is not an invisible issue but a constant, looming fear.

These ideas are reflected in Shinkai Makoto's 2019 hand drawn animated film, *Tenki No Ko (Weathering With You)*, which is, first and foremost, a film about the relationship between humans and nature in the Anthropocene. The film follows a teenage runaway, Hodaka, as he begins working as an investigative journalist in a consistently rainy Tokyo. During his investigation of the urban legend of the "sunshine girl," a magical girl who possesses the power to stop the rain, Hodaka meets Hina. Discovering that she is a sunshine girl, Hodaka and Hina create a small business, which promises to stop rain for a small fee. As the film progresses, Hina discovers that she is slowly sacrificing herself to the Gods for eternal sunshine and that her ability to stop the rain causes her body harm. The characters make the conscious decision to choose being together over the sacrifice of Hina's body. Subsequently, Tokyo floods and the film ends. *Weathering With You* serves as an allegory for the contemporary experience of grief and ecological crisis, intertwining themes of solastalgia, mythology, and human connection with the environment. An analysis of the film's narrative and its depiction of the relationship between characters and the changing landscape of Tokyo raises critical questions about how viewers can discuss the end of the world and the impact of climate change. It also provides alternative models for the ways children may deal with the ever-growing burden of solving the climate crisis.

Weathering With You's portrayal of landscape in relation to its human characters differs greatly from the films of Chapter One, such as *Ferngully*, *WALL-E* and *The Lorax*. While the films of Chapter One are set in fictitious or purposefully vague landscapes, *Weathering With You* is grounded in the real city of Tokyo. The film explores the city landscape through the lens of vernacular human-land relationships. To understand what makes the film's understanding of space particularly "vernacular," we can refer to McNamara's *Vernacular Pedagogy*, where he defines the term as "[carrying] connotations of belonging to the people, of being rooted within

the local community and environment, of being concerned with the practical and having a sense of purpose, of having a sense of modest appropriateness, and not being dressed in ornamental language" (McNamara 305). In essence, a vernacular understanding of space is grounded in lived experiences and intergenerational knowledge. *Weathering With You* understands character experience, local mythology and geological history as integral issues in the studies of such relationships. Through its multilayered use of space, physically, affectively and temporally, the film is effectively able to map the human relationship to both built and natural environments, encompassing a wider spectrum of the human experience of climate change.

Environmental media in the context of environmental education is often used for didactic purposes, such as the films in Chapter One, which seek to impart their environmental messages through clear-cut narratives and themes. *Weathering With You* complicates the medium's relationship to environmental education, as it does not only provide no clear-cut answers but is also somewhat informal in the way it seeks to educate. *Weathering With You*, which I argue functions through multilayered maps, exemplifies the potential of animated media to engage children in environmental education, as these media can informally allow for the fostering of empathy and imagination in the face of environmental challenges. In the previous chapter, I discussed the ways that animation can be used as a medium to portray and create environments that encourage children to consider their own relationships to nature. In this chapter, I extend the conversation to more directly address the benefits of childhood environmental education. I argue that *Weathering With You* lays out frameworks for environmental learning, through a focus on the intersections of vernacular storytelling and mapmaking. While the pedagogical messaging grasped from the study of this film can be applied to several age groups, I have decided to focus

my research on the study of school-age children, for purposes of continuity between chapters one and two.

Part One will focus on what non-didactic, vernacular learning, as it relates to geography, mapping and environmental education, can offer to current Western environmental education. Part Two will delve into the storytelling and mapping of climate and place in *Weathering With You*, as it relates to built and natural environments. I will use animation theory and narrative analysis to break down the ways that *Weathering With You* depicts the agency of the natural world and the failure of systems within cities, exploring the significance of vernacular knowledge in understanding and coping with climate change. Applying the knowledge gained from Part Two, Part Three discuss how these concepts can be applied to early childhood environmental education. I will investigate the animation, narratives and themes of *Weathering With You* as a means to understand potential educational frameworks, through mapping and storytelling.

Environmental Education and Mapping the Landscape

The experience of Anthropogenic climate change in the 21st century is one consisting of instability. While the effects of climate change have been and will continue to be documented, the future of the planet is still unclear. In “Young children’s imagination in science education and education for sustainability,” Cecilia Caiman and Iann Lundegard write that, in creating a nurturing space for early childhood environmental education, one is tasked with “[helping] younger generations to 'cope creatively with the unavoidable uncertainty'” (Caiman, Lundegard 688). In considering approaches to teaching about the "unavoidable uncertain," the concepts of didactics vs pedagogy are important yet complicated distinctions to make. In *Pédagogie and*

didactique: An incestuous relationship, Yves Bertrand and Jean Houssaye state that: "didactics - relates to teacher planning, working chiefly from considerations about the pupil's cognitive characteristics [Pédagogie -] pedagogy - relates to the features of pedagogical reflection-in-action" (Bertrand et al. 33). Furthermore, in "Novice and Expert Teachers' Time Epistemology," Francois Tochon and Hugh Munby differentiate the terms from a temporal standpoint, writing: "Didactic transformation of knowledge is related to the processing of time. (...) [the] way of organizing time has no flexibility; it is not synchronic. In contrast, pedagogy is (...) live processing developed in a practical and idiosyncratic situation" (Tochon and Munby 206). Didactic learning has a set plan and considers the educator first. Pedagogy considers more variables, encompassing a more student-centered approach.

Government-created primary and secondary education humanities sectors oftentimes blend these two approaches, according to education level. Using the Quebec Education Program as an example of North American humanities education progression, elementary school education may begin from a more open and pedagogical lens, aiding the student to "become familiar with the concept of organization" (Quebec Education Program 4). From this point on, The Quebec Education Program elaborates that, in this module, "the targeted knowledge is [based on students'] observation of the everyday objects, people and landscapes around them" (Quebec Education Program 3). While students are encouraged to draw from their own experiences and perspectives, their understandings of the world are then moulded into these "concepts of organization," encompassing different social and physical landscapes, such as cities, institutions and the natural world. As students' education continues, studies become far more didactic, focusing primarily on the dissemination of historical and spatial information.

When introducing geographical and historical education at such a foundational level, it is important to consider the fundamental meaning of a "landscape." In defining the "landscape," John Brinckerhoff Jackson deduces that it is "a space deliberately created to speed up or slow down the process of nature. As Eliade expresses it, it represents man taking upon himself the role of time" (Brinckerhoff Jackson 55). Landscapes take on many different forms but are inherently linked to human activity. Maps of these landscapes, according to the Quebec Education Ministry, specifically "[help] students locate things in space" (Quebec Education Ministry). While oftentimes boiled down into didactic, institutionally imposed means of understanding, landscapes are in fact constantly shifting, in both their form and meaning. In "Form, Meaning, and Expression in Landscape Architecture," Laurie Olin writes:

Human landscapes exhibit a complexity akin to living organisms. They are composed of disparate elements that form entities different from their parts; they inhabit real time and interact with their environment. They can be evolutionary, undergoing morphological change (e.g., trees growing and maturing with subsequent visual, spatial, and ecological changes), and can even die, both physically and metaphorically (Olin 22).

When considering how landscapes die "both physically and metaphorically," from a pedagogical standpoint, the educational variable to be considered is the constantly evolving state of global warming and the ways in which people (in this context, more specifically children), understand and react to it. Furthermore, the death of landscapes links to the idea of climate grief, or the psychological feeling of grief in response to climate change (Allen). While there may be continuities in the ways that students process their relationship to climate change, no two reactions will be exactly the same, requiring a certain level of openness from the instructor.

This seemingly doomed "physical and metaphorical" loss of landscapes is a daunting concept to tackle in such age groups, who do not yet concretely understand the foundational qualities of landscapes themselves. Although the spatial study of cartography is oftentimes done in a top-down model which imposes an understanding of place and its use, maps can be taught and utilized in a variety of other ways. Compiling personal narratives and histories and collectively creating new forms of mapmaking, such as deep-mapping, allows for a sense of freedom from imposed spatiotemporal norms placed on storytelling. In *Deep Maps and Spatial Narratives*, David Bodenhamer et al. define deep mapping as "simultaneously a platform, a process, and a product. It is an environment embedded with tools to bring data into an explicit and direct relationship with space and time" (Bodenhamer et al. 10). Furthermore, in "Deep Mapping: Space, Place, and Narrative as Urban Interface," Maureen Engel writes that deep maps "[contest] the cartographic bias of what might 'count' as a map while simultaneously building palimpsests, narratives, cartographies, and critical interfaces to space and place" (Engel 215). The idea of using storytelling and other artistic mediums as a means to make and understand lived space opens doors to new ways of approaching childhood environmental education.

In the realm of filmmaking, landscapes are a visually essential component of the medium, spaces that characters and spectators are invited to take in and explore. The production of animated landscapes is particularly interesting to consider, as opposed to its live-action counterparts. Hence, a more intentional approach to the way landscapes are portrayed must be taken into consideration. In "Anime Landscapes as a Tool for Analyzing the Human–Environment Relationship: Hayao Miyazaki Films," Sema Mucmu states that "landscape paintings, animated landscapes, and videogame landscapes, each attempt to position the human (both as in humankind and as spectator) in relation to the landscape," elaborating that through

this created relationship, "animated landscapes can be used for questioning the dualistic Western worldview and creating an ecological awareness for landscape architects" (Mucmu 4). Similarly, animated landscapes can be used as pedagogical tools for environmental education, as the openness of their imaginative possibilities allows for creative thinking about the portrayal of space, both physically and metaphorically.

As fear of climate change has risen, so too has the media that seeks to comprehend and solve it, offering a more informal learning tool to the oftentimes cut-and-dry methods of early educational models. While audiences are now offered a wider range of perspectives on the issue, many of these media narratives fall into the same didactic pitfall as many educational systems. *Captain Planet*, for example, teaches the issue of climate violence using a good vs. evil narrative logic, emphasizing what "good" viewers can do to help fight "evil" climate villains. These solutions are oftentimes minuscule and individually focused. The structure of these films sets up a clear narrative and path for audience members to take, removing a sense of creative agency from the viewer, to understand their own complex relationship to the issues at hand. *Weathering With You*, which offers more of a pedagogical way of teaching, allows different variables to be considered through its viewing. Through the film's open-ended conclusion and constant questioning of capitalist city systems, viewers are invited to consider their own relationships to space and the systems that inhabit them.

Mapping *Weathering With You*

The world of *Weathering With You* is mapped in an almost meticulous way. While the film contains no explicit references to contemporary maps used for navigation, the world of the film is consistently explained through its layout, geology and history. The physical landscape of

Weathering With You contains two known layers: Tokyo and the spirit realm, which exists in the sky directly above the city. The film's topography is shown in the opening scene of the film, as Hina discovers a rooftop with a Shinto shrine, which she walks through, transporting her to the spirit realm. From her vantage point, she looks down onto Tokyo, as she floats alongside mythical rain lifeforms such as fish and dragons. Both realms contain a somewhat overwhelming sense of motion, but while the spirit realm is portrayed as an ungraspable and chaotic storm of rain and weather, *Weathering With You's* Tokyo is portrayed as a more or less rational system. When Hodaka arrives in the city after running away from his small town, he gets into a routine: searching for work, sleeping in alleys, stressing over bills.

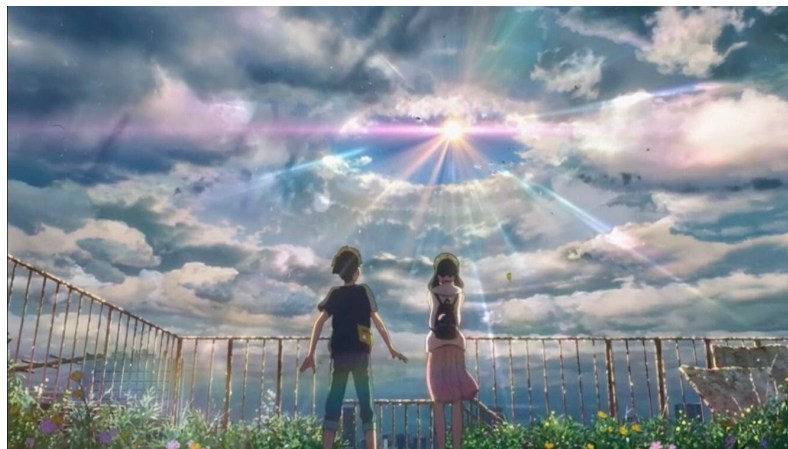


Figure 2.1: Hina and Hodaka stand in the Shrine, looking up at the spirit realm

As previously ascertained, cities are often designed to be easily navigated for humans existing within a society that prioritizes work, capital and convenience. While navigating the streets of Tokyo, Hodaka repeats: “Tokyo sure is scary.” The consistent rain and detrimental floods threaten the city systems and the convenience that they promise. There is something inherently uncanny about the breaking and disruption of systems. In *Disrupted Cities: When Infrastructure Fails*, Stephen Graham writes that “infrastructural disruptions provide important heuristic devices or learning opportunities” and that these “disruptions and breakdowns in

normal geographies of circulation allow us to excavate the usually hidden politics of flow and connection, of mobility and immobility, within contemporary societies” (Graham 3). When these built systems that we perceive as “normal” fail, it is unsettling. It is arguably even more unsettling when it relates to the uncanny experience of anthropogenic climate change.

The uncanniness of both system failure and weather works as a narrative device in *Weathering With You*. At the end of the film, the newly flooded Tokyo is described by the characters as a “strange world,” mirroring Nils Bubandt in “Anthropocene Uncanny. Nonsecular Approaches to Environmental Change,” where Bubandt states that “the Anthropocene is a time when ghostly forces come to life in ways that are tainted through and through with strangeness” (Bubandt 5). Bubandt goes on to write that “climate, like ghosts and witches, teeters on the border between being-there and not-being-there,” straddling the line between life and death (Bubandt 4). The bay of Tokyo, while certainly affected by climate change, also possesses its own strange sense of agency. In the film, an elderly woman, Fumi Tachibana, explains that, “in old times, Tokyo was just a bay. Human beings and the weather changed it, little by little. So, well... [it’s] just gone back to its original self.” The viewer's understanding of Tokyo as a city system is overridden by the agency of the natural land.

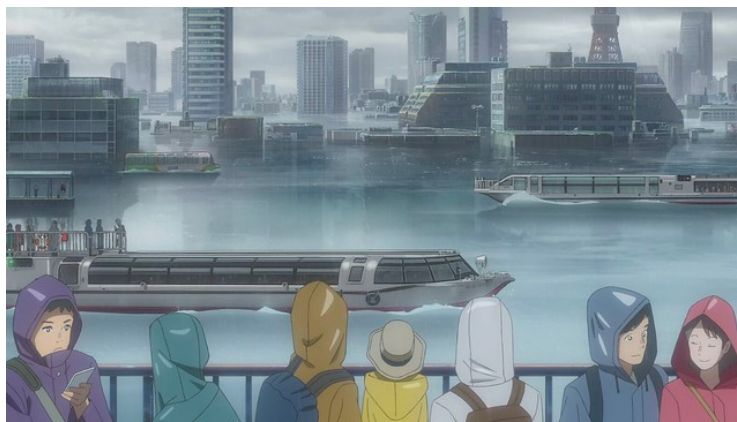


Figure 2.2: A Flooded Tokyo in *Weathering With You*

The dichotomy of the two realms in *Weathering With You* is experienced through the ways in which characters turn to prayer and pseudoscience to cope with and attempt to solve the issue of anthropogenic climate change. In “Weathering with You: Mythical Time and the Paradox of the Anthropocene,” Yuriko Furuhata writes that the film “is an example of the resurgence of cosmology and mythology in response to the concept of the Anthropocene that threatens to unmake epistemic and symbolic boundaries between human history and geohistory created by modern science” (Furuhata 22). Essentially, when threatened with the breaking down of the world as we understand it, we may turn to these means laid out by Furuhata, such as cosmology and mythology, as ways to cope and create a sense of meaning.

This fusing of science and myth could also be likened to the childhood phenomena of mythologizing experience. Exploring childhood understandings of place in an urban context, in “Vernacular Modernism as Child’s Play,” Pamela Wojcik writes that “in films about children, cinematic space and children’s space are stitched together within the mise-en-scene to produce a philosophy of urbanism that transforms familiar spaces into spaces for play and adventure” (Wojcik 88). In *Weathering With You*, the bleakness of Tokyo is transformed through play and imagination, in the form of Hina and Hodaka's sunshine girl business. Furthermore, the Sunshine Girl business is used to facilitate play for both Hina and Hodaka, as well as the children of Tokyo. Hina creates a landscape of both play and convenience through her power to transform the landscape. In many ways, her powers mirror those of the Anthropocene, with humans becoming geological agents. The Sunshine Girl business is an innovative short-term solution with unsustainable long-term potential.

Throughout *Weathering With You*, inherited knowledge and aspects of familiarity become central to the viewer's understanding of the film's landscape. Rob Nixon defines a

vernacular landscape as a place in which maps and routes have been divided and named by communities over generations with ecology and geological features in mind (Nixon 17). Furthermore, in “Vernacular Knowledge, Natural Disasters, and Climate Change in Monsoon Asia,” Senjo Nakai states that vernacular knowledge comes in both tangible and intangible forms. Tangible vernacular knowledge includes features such as architecture, monuments and farming tools, while its intangible forms include customs, place names and proverbs (Nakai 2). Throughout *Weathering With You*, Hodaka’s relationship to Tokyo and the way he understands it moves from one that is bureaucratically imposed to one that is more vernacular. This understanding is built upon Hodaka's lived experience within Tokyo, as well as the cultural, mythological and geological history he gleans from his relationship with both his elders and cultural spaces within the city.

Weathering With You functions as a map through its juxtaposition of Tokyo and the spirit realm, as well as the multiple layers of scientific and mythical meaning created through Hodaka’s experience, which is oftentimes literally portrayed within the film. At a Shinto temple, Hodaka and Natsumi visit an elderly Shinto priest, in order to gain more insight about the mythical sunshine girl. On the ceiling is a painting of the sky, with a dragon, portraying the myth of the rain maiden. The composition of the painting is cartographic in nature, and the landscape of Tokyo expands, becoming more than a series of roads and buildings. Here, the animation and materialization of the mythical—specifically the spirit realm and its proximity to Tokyo—allows invisible or hard-to-portray vernacular concepts to come to life. In *Animated Documentary*, Annabelle Honness Roe states that, in the context of animated representations, "astute and imaginative creative choices of how to visually represent, interpret and infer reality can enable truth claims of a different order to live-action documentary" (Honness Roe 39). While Honness

Roe is specifically discussing the context of animated documentaries, it can be argued that the representational choices made in *Weathering With You* do in fact "interpret and infer [a multilayered] reality," through its portrayal of both systemic and mythical space, which becomes physically mapped out for the viewer.



Fig 2.3: Weather Maiden painting

Related to the animation of the mythical is the use of animism within *Weathering With You*. Animism, the ascription of life to non-living entities, is a popular belief within both Japanese folklore and religion and is commonly portrayed within Japanese popular cultural and animated media. In discussing the use of animism and folklore imagery in *Weathering With You*, Furuhata notes that "folkloric and religious tropes associated with Shinto and Buddhism (...) have become staple elements of Japan's spiritual and entertainment industries for the past two decades," stating that the film's fusing of myth and entertainment addresses the idea that spirituality and the occult have become lucrative businesses (Furuhata 18). This concept becomes evident in the very fact that Keisuke's business is built on the profitable nature of the occult, further blurring the boundaries between spiritual space and capitalism within the built environment of Japan.

Further encapsulated in the mapping of *Weathering With You* are the systems and characters' emotions that inhabit the narrative space, creating a more nuanced and in-depth portrait of Tokyo. Beyond the film's ability to portray physical space, the film tackles the issue of climate activism's potential to become consumable in a landscape of capitalism. In thinking about *Weathering with You* and its relationship to climate change, temporality and capitalism, Hina's role as the Sunshine Girl underscores capitalist tendencies towards symbolic quick fixes for climate changes. More specifically, Furuhashi posits that the film "functions as an allegory of the contemporary practice of geoengineering as a technological fix to the anthropogenic climate crisis. Both the scientific technology of geoengineering and the mythical cultural techniques of weather-making are human acts, which come with their own environmental damages and human costs" (27). In *Weathering With You*, the human cost comes very literally in the form of Hina's body, which is significant due to both her age and gender.

From a gender perspective, Hina exists as a magical girl, a popular trope found in Japanese anime, referring to a young girl who possesses magical powers. In "Magic, Shōjo, and Metamorphosis," Kumiko Saito states that rather than being defined by setting and plot, magical girl narratives are defined by their business models, as the creation of these characters is often used as a means to sell merchandise (Saito 144). In explaining the role of the magical girl in Japanese media, Saito writes: "she frequently uses magical empowerment gadgets, such as wands and accessories (to be sold as toys), often accompanied by little animal pets (to be sold as toys)" (Saito 145). As previously stated, in *Weathering With You*, the young girl's body itself is what is commodified. She performs deeds at the expense of her physical form, which the masses are readily willing to use and sacrifice for their own benefit.

This may point to the burden placed on youth to fix environmental issues before they get caught up in the circular nature of capitalism, selling themselves to fix the issues at hand. After Hina's disappearance, Hodoka sits with the elderly Fumi Tachibana and apologizes for causing the flooding of Tokyo. He believes that, as the burden of climate change was felt on his shoulders, it was therefore his sole responsibility to fix. As previously explained, Tachibana reassures Hodoka that Tokyo used to be a bay, and through flooding, in some ways, the landscape has simply gone back to the way it was. While it can be argued that this explanation of climate change removes any true sense of responsibility from the viewer, it can equally be argued that the film is challenging understanding of what it means to live in a place undergoing Anthropogenic climate change. Hodoka's understanding of Tokyo's landscape becomes purely vernacular—one stemming from lived cultural and geological understandings of the land, learned from Tachibana. This vernacular understanding allows him to comprehend the landscape of Tokyo and its ongoing physical transformations beyond the frameworks of capitalism and personal responsibility. While Hodoka and Hina do not directly confront the corporations and entities reinforcing the importance of individualistic environmental responsibility, their choice to resist these pressures and embrace vernacular thinking indirectly challenges these systems.

Writing of the novelty of using vernacular knowledge to address climate violence, Nakai writes that such knowledge, “while not readily compatible with scientific discourse, [is] by no means at odds with it. With ingenuity, vernacular knowledge can be a valuable medium for people to understand and cope with such multifaceted phenomena as climate change” (Nakai 116). Nakai's concept of ingenuity in relation to solutions for climate change points to the importance of creativity. Much like embedded Western, neoliberal understandings of climate change discussed in Chapter One, the unpacking of urban systems and the ways in which they

normalize capitalist understandings of the world are important to understanding alternative, vernacular ways of living and creating space. Similarly, in “Emergent Strategy: Shaping Change, Changing Worlds,” Maree Brown discusses the importance of imagination within climate activist thinking, utilizing the visual of “turning and evolving, as opposed to destroying the systems in place now” (Brown). In considering how this applies to capitalist systems, she states that “matter doesn’t disappear, it transforms. Energy is the same way. The Earth is layer upon layer of all that has existed, remembered by the dirt. It is time to turn capitalism into a fossil, time to turn the soil, turn to the horizon together” (Brown). Through Hodaka’s decision to choose his relationship with Hina over the environmental salvation of Tokyo, he is, in some ways, choosing to “turn capitalism into a fossil.” Tokyo is flooded, yet the end of the film shows a world adapting to the change, one which does not function with a “business as usual” mentality. Here, the utilization of imagination and love can dismantle the systems that become invisible through routine and normalization.

The construction and dismantling of systems within a greater natural and spiritual ecosystem is a complex, yet important concept to bring to light. From an educational standpoint, the weaving together of the themes of history, culture, geography and geology may offer a richer understanding of place. Furthermore, narrating the story from Hodaka's perspective provides a compelling lens through which to explore the acquisition of knowledge about systems and space. Hodaka is a boy from a small town whose entire experience of Tokyo is built through learned understanding of city systems. He is thrown into a confusing, hostile environment upturned by climate change—an experience that appears both unnatural and relatable to viewers acquainted with the challenges of life in urban spaces. While the overwhelm of city life is not a novel concept, the ways in which Shinkai presents Hodaka’s journey is one of learning and unlearning

the urban space. Through Hodaka's economic need to climb the ladder of capitalism, alongside his curiosity surrounding the myth of the sunshine girl, he understands the city systems of Tokyo. Through his love for Hina and his vernacular understanding of land, the systems seem to lose meaning. These experiences are mapped out by the film's animation and storytelling, allowing viewers to consider their own relationships with nature and systems, and to use Hodoka's story as a framework.

Weathering With You As Pedagogy

While the ending of *Weathering With You* is quite open-ended, Shinkai's film still contains a somewhat didactic message. In "Rethinking Human-Nature Relationships in the Time of Coronavirus: Postmodern Animism in Films by Miyazaki Hayao & Shinkai Makato," Shoko Yoneyama writes that the film's director, Shinkai, "deliberately chose to present this story that may be taken as 'politically incorrect', because the take-way message of the film is not so much 'solve climate change!' but 'live!' in an age when it has become increasingly difficult for the young to live" (Yoneyama 18). While Shinkai's message of choosing to live is clear, the idea of "choosing life," is far more complicated than the simple message of reusing, reducing and recycling. While films like *The Lorax* and *WALL-E* can be useful springboards for discussion about climate change within capitalist systems, the affective nature of *Weathering With You* complicates the multifarious ways in which the film can and should be studied. The affective reaction of the characters in *Weathering With You* points to a need for both an understanding of how children learn and how their imaginative potentials can be utilized in thinking of new ways to discuss anthropogenic climate change and climate activism.

When considering solutions to enact meaningful change in the current state of environmental crisis, a certain level of imagination and fluidity is required. In “Imagination Is a Muscle,” a conversation with Adrienne Maree Brown, Brown states: “lately I’ve been thinking of humans as just another form of water. There’s rivers, there’s raindrops, there’s humans. We’re just a different structure for water is a mutable substance. Water is always changing from one form to another, given whatever task is needed” (Maree Brown). Water and its fluidity (in both its form and meaning) are essential to the story and meaning of *Weathering With You*, acting as a plot device, through the Tokyo rain and the water spirit realm. It also acts as a powerful metaphor for the fluidity of behaviour required within environmental activism. When Hina and Hodaka walk through the shrine in *Weathering With You*, they gain the ability to become malleable, to become water spirits within the spirit realm. While Hina possesses the ability to mould herself to meet the demands placed on her, she is bound to the idea that, once she has completed her sunshine girl role of stopping the torrential rain in Tokyo, she will be sacrificed to the spirit realm. While her efforts can “fix” the state of environmental violence in the city, it also comes with the loss of her physical form, which affects those around her, including Hodaka. Beyond being an allegory for climate change, *Weathering With You* is a film about teenage love, play, learning and resilience.

Imagination plays a large role in shaping childhood understandings of the world and the systems that inhabit it. In "Imagination, Playfulness and Creativity in Children's Play With Different Toys," Signe Juhl Møller writes that, "for children, creativity produces a feeling that they can contribute to their surroundings and gives them a sense of control, of being the cocreators of their world" (Møller 322). Play and imagination can be used as tools to better comprehend difficult and potentially traumatic topics, such as Anthropogenic climate change. It

can be used to both understand and escape. In “Children’s Coping, Adaptation and Resilience through Play in Situations of Crisis,” Sudeshna Chatterjee suggests that “places have been empirically found to support (..) children in their exploration (...), self-actualization of the affordances embedded in place, and in self-expression including making changes to the place through play” (Chatterjee 123). Furthermore, Chatterjee found that even during these times of devastation, children, especially teenagers, were resourceful in finding alternative spaces of play in these situations. In demonstrating this resourcefulness, one teenager in Chatterjee's study stated that “If adults rely on us to be ourselves, we can use our imagination to find a way to be, though we may sometimes be close to breaking when we challenge ourselves and do a dangerous thing, but it is better for us to have a chance to find a way by ourselves” (130). Hina and Hodaka’s resourcefulness and faith in Hina’s abilities point to the imaginative potential of children in situations of crisis.

Hodaka and Hina, while provided with guidance, are presented with agency over the ways that they perceive the landscape and imagine futures. Their persistent escape from the police who seek to capture them, due to the fact that they are underaged, may highlight the desire to move away from systems that oppress the imaginative and adventurous nature of the childhood experience. In considering the imaginative potentials of children, the issue of children's agency arises. In "Giving Voice to Children’s Voices: Practices and Problems, Pitfalls and Potentials," Allison James posits that children, rather than grouped together, should be regarded as “individuals with their unique and different experiences and as the collective inhabitants of that social, cultural, economic, and political space that in any society is labelled as ‘childhood’” (James 262). Much like the film's vernacular understanding of its narrative space, *Weathering With You's* vernacular methods of teaching and mapping space can be more directly

applied to environmental education activities. In finding ways for children to express themselves as individuals with valid and socially/culturally relevant experiences, map-making is a meaning-making tool for understanding one's relationship to nature. In a study conducted by Ronald Grady, it was found that mapping, in the form of "books, or stories of a particular place or journey," functioned as "avenues for reflecting on relationships with the natural world" (Grady 34). Furthermore, Grady states that "in creating and dictating a map and its words, children are exerting power and influence over the physical environment and its officially documented public memory" (Grady, 43).

As previously discussed, the media of Chapter One focuses heavily on didactic messages, with clear-cut solutions to issues of climate change. While *Captain Planet* uses exaggerated and supernatural means to teach children how to practically conserve and reduce pollution, *Weathering With You* calls viewers, through supernatural storytelling, teaches children to consider their relationship to nature, which can be practically examined through mapping. Much like the ways that Hodaka learns and unlearns the built environment of Tokyo, the process of mapping gives children the opportunity to understand their relationship to their environment in a multi-dimensional way, taking variables such as personal experience and emotion into consideration. Grady states that, in a study conducted with prekindergarten-aged children in a nature-based school, "making maps was a doubly layered experience that constituted an important memory of itself and served as an occasion to process an experience either as it unfolded or immediately after" (Grady 39). Understanding place through personal history allows for engagement with vernacular knowledge. Looking at *Weathering With You* from the lens of environmental education, and using mapping as a methodology, open doors to new ways of thinking pedagogically about spatial understandings of human-environment relationships. The

open-ended, non-didactic nature of *Weathering With You* allows children to form their own relationships with their surroundings based on experience, context and critical thinking.

Harkening back to Furuhata's discussion of the multifaceted understandings of climate change in the age of the Anthropocene, it is interesting to consider the ways in which children's multimedial explorations of space can be utilized to create vernacular spatiotemporal ways of learning about climate violence. Mapping projects can be used as a way to both create and guide learning through exploration and the understanding of children's narratives being valuable to the discussion of climate change. Climate violence can be disorienting and overwhelming, due to the sheer amount of public information and negative affect. Nevertheless, feelings of overwhelm and dread can be harnessed through creative means like mapmaking, as a way to create more meaningful understandings of Anthropogenic climate violence and activism. Maps are often understood in conjunction with systems of power and imposition. The exploration of alternative mapping methods, through means such as storytelling, can reorient the ways in which we understand these systems, giving children a sense of agency over the spaces they occupy and therefore, allowing for deeper forms of meaning-making.

Conclusion

Climate change is difficult to talk about. It often brings up feelings of discomfort, grief and solastalgia. While fatalistic views of environmental destruction may not be useful, they are an undeniably valid response to our current state. While I personally have certainly grappled with climate anxiety and feelings of doom, the research and writing of this thesis have imbued me with a sense of hope regarding the future of environmental education. Despite the somewhat bleak state of environmental education in many regions of North America due to corporate interference and political divisions, this thesis posits that didactic and non-didactic animated children's media can be mobilized as meaningful tools for informal education, circumventing the rigidity of its more formal and politicized counterparts. Through learning and applying the multidisciplinary frameworks of cultural studies and ecocriticism, I gained insights into how environmental media, directly and indirectly, fosters discussions about personal and political perceptions of the environment.

In Chapter One, I explored how critical media analysis of didactic environmental media holds the potential to challenge the perplexing narratives crafted by corporations behind such media. Through my analysis of *Captain Planet* and *Ferngully*, I argued that archetypal, anthropomorphized depictions of pollution were used as tactics to impart young viewers with a sense of individual responsibility. Similarly, my analysis of *WALL-E* and *The Lorax* found that the villainization of technology and capitalism indirectly places blame on viewers (consumers), rather than the corporate entities responsible for their creation. While these films, in many ways, failed to create a meaningful sense of change and hope amongst audiences, they unintentionally shed light on the dubious practices of large corporations, who oftentimes use environmental platforms as a guise to fulfill their own profit-incentivized agendas. Using children's animation

as a tangible and accessible platform has the potential to facilitate learning about the intricacies of media and environmental industries, by imbuing them with a better understanding of media literacy.

In Chapter Two, I explored the non-didactic storytelling techniques of *Weathering With You*. I argued that the film's open-ended, site-specific and empathic messaging serves as an effective framework for alternative environmental education models based on vernacular learning and mapmaking. The film's narrative echoes sentiments of climate doom and imposed responsibility on youth, both narratively and aesthetically challenging conventional corporate perspectives on environmental action. In considering the multilayered nature of place portrayed in *Weathering With You*, I argued that personal and site-specific mapmaking can serve as a tool for personal reflection on one's relationship to place. Consequently, these reflective exercises have the potential to empower children and give them a sense of agency in a perplexing time of climate crisis.

Through this thesis, I conclude that informal education through children's animated media studies provides a multitude of open-ended learning frameworks, which can be applied in and out of classroom settings. The medium of animation has the ability to portray space in unconventional and imaginative ways, thereby fostering creative thinking about environmental spaces and narratives, which can further be transferred to activities such as personal mapmaking. Furthermore, the study of these films from both political and emotional lenses may facilitate a deeper understanding of personal relationships to place and environmentalism. This, in turn, can foster more nuanced discussions about climate anxiety and even more effective climate activism.

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