Communicating Climate Change:

An examination of narrative intuition, transmedia acumen,
and emotional intelligence in the presentation of the
Transmedia Emotional Engagement Storytelling (TREES) Model

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A

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Abstract

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Abstract

This dissertation contextualizes a new model to help design more effective communication campaigns aimed at addressing the climate emergency. My multi-pronged research approach led me to discover three key competencies, or abilities—(1) Narrative Intuition, (2) Transmedia Acumen, and (3) Emotional Intelligence—that can be combined to bring about deeper and lasting emotional engagement with climate change storyworlds.

The public is inundated with climate change discourse unlike ever before, yet most of us remain superficially engaged with solutions to the crisis because of a multifaceted set of challenges that are unique to climate change communications. To this end, climate change communicators should consider the efficacy of narrative *affect*—or how affective experiences result in varying levels of emotional engagement and ultimately influence how people live out their lives.

To transport people into climate change storyworlds, this dissertation asserts that transmedia storytelling, or the worldbuilding process, can place a renewed emphasis on the *affective dimensions* of our engagement with climate change.

Across five chapters, I use a transmedial econarratological lens to answer two core research questions: (1) How is a successful transmedia storytelling climate change campaign structured? (2) What does a novel transmedia storytelling model for the modern climate change campaign comprise?

In Chapter 1, I affirm that narrative building can serve as an effective strategy for climate change campaigns. Chapter 2 is divided into four parts that explore the prevailing challenges that surround climate change communications, as well as, theories of narrative, transmedial narrative, and engagement, and in parallel, the Degree of Narrativity, Degree of Transmediality, and Degree of Engagement—the main branches of the TREES Model I present in Chapter 5. In Chapter 3, I highlight the ethnographic methodological lens I used to conduct my research. In Chapter 4, I examine the structure and best practices of two exemplary transmedia storytelling campaigns. Finally, in Chapter 5, I elaborate on the origins of my TREES Model to introduce three key competencies used in the production of a storyworld that evokes emotional engagement with audiences.

This document concludes with a summary of recommendations to inspire additional research.

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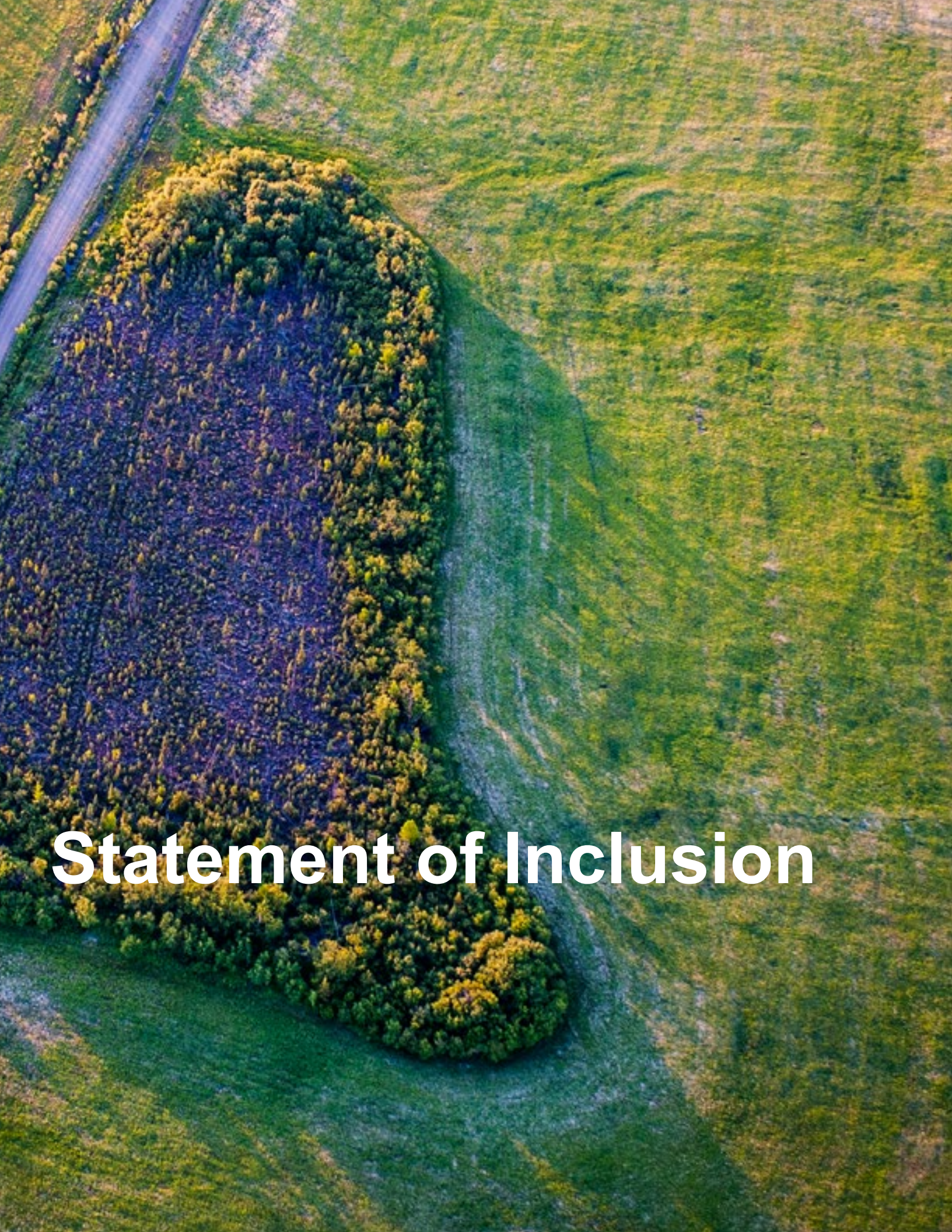
Statement of Inclusion

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Statement of Inclusion

I decided then to take as a guide for my new analysis the attraction I felt for certain photographs. For of this attraction, at least, I was certain. What to call it? Fascination? No, this photograph which I pick out and which I love has nothing in common with the shiny point which sways before your eyes and makes your head swim; what it produces in me is the very opposite of hebetude; something more like an internal agitation, an excitement, a certain labor too, the pressure of the unspeakable which wants to be spoken. Well, then? Interest? Of brief duration; I have no need to question my feelings in order to list the various reasons to be interested in a photograph; one can either desire the object, the landscape, the body it represents; or love or have loved the being it permits us to recognize; or be astonished by what one sees; or else admire or dispute the photographer's performance, etc.; but these interests are slight, heterogeneous; a certain photograph can satisfy one of them and interest me slightly; and if another photograph interests me powerfully, I should like to know what there is in it that sets me off. So it seemed that the best word to designate (temporarily) the attraction certain photographs exerted upon me was advenience or even adventure.

- Roland Barthes, Camera Lucida, 2010

This statement of inclusion draws attention to a specific set of curated images (i.e. A-DD) made *on assignment* across the world and back again. The images purposely run large across two pages for viewing pleasure. It is my hope that at least one of these images *sets you off*, for one reason or another.

How an image—and the story behind it—might work to stir us to act was part of the reason I pursued research on the topics herein, so it seemed fitting to share a sampling of my photographic work as a supplment to this dissertation's findings.

In presenting these images I want to recognize myself as a white male from Canada with European descent; I made these images looking through a specific lens, so I carry a responsibility I still want to learn more about. As Susan Sontag wrote, "To collect photographs is to collect the world," and I know it has been a privilege to witness what I have seen (Sontag, 1977, p. 3).

On this note, I declare that I have made every effort not to be intrusive with my photographic work because photography can be disruptive, even disrespectful at times. This commitment has, and always will be, paramount to me.

The images made on assignment have been selected from thirty unique projects and are presented in chronological order such that the first image of a sea turtle resting on a plastic bottle (see pp. II-III) was made on my first trip as a professional photojournalist and the last image of Block Island Wind Farm (see pp. 466-467) was made more recently while visiting Rhode Island.

In Appendix A I present more details for each image (i.e. A-DD). Each of the chosen images are the ones that mean the most to me from each select assignment—they may not necessarily be the ones that were published or most liked by my editors or audience.

More of my photography can be found at www.neileverosborne.com.

All of the other images found in this document have been credited to the rightful author and used with permission.

On a final note, what follows is not meant to be a definitive account of the topics discussed herein, but rather this document serves as my attempt to curate the relevant resources applicable to specific ideas. No doubt I have left something out. If you are reading this and find either a blatant omission or an error please email me at neo@neileverosborne.com so I may review.
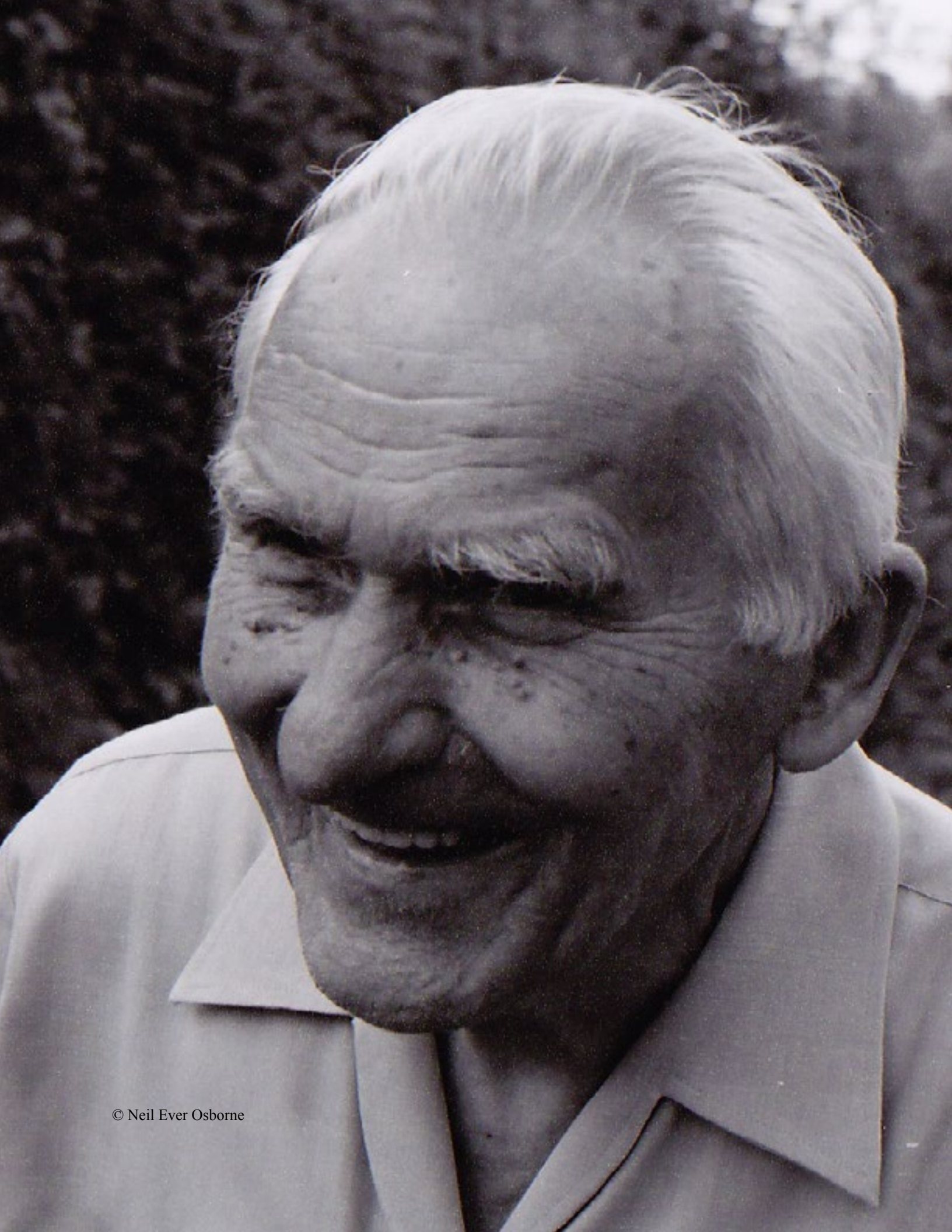
Dedication

For Kazimierz "Joe" Mazgaj, one of the best storytellers I ever knew,

&

to each of you authoring your own unfinished spiritual journey—

through stories that matter most and connect us to the things we love.

E

Acknowledgments

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Acknowledgments

According to Wade Davis, "the world can only appear monochromatic to those who persist in interpreting what they experience through the lens of a single cultural paradigm, their own." That is, while I have been drawn to the lone wolf existence of the globetrotting photojournalist for much of my life, it has only been in the good company of others that I have learned to truly see with my eyes, earnestly feel with my heart, and actively ponder with my mind—all the possible other ways of being—and because of this, I am forever grateful for these connections and experiences. If stories are how we make sense of the world—and climate change, among other things—it is only through the polychromatic stories I have been told that this dissertation was made possible.

One other introductory note: The last time I wrote an acknowledgement section I omitted some people in haste, and have since forgotten their names, so the following account is my best attempt to recall who made this dissertation achievable; if the section is lengthy, it is rightfully so, and I still might have omitted several others that have helped.

I am first and foremost grateful to Jose Etcheverry who answered an email some time ago and henceforth became my primary advisor throughout the duration of my PhD pursuit. I am fortunate to have found both a mentor and life friend in Jose and I know that our more meaningful collaborations are only now just about to begin. As an international renewable energy expert, Jose is a busy man, but every single time I needed him over the course of the last seven years, he was there, and I know he always will be. My primary committee also included Peter Timmerman and Matthew Tegelberg. If there is any novelty in the discovery of the competencies I write about in the words that follow, it is because of the many conversations I had with Peter at the Baka Cafe. Peter is an environmental soldier who will never give up the good fight; Matthew is part of a new camaraderie of scholars who will no doubt help to shape the future of climate change communications. Matthew joined my committee half-way through this journey and I am glad that he did for the document herein would not be the same otherwise.

I am also grateful to Steve Alsop, Leesa Fawcett, and Faisal Moola, each of whom played a peripheral role in advancing my candidacy for this degree as part of my extended committee.

I need to thank other colleagues in the Faculty of Environmental and Urban Change at York University who helped at various stages along the way: Anders Sandberg, Anna Zalik, Cate Sandilands, Ilan Kapoor, and Liette Gilbert, and in the office, Sharrieffa Sattaur and Ouma Jaipaul-Gill, provided key insights

at critical junctures.

As my research on climate change communication is specifically concerned I am indebted to Cristina Mittermeier and Paul Nicklen and David Suzuki and Sherry Yano, leaders of their organizations who granted me unprecedented access to campaigns by SeaLegacy and the David Suzuki Foundation respectively. While these two organizations might go about their business of saving the world in their own unique ways, I am equally appreciative of the input provided by their teams and the case study analyses I used to draw out conditions for my TREES Model; Cristina is worth a second mention. Much of the work I do is inspired by this true visionary and several times my conversations with Cristina were instrumental in grounding the ideas I try to express throughout this dissertation.

Relatedly, I am grateful for phone calls with Marie-Laure Ryan and Henry Jenkins, the two scholars that show up the most prominently in my work on climate change communication—as I regrouped and renamed their narrative and transmedia storytelling principles, I appreciated their candid insights.

A multitude of other environmental organizations have played a significant role in shaping my own understanding of the modern climate change campaign; there are too many to name here, but I should single out a few who I have had the privilege to work with more intimately: International Conservation Fund of Canada; International Gorilla Conservation Programme; International League of Conservation Photographers; Nature Conservancy; Nature Conservancy of Canada; Oceana Canada; Ocean Conservancy; Polar Bears International; Save Our Wild Salmon; Sea Turtle Conservancy; Sustainability Network; The Wilderness Society; and World Wildlife Fund.

I must also acknowledge some collaborators whose collective mentorship has made me the effective communicator I am today. I am grateful to Michael Dismatsek who was one of the first people to teach me about photography and light; I am grateful for the many phones calls I have had with Brian Storm and Chad Heartwood who have no doubt played a significant role in shaping my understanding of story arc; I am grateful to National Geographic photographer Frans Lanting for taking me into his California based studio where I learned most importantly about the process of pre-visualizing my stories before leaving for the field; I am grateful for the field time I spent with National Geographic photographer Paul Nicklen who at the time used an inscription in a book he gave me to remind me to "keep following [my] heart (and right brain) and amazing things will happen"; I am grateful for all the field time with Wallace J. Nichols who invited me to follow him around the globe as we tracked down important sea turtle nesting sites, while working with poachers who shared a different version of the conservation story; I am grateful to Kathy Moran at National

March 8th, 2022

F

Table of Contents

Table of Contents

Chapter 1

Introduction

Chapter 2

Literature Review & Theory

Part A

Part B

Part C

Part D

Chapter 3

Methodology & Methods

Chapter 4

Results & General Discussion

Part A - The Greatest Sanctuary

Part B - Charged Up

Chapter 5

Conclusion

G

H

List of Tables

List of Figures

List of Figures

J

Chapter 1

Introduction

Section 1.1 - A State of Need

1.1.1 - Need for a Novel Model

The stories we tell ourselves and each other matter because they help us make better sense of the world—they can also help us make better sense of climate change.

To approach the multifaceted set of challenges that are unique to climate change communications—the crisis is flooding the homes of some global citizens yet remains a non-urgent and psychologically distant risk for others—is to reflect on the elemental capacity of narrative to evoke our emotions and stir in each of us the ability to act. Put another way, because the climate change crisis exists spatially, temporally, and socially apart from so many, statistics and facts are simply not enough to bring about the necessary social change required to address the clear and present danger. To this end, climate change communicators should consider the efficacy of narrative affect—or how affective experiences result in varying levels of emotional engagement and ultimately influence how people live out their lives: We need stories to sound the alarm—those that incite an ominous and existential threat, and have awoken us to the stakes. We also need stories of hope and optimism—those that will lead us out of the burning house towards a more prosperous and sustainable future.

Considering the dire circumstance of a warming world, coupled with the ascendency of prevailing and polarizing counter-narratives—those narratives that advance ideas like individualism and consumption, rather than collectivism and preservation—there is a need for a novel model which could place a renewed emphasis on the affective dimensions of our engagement with climate change. Cued by a set of narrative conditions—and communicated across media—this new strategic framework will function to successfully transport audiences into immersive storyworlds where states of emotion can create felt experiences with the urgency of the climate change crisis as well as with others and with the non-human species and places that connect us all.

With this novel model in mind I propose that communication practitioners develop and implement in concert (1) Narrative Intuition, (2) Transmedia Acumen, and (3) Emotional Intelligence, the key competencies necessary to advance the climate change campaign; in combination these abilities bring about deeper and lasting emotional engagement with climate change storyworlds—those worlds designed to elicit understanding of the crisis and foster involvement with practical solutions to global warming.

Beyond any single campaign, the climate change advocacy community at large might be interested in the discovery of my Transmedia Emotional Engagement Storytelling (TREES) Model because it outlines the central role of these three competencies in the production of a storyworld that evokes emotional engagement with audiences.

1.1.2 - Need for Narrative

The stories we tell really do matter (Baudrillard, 2017; Fisher, 1984; Gottschall, 2013; James and Morel, 2020; Lakoff & Wehling 2012; McLuhan, 1964; McLuhan, Zingrone, & McLuhan, 1996; Salgado & Salgado, 2013; Weik von Mossner, 2017; Wulf, 2016). Story—or narrative—is acknowledged to be "a fundamental way of organizing human experience" and "a tool for constructing models of reality" (Herman, Jahn, & Ryan, 2005, para. 7); yet, existing narratives about climate change have not been adequately successful (Bevan, Colley, & Workman, 2020; Bushell, Colley, & Workman, 2015; Bushell et al., 2017; 2018; de Meyer et al. 2020; Hinkel et al., 2020; James and Morel, 2020; Pidcock et al. 2021). New narratives are necessary to better appreciate the existential threats of climate change as well as elucidate what might be achieved to prevent the climate problem from getting even worse.

A global audience remains only superficially engaged with climate change (Flynn et al. 2021; Leiserowitz et al. 2021), and worse, many of us feel negative climate-related emotions such as being anxious, worried, and terrified (Ojala et al. 2021), or guilty (Brosch, 2021), which leaves people in "a passive state of avoidance, denial, or helplessness" (Brosch, 2021, p. 16). For environmental and cultural sociologist Annika Arnold, "In order to make the fight against climate change a priority, climate advocates need to tell stories, to mobilize people and guide their actions" (Arnold, 2018, p. 2). Similarly, the German advisory council on global change calls for "narratives of and for change" to foster a greater connection with the "cultural fabric of society" (Arnold, 2018, p. 2). Econarratologists Erin James and Eric Morel even suggest that along with the real climate crisis, we are experiencing a "crisis of narrative," and we need to evaluate the stories we tell about climate change (James and Morel, 2020, p. 4).

Other prominent practitioners familiar with climate discourse have weighed in on the inefficiency of existing climate narratives to move us collectively into action: Christiana Figueres and Tom Rivett-Carnac, key brokers of the Paris agreement, agree that "the predominant stories we are telling ourselves about the climate crisis are not very inspiring" and "a new story can reinvigorate our efforts" (Figueres &

Rivett-Carnac, 2020, p. 158); James Painter, the Director of the Journalism Programme at the University of Oxford, surveyed recent media and found "a need, in the face of uncertainty, to weigh up the risks of possible outcomes" to diversify the climate narrative "into other areas like health, air pollution, financial investments or energy security," those areas which have "demonstrated one of the best ways of engaging a wider audience and making it more relevant to their lives" (Painter, 2020, p. 31); and, Bushell et al. (2017) remark that while "research into climate change strategic narratives is nascent," the use of "strategic narrative is key to making meaningful progress" that might narrow the "action gap" between what the scientists are telling us about climate change and what the government, industry, and public are doing about it (p. 39).

More recently, other scholars have advanced the case for new narratives as they criticize existing climate discourse: "Today's environmental challenges necessitate revisions to models of narrative," and there is a need for "new narratives that are calibrated to the realities of our changing world" (James & Morel, 2020, p. 2). James (2015) makes this call-to-action even more explicit: "Which concepts of narratives from the environmental inventory will move environmentally oriented thought into the future, and which ones shackle environmentalism to outdated templates?" (p. 26). Even more to the point, in *Environmental Culture: The Ecological Crisis of Reason*, Plumwood (2001) addresses the climate breakdown and instructs: "To change the crisis … we must change the narrative" (as cited in James, 2015, p. 26).

1.1.2.1 - In Environmentalists, what are we fighting for?

If climate change was a naturally occurring phenomenon it might not be worth thinking more about because there would be not much that we could do about it. However, because the crisis is human-caused, there is something we can all do, and this will make for good storytelling.

Graham Saul, the Executive Director of Nature Canada, explicitly comments on the need for a new narrative (Saul, 2018). Researching past social movements, Saul (2018) observed some form of unity around the use of powerful words like "freedom, equality, liberty, and independence," and that these words "conveyed a goal that was understood and worth struggling for" (p. 6). For Saul (2018), "These words are tools that past social movements used to communicate with the public and frame the debate"; that is, they provided a "compelling answer to the question: What are we fighting for?" (p. 6).

An investigation of various past social movements, Saul's (2018) work defined a distinctive set of words—or perceived entry points to the narratives that propel those worldviews forward—that regularly

occurred in the responses from the interviewees who were asked about a specific social movement. For example, more than 70 percent of the people surveyed in Saul's work used "equality," "equity," or "equal" when asked to describe the "women's movement" in the 1960s and 1970s (2018, p. 14); 77 percent of respondents used "freedom," "equality," "human rights," or "end slavery" to describe the anti-slavery movement (p. 14); and 75 percent of interviewees used one of six synonymous, words that included "self-determination," "independence," "sovereignty," "autonomy," "liberation" and "freedom," to discuss the "anti-colonial movement" (p. 15).

Saul (2018) did not find the same consistency when he posed questions about the environmental movement; in fact, what he found was a "jam-packed mishmash" of descriptive words, or stories. In conclusion, he left us with the following insight:

> Environmentalists do not need to abandon their differences in the interests of helping the public understand what we are fighting for. But we do need to come together and put the necessary time and energy into a conversation about how best to talk about the issue with the public. (p. 44)

Saul (2018) is asking us to define a new narrative for the environmental movement or at least to take steps to define what stories will comprise our answer to the question "what are environmentalists fighting for?" In this pursuit, Saul (2018) notes:

> The environmental movement needs to be able to sum up concepts that inspire people, present aspirations that people can say 'yes' to, articulate overarching goals that people are either for or against, and, in the end, convey truths that cannot be reasonably denied." (p. 6)

He continues:

> I believe that if environmentalists can learn to explain this goal coherently, and if we can develop an expression that comes to stand for this worthy thing we all have in common, then our individual and collective actions will have far more impact. The public will be more likely to care about our issues, better understand how to make a difference, and be

motivated to act. (Saul, 2018, p. 7)

James and Morel (2020), who comment on the efficacy of narrative thinking, share reasons to be optimistic about Saul's proposal: "The even broader mode of narrative has much still to contribute to crafting cultural responses to present and future environmental challenges" (p. 4).

In this vein, while Saul's criticisms on environmentalism remain apt, we have indeed witnessed before how narrative mode—in language and image form—can work to advance the environmental movement.

While restricted to the media of their time, recall that Rachel Carson used "her remarkable knack for taking dull scientific facts and translating them into poetical and lyrical prose" to enchant "the lay public" in *Silent Spring* (The New York Times, 1964, para. 14), and the environmental organization Greenpeace achieved a similar response using provocative imagery of a whaling encounter that launched a "mind bomb," or "image event," that exploded "in the public's consciousness to transform the way people view their world (DeLuca, 1999, p. 1).

This seminal work by Carson and Greenpeace disrupted society's equilibrium with advantageous results. In other words, it stirred us to act.

Carson "draws us in with the ancient storytelling rhythms of the fable" and as science writer to non-scientist reader she becomes a translator and "stakes out common ground before introducing concepts like synthetic pesticides, chemical intake, etc." (Calderazzo, 2013, para. 9). Carson is a unique case of reference for other reasons too: She wrote about the human condition when she described the "pitiful, heartbreaking" experience of the Milwaukee woman who discovered dozens of beautiful dead birds in her back yard (Carson, 1962, p. 106), and the "steadily growing chorus of outraged protest about the disfigurement of once beautiful roadsides by chemical sprays" (Carson, 1962, p. 69). Lockwood (2012) explains:

> Carson's skill is in marshalling the affects of the everyday—the emotions invested in writing letters, waiting in the kitchen at the back window while the pie is cooking for the first phoebe to arrive, watching the evening's news—and shifting its collective force into a public sphere, challenging the limits placed on emotions as proper only to the domain of private life. (p. 129)

The success of *Silent Spring* was Carson's ability to move beyond the science to reach her audience using narrative; as Harris (2000) notes, "By giving so many citizens a voice in Silent Spring, Carson is also giving voice to her readers, engaging them in the book and in the argument" (p. 46).

Similarly, associated with the "meteoric rise" of Greenpeace, and the organization's ascent to a global stakeholder in the environmental movement, was an ability to use narrative, this time in visual form, as described by DeLuca (1999) in the following passage details:

> These tactical image events have driven numerous successful campaigns that have resulted in the banning of commercial whaling, harvesting of baby harp seals, and ocean dumping of nuclear wastes; the establishment of a moratorium in Antarctica on mineral and oil exploration and their extraction; the blocking of numerous garbage and hazardous waste incinerators; the requirement of turtle excluder devices on shrimp nets; the banning of the disposal of plastics at sea by the United States; and much more. (p. 3)

DeLuca (1999), on citing another Greenpeace campaigner, also notes that image events seldom stop the "evil" immediately, but that, "success comes in reducing a complex set of issues to symbols that break people's comfortable equilibrium" and gets them "asking whether there are better ways to do things" (p. 2). Media scholars Sarkar and Walker (2010) provide greater context for Greenpeace's visual narrative modes, which made participants out of all of us:

> In our latter twentieth and twenty-first century 'era of witness,' media testimonial initiatives—be they official, grassroots, guerilla, transitory, insistent, or any combination thereof—participate in the creation of ethical communities by bringing testifiers and testimonial witnesses together at the audiovisual interface. (p. 1)

What Carson and Greenpeace did was extend the reach of environmental texts outside the boundaries of their primary media forms, such that important messaging entered into a global dialogue, encouraging citizens to become active participants in a campaign. As such, these texts serve as exemplary templates for communicators working today.

Importantly, how we manifest climate change narratives—in language and image—will ultimately

concern our competency to "not just to know the basic rules of narrative," but "to have absorbed and assimilated" a set of narrative conditions so thoroughly we can "actually sense them" (Olson, 2015, p. 20).

As Carson and Greenpeace demonstrated, it will also depend on how audiences enter into these stories using newfound, and ever increasing transmedia ways.

1.1.3 - Need for Transmedia Storytelling

To transport people into climate change storyworlds environmentalists should also consider transmedia storytelling which advances narratives "across a number of different media contexts, with the strengths of a particular media form or platform helping to establish new layers of meaning and entry points into an evolving story" (Lam and Tegelberg, 2019, p. 3). In doing so, transmedia storytelling—or the worldbuilding process—accomplishes the tasks of eliciting responses and actions from diverse audiences whose "real-life attitudes, behaviours, and values" are affected as they enter into a storyworld (James and Morel, 2020).

Independent scholar Marie-Laure Ryan suggests "transmedia storytelling is the most important narrative mode of our time" (Ryan, 2015, p. 1) and Weik von Mossner (2017) believes "if we are truly interested in the potential or actual" impact of "transmedia environmental narratives," we need to pay more attention to all "modes of storytelling" and to the different ways in which transmedia storytelling can offer audiences spatial and temporal immersion into environments where emotional engagement with human and non-human others can occur (p. 194). Because transmedia storytelling can "recruit from more than one semiotic channel" there is the need to better evaluate how transmedia storytellers take narrative into account (Gardner & Herman, 2011, as cited in James and Morel, 2020, p. 14).

1.1.3.1 - Worldbuilding & Storyworld

We gain clarity on the role and efficacy of transmedia storytelling to deliver emotional engagement experiences for audiences when we acknowledge that, "Narrative comprehension requires reconstructing storyworlds on the basis of textual cues and the inferences that they make possible" (Herman, Jahn, & Ryan, 2005, para. 1). As textual cues abound across media, Herman (2009) thinks, "Storyworlds are global mental representations enabling interpreters to frame inferences about the situations, characters, and occurrences

either explicitly mentioned in or implied by a narrative text or discourse" so "storyworlds are mental models

… of who did what to and with whom, when, where, why, and in what manner" (p. 106–107). By associating

narrative and storyworld, Herman (2009) draws our attention to the ability of transmedia texts to immerse

and transport "interpreters into places and times they must occupy" for the purposes of understanding

narrative (p. 119). For Herman (2009) each of us is a transmedia storyteller and each of us is involved with

storyworlds. Herman, Jahn, and Ryan (2005) state:

> Interpreters do not merely reconstruct a sequence of events and a set of existents, but
> imaginatively (emotionally, viscerally) inhabit a world in which things matter, agitate,
> exalt, repulse, provide grounds for laughter and grief, and so on—both for narrative
> participants and for interpreters of the story. (para. 3)

With storyworld in mind, Ciancia, Piredda, and Venditti (2018) also believe, "Worlds allow members of the

audience to enter vicariously in the narrative space, spending a certain amount of time in speculative and

explorative activities," and while there, they experience "the possible world through the stories set within it"

(p. 115). As such, if stories are "self-inclosed arrangements of causal events that come to an end in a certain

period of time," then storyworlds can be interpreted as "mental constructions shared between recipients and

authors in which new storylines can be developed" (Ciancia, Piredda, & Venditti, 2018, p. 115), and we can

"differentiate between story and storyworld" (p. 115).

Moreover, according to the James (2015), "Engagement with storyworlds stands to foster real

world understanding" among interpreters "by opening up channels of communication concerning different

environmental experiences across space, time, and culture" (p. xv). James (2015) further states:

> The subjective imaginations of environments embedded in storyworlds could have a
> profound effect on readers and encourage those readers to develop a greater understanding
> for what is it like for people around the globe to conceive of and live in various environments.
> (p. xv)

It is the notion of emotional engagement, in particular, created through embodied simulation and

imaginary perception within storyworlds—the interface for transmedia narratives—that should intrigue

climate change communicators the most.

Transmedia storytelling—as an effective emotional engagement tool—is poised to shift climate change discourse while being burdened by the multitude of options available for storytelling that must be considered when thinking more about the production of climate change storyworlds—those worlds made sense of by narrative. *The New Yorker* staff writer, Malcolm Gladwell, puts the challenge of transmedia storytelling in larger context: "There is a simple way to package information that, under the right circumstances, can make it irresistible. All you have to do is find it" (Gladwell, 2002, p. 131–132) It would seem climate change communicators are seeking this method out, unhappy with the ineffectiveness of the current strategies and tactics at hand.

How we achieve this new method will ultimately concern our competency to deploy a set of transmedia storytelling conditions to produce, curate, and disseminate content that shapes how audiences enter into and experience a climate change storyworld.

It will also depend on how audiences engage with these stories once inside the storyworld.

1.1.4 - Need for Emotional Engagement

Narratives that help us all navigate the complexities of modern life are top of mind for Alexa Weik von Mossner who has contributed much to the evaluation of narrative as an emotional engagement device. Emotional engagement with and across climate change media should indeed be taken more seriously. For Weik von Mossner, "One of the inescapable conundrums of climate change campaigning" is that it requires people to act before the effects of climate change can be witnessed; one of the potential ways out of the conundrum is "to offer people affective and experiential engagement with climate change on the imaginary level through images and narratives" (Weik von Mossner, 2017, p. 141). Here, Weik von Mossner is presenting a case for emotional engagement built through narrative characteristics that are particularly aligned with the storytelling concerns of the climate change crisis. To clarify her intent, Weik von Mossner (2017) poses questions such as:

How do we experience the characters, events, and environments we encounter in literature

and film on the sensory and emotional level? How do environmental narratives invite us

to care for human and nonhuman others who are put at risk? And how do we relate to the

speculative futures presented to us in ecotopian and ecodystopian texts and films? (p. 3–4)

Weik von Mossner (2017) emphasizes these are the questions that are central to not only climate change communicators but to anyone interested in the "rhetorical strategies and persuasive power of environmental narratives" (p. 4).

On the matter of narrative, Weik von Mossner (2017) attests:

Storytelling plays a central role in memory formation and counterfactual thinking; it is what allows us to communicate events we have experienced or imagined to others, who can then in turn imaginatively simulate those events and therefore share our experience to some degree … Narrative, then, is a means for making sense of the world; not only of the imaginary world on the pages of a book or on the silver screen of a movie theatre, but also of the actual world in which we live out our lives. (p. 6–7)

1.1.4.1 - Empathy & Embodied Simulation

According to Weik von Mossner (2017) emotional engagement uses the "emotionalizing strategies" of narratives to "invoke in our minds immersive environments and emotionally salient human-nature relationships" brought about by empathy and "our capacity for embodied simulation" (p. 190). Essentially, Weik von Mossner (2017) is interested in "the ways in which … narratives appeal to our sensual perception and embodied cognition … in order to immerse us into their storyworlds and engage us" (p. 3). Weik von Mossner's emotional engagement is then grounded in embodied cognition, or the idea that mental thought "is deeply dependent upon features of the physical body of an agent," following the work of Wilson and Foglia (2011, para. 1), and that the "processes of embodied simulation play a crucial role in our engagement with the world," as is described by the Italian neurologist Vittorio Gallese (Weik von Mossner, 2017, p. 3).

It is through the ongoing work of Weik von Mossner that we can further approach the topics of narrative and emotional engagement. Weik von Mossner (2017) states since we are all "narrative creatures," there is a need to better appreciate how we enter into and engage with narratives and why it is that they can "impact us so deeply" (p. 13). When we read John Muir's *The Mountains of California*, and are instructed to "go where you may in the bounds of California … mountains are ever in sight, charming and glorifying every

landscape" (p. 30), or when we watch one of the final scenes of *The Cove*, a "horrific visual spectacle as the fisherman over and over again drive their spears into the bodies of the trapped animals, the surrounding water turning bright red from gallons of dolphin blood" (p. 105), these processes are "highly embodied activities" that require "our senses in order to be able to perceive things," but they also require "our bodies," that "act as sounding boards for the mental simulation" of "storyworlds and of characters' perceptions, emotions, and actions within those virtual worlds" (p. 3). Neuroscientist Antonio Damasio puts Weik von Mossner's emotional engagement experience into context for us in *Descartes' Error*: "The organism interacts with the environment as an ensemble: The interaction is neither of the body alone nor of the brain alone … mental phenomena can be fully understood only in the context of an organism's interacting in an environment" (Damasio, 2005, p. xxi).

1.1.4.2 - Framing

The premise of mental phenomena and emotional engagement with narratives is addressed by the cognitive linguist and philosopher George Lakoff in his theory of framing, since frames are like "roadmaps" in our heads, and these unconscious neural circuits that define how we think, exist as conceptual structures, or "schemas," that are made up of images, metaphors, narratives, and emotions" (p. 71–72). Commenting on Lakoff's framing rationale Weik von Mossner (2018) relates:

> Once we recognize that framing has a bodily dimension in the very stuff that makes up
> our brains, we begin to look differently at the idea that framing is an ideological tool
> that we must abandon in order to become truly intimate with our environment. Instead,
> we recognize that framing, even anthropocentric framing, is an integral part of human
> cognition and that, unless we want to abandon cognition altogether, we better get used to
> the idea that we cannot help but frame our understanding of the world in some way. Once
> we have accepted this neurological premise, we can begin to discuss how such frames
> develop over time and whether there is any way to change them. (p. 3)

Lakoff's framing premise puts Weik von Mossner's aforementioned ideas into crucial environmental communication context when considering that many people engaged in environmentalism "believe that if you just tell people the facts, they will reason to the right conclusion" (p. 73). This assumption is troublesome

and has been proven false; emotional engagement with narratives might provide a corrective. Weik von Mossner (2018) explains:

> If we aim to convince people who do not share our cognitive frames about urgent
>
> environmental issues, it is unwise to tell them what to think. A more promising approach is
>
> to help them discover for themselves what feels right to them. (p. 5)

Lakoff (2010) elaborates: "Many frame-circuits have direct connections to the emotional regions of the brain. Emotions are an inescapable part of normal thought. Indeed, you cannot be rational without emotions" (p. 72).

Building on this, how we engage audiences will ultimately concern our ability to identify and understand emotions and transfer them through the fulfillment of engagement conditions, with the aim of eliciting a certain feeling—positive or negative—and a deeper connection with the audience.

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Section 1.2 - Research Overview

1.2.1 - Research Field

Transmedial econarratology is the most applicable term to describe my dissertation research on climate change narratives and transmedia storytelling. The novelty of this term requires the following explanation to orientate the discussion that follows.

By trans- I mean across media. By media I mean texts, including all forms and channels of communication.

American media scholar Henry Jenkins popularized the term transmedia storytelling, and provides us with an original definition that I have modified for my particularly purposes:

> Transmedia storytelling represents a process where integral elements of a narrative (previously fiction) get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated emotional (previously entertainment) experience. Ideally each medium makes its own unique contribution to the unfolding of the story. (2009a, para. 7)

Econarratology studies: (1) environmental texts, or storyworlds that interpreters simulate and transport themselves to during narrative comprehension; (2) "the correlations between textual, imaginative worlds and the physical, extratextual world;" and (3) the potential of the interpretation process "to foster awareness and understanding for different environmental imaginations and experiences" (James, 2015, p. xv).

Storyworlds are worlds designed by narrative and are products of the worldbuilding process. Storylines, or individual stories, increase the complexity of storyworlds.

Econarratologists use the pairing of traditional ecocritical approaches with narratology—including insights from communication theory, cognitive theory, and affect theory, among other growing realms of scholarship as interest in narrative diversifies and expands—to better understand the effect of media on interpreter's real-life attitudes, behaviours, and values, through a process of reading and seeing environmental texts.

Following guidance from James (2015), my econarratological readings of climate change storyworlds broadly focus on the tasks of highlighting the role of narratives in the worldbuilding process as well as how these narratives go on to engage audiences (p. 25).

In short, transmedial econarratologists are interested in the affective dimensions of storyworlds and how narratives across media landscapes bridge humanity's relationship with the environment and each other.

With this in mind, my research field is specifically concerned with transmedia storytelling that engages viewers emotionally because it is this form of engagement that could better realize the human condition that is mostly still absent in climate change discourse.

I am particularly interested in the visual forms of transmedia storytelling—narratives advanced by both the still and moving image form, though narratives of all kinds are important to this study.

1.2.2 - Research Focus

The multiple connections between theoretical research, econarratological readings, and praxis—over the course of a twenty year career as a photojournalist and environmental communications consultant—form the foundation underpinning my dissertation research. In my opinion, climate change communications need to be researched with a particularly focus on the role of narratives and the effective dissemination of these narratives. More specifically, my work aims to fill a void in the academic literature that only scarcely covers the role of transmedia storytelling as a means to bring about greater emotional engagement with climate change narratives. Because most people think of climate change as a non-urgent and psychologically distant risk that exists spatially, temporally, and socially apart from all of us, there is a need to provide emotional engagement with climate change narratives that can be specifically achieved through experiential transmedia storytelling projects—campaigns—that take into account the following lenses in their conceptualization, design, implementation, and evaluation:

• Degree of Narrativity

• Degree of Transmediality

• Degree of Engagement

As this nomenclature, or grouping of ideas, has existed in various forms before, the originality of

my research manifests in the re-purposing and re-organizing of some common terms that will inform the introduction of a new climate change communication model.

1.2.3 - Research Scarcity

Our world is predominantly visual so many practitioners and a growing list of scholars interested in the introduction of emotional engagement into climate change communications have suggested that the responsibility for creating such experiences—which might effectively advance the climate campaign—could fall on the shoulders of transmedia storytellers who are particularly apt at visual communication, or visual storytelling. This is not necessarily novel thought: For French literary theorist, essayist, philosopher, critic, and semiotician, Roland Barthes, media could be the "consummate realm of ideology" by which a "mystifying power" brings about a "field of affect" with "emotion-values" (Barthes, Miller, & Howard, 1975, as cited in Oxman, 2010, p. 74). Similarly, Sontag predicted the role of visual storytelling some time ago when she wrote, "In teaching us a new visual code, photographs alter and enlarge our notions of what is worth looking at and what we have a right to observe" (Sontag, 1977, p. 3).

However, it is worth emphasizing the shortage of studies evaluating visual storytelling that addresses the climate change crisis. Influential scholars have suggested that "research on the verbal communication of climate change has proliferated" (Chapman et al., 2016, p. 172); but upon closer examination of the existing literature, only a few peer-reviewed studies have focused specifically on visual storytelling, and as a result, "our understanding of the use of visual images in communication, and how they shape public perceptions of climate change, is less developed" (Wang et al., 2018, p. 1).

Visual storytelling that builds and advances new climate narratives could be advantageous in climate change communications and recent research has demonstrated the immediate impact of knowing more about this endeavour (Chapman et al., 2016). We gain an appreciation for the potential of alternate forms of storytelling in the Climate Visuals work of Chapman et al. (2016), who found that "perceived authenticity" and "credibility," as depicted by people in the image, was an important narrative component and that "familiar" climate change images, such as polar bears on melting ice were "easily understood" and "evaluated positively as a consequence," but were viewed with cynicism in discussion groups. Furthermore, Chapman et al. (2016) found that images of "impacts," floods and extreme weather moved audiences, but because they are emotionally "powerful" they were also overwhelming and needed to be coupled with new

narratives that addressed "concrete behavioural action (i.e., solutions)" (p. 180).

According to www.climatevisuals.org, a website that curates a growing library of images that provides guidance for campaigners, picture editors, and communication practitioners selecting imagery for communicating climate change, the international social research conducted by Chapman et al. (2016) produced seven core principles for effective climate change communication. Among other relevant findings that placed visual storytelling at the forefront of this work, Chapman et al. (2016) presented "some of the first evidence gathered regarding the impact of climate change imagery on individual affective, attitudinal, and behavioural responses to the issue" (p. 180); they conclude that more work in this area should be a priority.

Similarly, as of 2019, Bieniek-Tobasco et al. (2019) reported that "only approximately 1.5%" of studies focusing on climate change communications have investigated "the efficacy of film or documentary as climate communication modalities" (para. 3); they contend that "given the potential for this form of mass media to reach a wide-ranging audience, there is a need for more focused efforts to evaluate the potential impacts of climate communications through film media on personal behaviour change and participation in collective and political action" (Bieniek-Tobasco et al., 2019, para. 3).

The dearth of knowledge about visual storytelling is one problem; the other issue is the content itself. Wang et al. (2018) inform us that climate change imagery "tend not to show impact … on humans," and when they do the human depicted is often a politician, public figure, protestor or scientist (p. 2). With few exceptions "ordinary people tend to feature rarely" and "mostly as background or context, or as victims of climate change in distant geographic regions" (p. 2). For Wang et al. (2018), this observation "underscores a striking and potentially problematic feature" of climate change communications; that is, "the absence of human stories" (p. 2). Wang et al. (2018) also note:

> As it seems unlikely that the 'right' images will be capable, on their own, of overcoming all potential barriers to engagement, researchers and practitioners must consider the combined influence of both imagery and context (e.g., combining imagery with a description, or a donation appeal) in identifying which imagery is suitable for use for different goals. (p. 18)

It is with this last comment from Wang et al. (2018) that we lean, once again, towards transmedia storytelling. We do so acknowledging that, "While transmedia storytelling methods have been widely adopted in entertainment, advertising, and public relations, they have garnered less interest" in climate

change communications so there is pressing need for research on this topic (Lam & Tegelberg, 2019, p. 3).

1.2.4 - Research Questions

With the conception of a new transmedia storytelling framework in mind, to be presented as the TREES Model in Appendix B, I was primarily interested in evaluating the following five research questions (RQ):

RQ1: How is a successful transmedia storytelling climate change campaign structured?

RQ1a: What is the Degree of Narrativity?

RQ1b: What is the Degree of Transmediality?

RQ1c: What is the Degree of Engagement?

I tested these research questions primarily using two exemplary case studies.

RQ2: What does a novel transmedia storytelling model for the modern climate change campaign comprise?

I present a hypothesis for a novel model in Appendix B.

1.2.5 - Research Case Studies

Case Study 1 - SeaLegacy (SL)

SeaLegacy, an ocean advocacy non-profit organization, was founded in 2014 by National Geographic photographers Cristina Mittermeier and Paul Nicklen and has been lauded for pioneering and innovative transmedia storytelling best practices. I tested my research questions on one of their latest campaigns: The Greatest Sanctuary.

Case Study 2 - David Suzuki Foundation (DSF)

The David Suzuki Foundation, an evidence-based research, education, and policy focused non-profit organization, was co-founded in 1990 by David Suzuki and has been recognized for natural environmental protection advocacy. I tested my research questions on one of their latest campaigns: Charged Up.

Section 1.3 - Dissertation Overview

I breakdown the content of this dissertation in the following overview.

1.3.1 - Chapter 1: Introduction

This chapter affirms that stories are how we all make sense of the world and that narrative building can serve as an effective strategy for climate change campaigns. In fact, Chapter 1 suggests we face a "crisis of narrative" so there is an immediate need to re-evaluate the narratives we use to communicate the severity and urgency of climate change (James & Morel, 2020, p. 4). Even more, this chapter suggests there is a need to revise existing models of narrative to face the environmental challenges of the modern world.

Included in Chapter 1 are statements that concern the need for transmedia storytelling to deliver emotional engagement experiences to audiences who undergo narrative comprehension via immersion into storyworlds that have been designed to make climate change a less distant and abstract phenomenon. The chapter also proposes that emotional engagement with narratives might provide a corrective because we know now more than ever that facts alone will not move people to act.

Finally, my research overview is detailed in this chapter along with the research questions that frame the discussion throughout. I also provide chapter summaries in this section.

1.3.2 - Chapter 2: Literature Review & Theory

Chapter 2 of this dissertation is divided into four parts that explore the prevailing challenges that surround climate change communications, as well as, theories of narrative, transmedial narrative, and engagement, and in parallel, the Degree of Narrativity, Degree of Transmediality, and Degree of Engagement—the main branches of the TREES Model I present in Chapter 5.

In Part A of Chapter 2, I comment on counter narratives that work in opposition to climate change solutions and I survey a spectrum of motivational constrainsts and barriers of resistance that prohibit action against climate change. The confounding, invisible characteristics of the crisis and the psychological and cognitive processes that surround climate change communication is also discussed.

In Part B of Chapter 2, I briefly explore why narratives matter before I present a set of narrative

conditions to be used in my analysis in Chapter 4. This set of narrative conditions provide a framework to evaluate the Degree of Narrativity in a transmedia storytelling campaign; Degree of Narrativity is identified as a main branch of the presented TREES Model and measures the ability of a campaign to fulfill a set of narrative conditions within an individual storyline that is controlled and diversified in order to advance a central idea, or core narrative.

In Part C, I briefly explore why transmedial narratives, or transmedia storytelling, is poised to advance climate change campaigns through its worldbuilding capacity before I present a set of transmedia conditions to be used in my analysis in Chapter 4. This set of transmedia conditions provide a framework to evaluate the Degree of Transmediality in a transmedia storytelling campaign; Degree of Transmediality is identified as a second main branch of the presented TREES Model and measures the ability of a campaign to fulfill a set of transmedia conditions to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced.

In Part D, I briefly explore engagement with transmedia storytelling before I present a set of engagement conditions to be used in my analysis in Chapter 4. This set of engagement conditions provide a framework to evaluate the Degree of Engagement in a transmedia storytelling campaign; Degree of Engagement is identified as a third main branch of the presented TREES Model and measures the ability of a campaign to fulfill a set of engagement conditions to elicit increasingly deeper emotional responses from audience members with the intent to incite participation and actionable events from those individuals who build connections within the storyworld.

1.3.3 - Chapter 3: General Methodology & Methods

Chapter 3 highlights the ethnographic methodological lens I used to conduct my research on transmedia storytelling and the methods I employed to evaluate the two central case study campaigns: The Greatest Sanctuary by SeaLegacy, an ocean advocacy non-profit organization, and Charged Up, by the David Suzuki Foundation, an evidence-based research, education, and policy focused non-profit organization. I detail methods that include: Interviews, content sampling and analyses, and coding and software.

1.3.4 - Chapter 4: Results & Discussion

In this chapter I examine two exemplary case studies to evaluate the structure and best practices of a successful transmedia storytelling climate change campaign. The examination uses the framework setup in the literature review and specifically assesses research questions that investigate the Degree of Narrativity, Degree of Transmediality, and Degree of Engagement across each campaign.

The data analyzed and discussed in Chapter 4 set up the presentation of the TREES Model in included Appendix B.

1.3.5 - Chapter 5: General Discussion & Conclusion

Chapter 5 first advances with commentary on the discovery of three key competencies to be used in future climate change campaigns: (1) Narrative Intuition, (2) Transmedia Acumen, and (3) Emotional Intelligence; I also elaborate on the origins of my TREES Model because it outlines the central role of these three competencies in the production of a storyworld that evokes emotional engagement with audiences.

Chapter 5 concludes with notes on the limitations of my research as well as future directions other research and practitioners can take. I also encourage and propose ways that subsequent research could test my TREES Model.

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Chapter 2
Literature Review & Theory

N

Part A

On Challenges of Communicating

Climate Change

Section 2.1 - On Challenges of Communicating Climate Change

2.1.1 - Motivational Constraints & Resistance, or Barriers

The call for more effective communication that will lead to social change assumes that *motivation*—typically derived via disseminated data, according to Moser and Dilling (2012)—is all that is needed to get people to act. Indeed, among some proponents vying to solve the climate change crisis is a prevailing belief that public motivation is a key to achieving a real and lasting response to the climate crisis (Moser & Dilling, 2012, p. 494). However, as audience segmentation research suggests, strategies beyond merely disseminating information will be required to motivate people with varying awareness and perceptions of climate change (Leiserowitz, et al., 2021).

Furthermore, motivation is only half of the equation. The other half is *resistance*, or *barriers*. In short, "There are internal psychological and cognitive processes that may prevent an individual from engaging on this issue, as well as social, political, economic, and other structural external barriers to such engagement" (Moser, 2009, p. 287). Gifford (2011) observed that even individuals engaged in some sort of action related to climate change were hindered from doing more by psychological barriers. Social networks, interactions, and norms that are in conflict with people's social identity cause impediment as well, and so does the inconvenience of climate change; that is, people might not have the time or resources to participate in the suggested solutions because of other demands and daily routines or they believe that politicians or other experts will resolve the problem for them (Moser, 2009; Chryst et al., 2018). Finally, even if the psychological, cognitive, social, and political barriers do not slow down participation in mitigation and adaptation strategies, many scholars have determined that the technology, regulations, and cost of dealing with the climate change crisis are prohibitive (Moser, 2009).

What follows is a framework outlining various challenges to communicating the climate change crisis, including an analysis into the levers of motivation as related to this issue as well as into how barriers play a role, in order to lay the basis for their removal.

2.1.2 - Ideological Motivation

The task at hand is to better understand how to effectively communicate the climate change

crisis, and in order to do this we need brief commentary on capitalism, or the ideological project known as neoliberalism.

It is generally agreed that for several hundreds of years now the driving force in modern society has been industrial capitalism, a global economic and political engine that continues to gain strength with advances in technology, the accumulation and concentration of wealth, and the entrenchment of global systems such as multinational corporations and free trade (Cahill & Konings, 2017). Neoliberalism is the contemporary organizing idea behind this paradigm, the "philosophy by which capitalist globalization is coordinated, justified, and extended" (Perkins, 2017). According to Noam Chomsky, neoliberalism is "the defining political economic paradigm or our time" (McChesney, 1999, p.7); and other scholars have gone so far as to label it "the most successful ideology" in history (Anderson, 2000, para. 24).

Considering this, it is unusual how little is generally understood about neoliberalism's core principles. Critics discuss the "doubt" and "puzzlement" behind the term and its overuse as a "buzzword, a catchphrase" to the point that meaning is lost (Wilson, 2018); yet many miss the fact that neoliberalism is in truth "an entire ideological project" (Klein, 2017).

The neoliberal paradigm or ideology, though difficult to straightforwardly define, generally refers to economic and political policies that came into prominence in the 1980s under the conservative governments of Ronald Reagan in the U.S. and Margaret Thatcher in the U.K. and pushed a rollback of social welfare policies in favour of a re-emphasis on free-market capitalism unencumbered by bureaucracy and regulation (Wilson, 2018; Cahill & Konings, 2017). While advocates such as Gore (2017) point out that the central functions of neoliberalism have made possible worthy achievements, including "higher standards of living, longer lifespans, historic reductions on poverty" (p. 13), many scholars contend that the neoliberal project has a far more concerning side and much less noble motivations. Klein (2017) argued that neoliberalism is "shorthand for an economic project that vilifies the public sphere and anything that's not either the workings of the market or the decisions of individual consumers" (p. 79); while Chomsky and McChesney (1999) stated that the ideology's aim is to ensure that a small number of "private interests" take control of the vast bulk of social goods "in order to maximize their personal profit" (p. 7). Davies (2017) considered the neoliberal project to have resulted in the "disenchantment of politics by economics" (p. xiv); Klein (2017) summarized these findings with the label "a rationale for greed" (p. 81); and Wilson (2018) noted that in certain circles the term has come to signify everything that is "evil" (p. 11).

For the purposes of this dissertation I will simply assert that the neoliberal ideology operates as an

effective barrier to communicating about the climate crisis.

2.1.2.1 - The "Thought Collective": Neoliberalism as the Root of Climate Change Denial

The inception of the "thought collective"—an intellectual structure designed to advance and integrate specialized knowledge—and the founding of the Mont Pèlerin Society (MPS) and its related networks of partisan think tanks around 1947, should be acknowledged as key players in the origin of the "political movement" now known as neoliberalism (Mirowski & Plehwe, 2009, p. 5).

In early development, the architecture of this Neoliberal thought collective systematically "connected and combined key spheres and institutions for the contest over hegemony" while dispersing "a universal ideology" through academia, the media, politics, and business (Mirowski & Plehwe, 2009, p. 22/3); appreciating the "networking capacity" and "organizing capacity" of the thought collective we better understand the rise of "one of the most important movements in political and economic thought in the second half of the twentieth century" and simultaneously gain a foothold on the utility of "a comprehensive transnational discourse community" that which was created by the Mont Pèlerin Society and its affiliates and would later propagate its "prodigious strength" and "intellectual discourse" into the lives of all of us over the years ahead (Mirowski & Plehwe, 2009, p. 5).

Wilson (2018, p. 2) lamented, "Since the late 1970s, neoliberal ideas have increasingly guided the policies and practices of governments and other social institutions, and as a result, we have come to live in competition with ourselves, others, and our social world." Stimulated by competition, Wilson (2018) continued, "Individuals, organizations, companies, and even the government itself, will seek to optimize and innovate, creating a truly free social world where the best people and ideas come out on top." Unfortunately, "this generalization of market competition produces anxieties" and because, first and foremost, we are competitive social beings, "the prospects of failure comes to define our lives." More specifically, neoliberalism forces "us to be constantly calculating potential gains, losses, and risks, to be thinking about how this or that decision might or might not give us a competitive edge over the rest of the field" (Wilson, 2018, p. 4). Despite being "interdependent beings" we are living as individuals, disconnected through an innate competitive nature and an ideology that strengthens its pull.

The task of opposing the neoliberal ideology, however, is often compounded by the details. In the case of climate change, neoliberal thinkers generally deny that the crisis is even happening. Hoggan (2009)

said this of the denials:

> It is a story of betrayal, a story of selfishness, greed, and irresponsibility on an epic scale.
> In its darkest chapters, it's a story of deceit, of poisoning public judgement—of an anti-
> democratic attack on our political structures and a strategic undermining of the journalistic
> watchdogs who keep our social institutions honest. (p. 3)

Moreover, Carroll et al. (2018) focused on the corporate elite and the architecture of climate change denial, conducting a social network analysis to map the Canadian network of carbon-capital corporations whose boards interlock with key knowledge-producing civil society organizations, including think tanks, industry associations, business advocacy organizations, universities, and research institutes. They found "a pervasive pattern of carbon-sector reach into…civil society" which is "linked to the central-Canadian corporate elite through hegemonic capitalist organizations, including major financial companies"; their approach, in politically progressive yet resource-rich Canada, is a "soft" denial strategy, affirming the existence of climate change yet taking only symbolic action, while "protecting the continued flow of profit to fossil fuel and related companies" (Carroll et al., 2018); in the United States, in 2002, with advice from communications specialist Frank Luntz, strategic messaging—and storytelling—was central:

> Should the public come to believe that the scientific issues are settled, their views about
> global warming will change accordingly. Therefore, you need to continue to make the lack
> of scientific certainty a primary issue in the debate (Burkeman, 2021, para. 4-5).

Other deniers include the fossil fuel industry generally; corporate America; conservative philanthropists; foundations; think tanks; front groups; contrarian scientists; conservative media; conservative politicians; and astroturf groups (McCright & Dunlap 2011, p. 148). All these "major actors," in one way or another, have created campaigns that have had a profound effect on the way the public has "perceived," "discussed," and "debated" climate change, as well as played a "crucial role" in "blocking" domestic and international policies that might otherwise mitigate the impending climate crisis (McCright & Dunlap, 2011, p. 156).

For example, coal and oil corporations recognized early on that the burning of fossil fuels was

a source of greenhouse gas emissions, so organizations like ExxonMobil and Peabody Coal, as well as industry associations such as American Petroleum Institute (API), Wester Fuels Association, and Edison Electric Institute, provided funding for contrarian scientists, conservative think tanks, and a host of front groups (McCright & Dunlap 2011, p. 148). In this process, well-funded think tanks backed by deep-pocket foundations controlled by philanthropists like Richard Mellon Scaife and David and Charles Koch initiated a "war of ideas" against progressive gains; front groups, like the Global Climate Coalition (GCC), formed in 1989 as a result of the increasing strength of the Intergovernmental Panel on Climate Change (IPCC), and provided a shield for anti-environmental activities—the GCC was sponsored by oil companies (i.e. ExxonMobil, Texaco, and BP), automobile manufacturers (i.e. Chrysler, Ford, and GM), and industrial associations (i.e. API, US Chamber of Commerce, and the National Association of Manufactures) (McCright & Dunlap 2011, p. 150); credentialed, yet contrarian scientists, associated with the George C. Marshall Institute manufactured uncertainty concerning climate change (McCright & Dunlap 2011, p. 151); conservative media in the form of right-wing radio talk show personalities, most notably Rush Limbaugh, attacked leading environmentalists like Al Gore; conservative politicians, that is, Republicans in Congress hosted contrarian scientists and other non-credentialed deniers as public speakers (McCright & Dunlap 2011, p. 153); and astroturf groups organized "spontaneous, popular grassroots efforts" while disguising the sponsoring industry, think tank, or front group to redirect denial efforts against climate change (McCright & Dunlap 2011, p. 154).

The prevailing counter narratives manifested by the climate change denial machine will remain one of the significant barriers to communicating the crisis; Oreskes and Conway (2010) attest to this malignant effect in *Merchants of Doubt*.

If a top-down neoliberalism thought collective promoted individualism under the guise of a set of social, cultural, and political-economic forces that puts competition at the centre of social life, then it should be the aim of a bottoms-up environmentalism thought collective to intentionally create a comparable set of forces that puts collaboration at the centre of social life to foster collectivism. There is, in other words, work to do to replace the prevailing system of competition derived from neoliberalism with a system of collaboration grounded in the principles of collective environmentalism.

2.1.2.2 - The Polluted Public Sphere

Neoliberalism's dominance within the "public sphere" might be central to the overarching problem

of communicating climate change. We gain our deepest understanding of this arena of dialogue through the work of German sociologist and philosopher Jürgen Habermas, who is perhaps best known for his theories on the public sphere. Habermas, Lennox, and Lennox (1974) state:

> By the "public sphere" we mean first of all a realm of our social life in which something approaching public opinion can be formed. Access is guaranteed to all citizens. A portion of the public sphere comes into being in every conversation in which private individuals assemble to form a public body. (p. 45)

For Habermas (1989) the public sphere is a space of "freedom" and "permanence." Moreover, it is within this space that "that which existed" becomes "revealed"; and in the public sphere "opinion- and will-formation" are central. Habermas (1996) elucidated this idea:

> A formation of opinion and will, public discourse is not merely a cognitive exercise but mobilizes reasons and arguments that draw on citizens' interests, values, and identities. Political discourse thus brings in the citizens' actual sources of motivation and volition. It thereby generates a "communicative power" that has a real impact on the formal decision making and action that represent the final institutional expression of political "will." (xxviii)

Brulle (2000/2010) furthered this concept, calling the public sphere "a communicative structure formed by civil society" that operates so that society can "identify problems, develop possible solutions, and create sufficient political pressure to have them addressed by constitutional governments."

As well, Habermas thought communicative action is a deliberative process in which actors in the public sphere seek to reach consensus through the act of argumentation, in which all stakeholders participate "freely and equally, in a cooperative search for 'truth'" (Flyvbjerg, 1998; Habermas 1987, p. 294).

Through this lens, environmentalism generally—and in particular communication about the climate change crisis—is losing the argument in the public sphere as we remain "vulnerable to the repression and exclusionary effects of unequally distributed social power, structured violence, and systematically distorted communication" (Habermas, 1996, p. 307).

2.1.2.3 - The Degraded Current State of the Public Sphere and Tools for Amelioration

The 1922 "Lippman-Dewey Debate" between Walter Lippmann about John Dewey provided groundwork "to identify new challenges for science education and to explore the relationship between science education and science communication (Feinstein, 2015, p. 145). It argued:

> Science education can help foster democracy in ways that embody Habermas' ideal of the
> public sphere, but only if we as a field pay more attention to (1) the non-scientific frames
> and narratives that people use to interpret news about science, (2) the "second shaping" of
> scientific facts by the media, and (3) emerging platforms for public engagement.

Considering the current state of the public sphere, in particular as it relates to climate change communication, this is instructive. A vital step forward is indeed to determine "what citizens need to know to participate in debates about climate change" and make the communication of such information, in formats and through media that will be "heard" by the appropriate audiences (Feinstein, 2015, p. 146).

However, Lippman and Dewey did not have to contend with a public sphere nearly so poisoned by cultural rifts, partisanship, the twenty-four hour news cycle, and the anonymity of social media. Hoggan (2016), who believes the public sphere should involve forums of "open and honest, higher-quality debate"—in a church, in our basements, during the news on a television or a chat at the water cooler—asserted that such forums have become "polluted by a toxic mix of polarized rhetoric, propaganda, and miscommunication" leading to "a dark haze of unyielding one-sidedness" that has "created an atmosphere of mistrust and disinterest." He noted the widespread and growing use of propaganda to disseminate false information about the climate change crisis, undercutting Lippman and Dewey's central argument that knowledge will lead to motivation and hence to action (Hoggan, 2016). Markowitz and Guckian (2018) concluded that polarization may indeed be the "single most challenging" and "stubborn" barrier to effective communication of the climate change crisis.

Nevertheless, experts have determined many strategies to clean up the public sphere and re-start the dialogue on climate change. The notion of dialogue is an important one. In contrast to debate, which concerns finding "weakness," the focus of dialogue is on locating "strength and value" in others. This is particularly notable when considering what Connor last name referred to as the "advocacy trap" (as cited in Hoggan

2016): The belief that people who disagree with us are wrongdoers. Connor went on to discuss the idea of "stance," wherein views on various matters are held sacred, and contends that overcoming the barrier of stance requires a "pull" not "push" strategy which involves "cajoling someone through education, incentives, or warnings" as well as a willingness to collaborate. Finally, public opinion analyst and social scientist Daniel Yankelovich describe the need for compromise:

> We need to bridge opposing positions, not accentuate differences … One-sidedness creates a mood of corrosive bitterness. Worst of all, it is a formula for losing the battle, whether it's a war on terror or combating global warming. (as cited in Hoggan 2016, p. 7)

2.1.3 - The Characteristics of Climate Change Itself Are a Barrier

Lucy Wood comments, "This invisible menace needs to be brought into the light so that we can understand what we are fighting" (Wood, 2016). Climate change is a slow-moving, long-term, complex, and abstract phenomenon (Markowitz & Guckian, 2018). Markowitz and Guckian (2018) described the nature of this abstraction:

> The impacts [of climate change] are diffuse and largely expected to occur in the future; few people are directly impacted by its effects currently; attributing specific negative outcomes … is challenging; and it lacks many of the typical features that support engagement with and attention toward other societal risks, including culprits, personally known victims, and a sense of urgency. (p. 4)

The impacts of climate remain largely invisible—due to diffusion, the long-term speed at which they are acting on the environment, disconnect from causes, and even, arguably, the areas most severely impacted at this point in the crisis. Indeed, Moser and Dilling (2012) observed that, "The early environmental impacts of climate change have mostly occurred (and are clearly noticed) in regions far from where the majority of mid-latitudinal audiences live" and that without "direct experience" these audiences require that the problem is communicated to them via "signalling, illustrating, and explaining" (p. 161).

Compounding these issues—which together may be thought of as a lack of tangibility—is the fact

that the causes of climate change are also essentially invisible. Moser and Dilling (2012) reinforced this notion, arguing that the "culprits" in this case—the greenhouse gases—"are colourless, odourless gases, and the long-term average changes set in motion by them have emerged only recently from the daily, seasonal, and interannual 'noise' of variability" (p. 161). More confusing still, as Markowitz and Guckian (2018) pointed out, is the fact that climate change is essentially "a side-effect of normal, daily behaviour, not intentionally caused" (p. 4). Lakoff (2016) examined this more explicitly when he described the nature of systemic causation, in which "many problems arise from the system they are in" (para. 25). Lakoff (2016) explained how the imbedded, widespread, and not-directly-traceable causes nevertheless mean that:

> Global warming over the Pacific can produce huge snowstorms in Washington DC: masses
> of highly energized water molecules evaporate over the Pacific, blow to the Northeast and
> over the North Pole and come down in winter over the East coast and parts of the Midwest
> as masses of snow. Systemic causation has chains of direct causes, interacting causes,
> feedback loops, and probabilistic causes — often combined. (p. 25)

Lakoff (2014) emphasized how this translates into communication challenges, asserting the possible existence of "multiple causes," "special conditions," a network of direct or indirect causes, a "feedback mechanism" or a combination of the above. He continued:

> Causation in ecosystems, biological systems, economic systems, and social systems tends
> not to be direct, but is no less causal. And because it is not direct causation, it requires all
> the greater attention if it is to be understood and its negative effects controlled. (Lakoff,
> 2014, p. 38)

Jamieson (2011) concluded that though climate change involves change by definition, the crisis remains difficult to identify both "empirically" and "conceptually." These characteristics of the crisis—its distance, abstraction, impersonal nature, and indirect causation—create the illusion of a lack of urgency, a barrier of misperception undercutting what should be a primary motivator in the campaign against the crisis.

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2.1.3.1 - Framing, or Psychological & Cognitive Barriers

Climate change remains complex, abstract, and polarized as discussed. Yet various psychological and cognitive barriers further complicate the challenge of communicating about the crisis. Lakoff (2010) explained that our perspective on a complex issue like climate change is defined by how we frame this issue in our mind (p. xi).

Frames are "roadmaps" in our heads, the unconscious neural circuits that define how we think. We cannot see or hear frames; they are conceptual structures, or "schemas," made up of images, metaphors, narratives, and emotions, and they are physically part of the brain (Lakoff, 2010). While we cannot consciously access these structures, we can experience and thus better understand how they operate. Lakoff's simple exercise instructs: "Don't think of an elephant." The result, of course, is that the word "elephant" (Lakoff, 2014)—whether seen or heard—activates the associated frame in the mind and causes respondents to think of a grey animal with a trunk and tusks.

This is the power framing. Frames are the conduits through which we reason and the way we make sense of the world. Without the frames allowing access to the concept of climate change, it is impossible to understand it. Nisbet and Scheufele (2009) considered framing an "unavoidable reality of the science communication process," adding that, "unframed" information does not exist (p. 1771). According to Gamson and Modigliani (1989), people each have their own "experiences or psychological predispositions to the process of constructing meaning" and arrive at any issue with "anticipatory schema" (p. 2). In their earlier work, Gamson and Modigliani (1989) suggested that media discourse can be conceived of "a set of interpretative packages that give meaning to an issue … with a central organizing idea, or frame" (p. 3). Building on this, Goffman (1974) called frames "schemata of interpretation," and identified a framework that people could use to make meaning of things that were previously meaningless. Ganz (2011) explains it this way:

> When we cognitively map the world, we identify patterns, discern connections, and
> hypothesize claims and test them–the domain of analysis. But we also map the world
> affectively by coding experiences, objects, and symbols as good or bad for us, fearful or
> safe, hopeful or depressing, and so on. (p. 270)

As in Ganz's description, it is important to note that frames involve not just rational thought but emotion. Early research in framing by Nobel Prize Winner Daniel Kahneman and his collaborator Amos Tversky in the 1980s upended the assumption that humans behave rationally—an assumption that a number of economic models previously rested on. Kahneman and Tversky showed in fact that humans consistently act and make decisions in irrational ways, relying on a number of mental shortcuts to speed up our reasoning, which to great extent are sensitive to how things are framed (Kahneman, 1994).

In examining how frames are used, Borah (2011) conducted an exhaustive study that analyzed framing literature from 93 peer-reviewed journals over a decade. The research, Borah found, was separated into "frames in the news" (i.e. sociological) and "frames in the individuals' minds" (i.e. psychological). The goal of some of this research was to determine how frames could become tools to better communicate. Entman (1993) noted that framing meant selecting certain "aspects of perceived reality" and making them "more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" (p. 52). Gitlin (1980), who described frames as the tools used by journalists to organize enormous amounts of information and package them effectively for their audiences, understood how they could be used to develop organizing principles in media communication via "persistent patterns of cognition, interpretation, and presentation, of selection, emphasis, and exclusion" (p. 7). Lakoff (2010) concluded, "Environmental framing is everywhere in the news" and these frames shape "the goals we seek, the plans we make, the way we act, and what counts as a good or bad outcome of our actions" (p. 70).

2.1.3.2 - Moral Judgement

Additional psychological and cognitive research on "moral judgement" hints at the severity of the information processing concern. Markowitz and Shariff (2012) state:

Converging evidence from the behavioural and brain sciences suggests that the human moral judgement system is not well equipped to identify climate change—a complex, large-scale and unintentionally caused phenomenon—as an important moral imperative. As climate change fails to generate strong moral intuitions, it does not motivate an urgent need for action in the way that other moral imperatives do. (p. 243)

Like other psychological processes such as "preference evaluation and construction," "moral judgement" is strongly affected by emotional responses to objects in one's environment and "moral intuitions rapidly and automatically drive our initial perceptions of right and wrong" (Markowitz & Shariff, 2012). However, analytic reasoning about moral issues tends to be slow and cognitively effortful and because climate change possesses few features that generate rapid, emotional visceral reactions, it is difficult to quickly comprehend. Consequently, understanding climate change as a "moral imperative" does not occur automatically, at an intuitive level. Confounding this moral dilemma is the "bystander effect," or "othering" (Bushell et al., 2017, p. 7), that posits as more people identify climate change as a problem, "the more likely we are to ignore our own judgment and watch the behaviour of others to identify an appropriate response" (Bushell et al., 2017, p. 41).

2.1.3.2 - Guilt & Blame

Markowitz and Shariff (2012) also pointed to the "blamelessness of unintentional action" as a barrier to understanding climate change (p. 244). They state:

> No one wants climate change to occur or is purposefully trying to make it happen. Although climate change is the direct result of intentional, goal-directed behaviour (for example, the use of energy to provide all the trappings of modern life), it is probably perceived by many individuals as an unintentional, if unfortunate, side effect of such actions. (p. 244)

Without a single villain or antagonist there is no one to blame. As this unintentional "blameless" scenario persists, so individuals' motivation to fix or "right past wrongs" decreases (Markowitz & Shariff, 2012, p. 244).

"Guilty bias" further complicates climate change communication (Markowitz & Shariff, 2012, p. 244). While it might be difficult to blame a specific person or entity for causing the crisis, many of us are exposed to messaging that suggests we are at fault by way of our lifestyle choices and behaviour; inundated with persuasive criticism, we engage in biased cognitive processes to minimize the negative feelings created. In the end, we challenge the significance of the problem or deflect evidence of our role in causing the problem, often blaming the actions (or inaction) of others.

2.1.3.4 - Tribalism & Biconceptualism

As mentioned in Section 2.1.2.3 with reference to political partisanship, the phenomenon of "moral tribalism" poses immediate barriers to communication about the crisis. According to Jonathan Haidt, human beings have a lifelong tendency to want to "band together" and "once they engage in the psychology of team, open-minded thinking shuts down." Haidt also touches on the entrenchment effect of confirmation bias, whereby we seek out evidence that confirms our beliefs rather than the other way around (Hoggan 2016, p. 33; Marshall, 2014, p. 14). Others have referenced this effect as "cognitive dissonance," or a mental discomfort held by someone who has two contradictory beliefs: One that might permit them to believe we should do something to mitigate climate change and another that reenforces the idea that air travel is just fine (Bushell et al., 2017, p. 41).   Dan Kahan reiterates this when he describes "cultural cognition" and the tendency of individuals to "confirm their beliefs about disputed matters of fact—whether relating to global warming as a serious threat or the death penalty as a deterrent to committing murder—to values that define their cultural identities" (Hoggan 2016, p. 41). Research by McCright and Dunlap (2011) and Haidt and Graham (2007) examined why moral priorities on the left and right of the political spectrum have led conservatives to be less sympathetic to the concept of climate change than liberals.

As the political landscape becomes increasingly polarized and tribal values are reinforced through bipartisan media outlets releasing carefully attuned messaging, a feedback loop is created. The Pew Research Centre confirms that this divide has manifested in regard to climate change as the rift between Republicans and Democrats (PRC, 2016, as cited in Clayton & Manning, 2018). Indeed, according to Markowitz and Guckian (2018), the conversation around climate change has become tainted with political frames that advance specific party agendas:

> Climate change has become infused with deeply antagonistic political and group-identity meanings, such that 'beliefs' about the issue have … essentially become proxies for political group membership and identity: What it means to be a 'good' Republican is to be skeptical about the reality and urgency of climate change, whereas what it means to be a 'good' Democrat is to see climate change as an existential threat in need of large-scale societal response. (p. 39)

Despite this, we are all what Lakoff (2006) terms "biconceptuals"—"conservative on some issues and progressive on others, in many, many possible combinations" or "people who use one moral system in one area and the other moral system in another area of their political thinking" (p. 14). Biconceptualism suggests there is no single, consistent worldview, or set of ideas, that propels people to make decisions. Instead, both conservative and progressive views are present in each of us and one particular view inhibits the expression of the other. Which mode of thought is triggered is determined by neural pathways built by repetitive, comforting, emotional, and moral appeals–simply put, by framing (Lakoff 2010).

Lakoff (2006) elucidates the notion of biconceptualism in a political context as he describes one type of "Partial Progressive" or "Lover of the Land"—anglers, campers, even "devout Christians who take seriously their biblical obligation to be stewards of the earth"—who share many "green" values but would never be identified by the term "environmentalist" (pp. 16-17). This is why effective communication in the public sphere has so much to do with effective use of culturally suited language and codes.

2.1.3.5 - Uncertainty

Markowitz and Shariff (2012) also acknowledge that uncertainty breeds optimism in some cases; the consequence of the crisis is a perceived reduction in the seriousness of the issue and thus a dip in motivation:

> The carefully chosen verbal labels used to describe different levels of (un)certainty in the
> 2007 Intergovernmental Panel on Climate Change report led respondents in one study to
> systematically interpret the outcomes as less likely than intended by the experts. (p. 244)

Beyond the lack of tangibility and immediacy of the climate crisis, the extended timescale in which scientists expect it to unfold further enhances audience uncertainty. Markowitz and Shariff (2012) confirm the prevailing feeling, not always conscious, that we are "less morally obligated" to act on the behalf of "faraway" communities or, perhaps, future generations who would be affected by the climate change only over a "long-time" (p. 245). In addition to this psychological response survivors of "climate disasters" have a "false sense of their own future invulnerability" or an "optimism bias" and can convince themselves they are "less likely to be affected by a future tornado than people in other towns," for example (Marshall, 2014, p. 9 and p. 60).

Uncertain about right and wrong we also tend to surround ourselves with "people who agree with" us, our "in-group," and this "echo chamber" reinforces false consensus along with views about "abortion, gun control, and, increasingly climate change" (Marshall, 2014, p. 29—33); Kahan et. al., (2012) further suggest that a "conflict of interest" exists between "personal" beliefs that are shared with others and "the collective one" (p. 1).

2.1.3.6 - Risk

That the climate crisis is an existential and impending threat that has been observed and scientifically agreed upon should suffice to warn us of future risks related to the consequences of global warming—this is not the case as discussed throughout. Scholars including professor of psychology Paul Slovic agree this is because our "perception of risk" is "socially formed" according to the our "availability bias," or what are friends and neighbours think is risky, along with two main drivers that include "a sense of powerlessness in the face of involuntary and catastrophic impacts," or what Slovic calls "dread risk," that which is "intergenerational and irreversible," and by "an anxiety that comes from the uncertainty of new and unforeseeable dangers, or "unknown risk," which can be invisible and unprecedented" (as cited in Marshall, 2014, p. 53).

Slovic continues: While we might welcome action against cell phone towers because of the risk of radiation to children on the playground, we do act on climate change because it does not "feel threatening"; while we might worry about the odd storm here or there, these extreme weather events become part of "our accepted way of life" and this "status quo" is "manageable," so subsequent threats of climate change need to be even more severe to make us feel at risk; and thirdly, our risk is specifically influenced by what we "want to believe" so if we do not "choose" to identify the risk of climate change, we might just feel quite safe (as cited by Marshall, 2014, p. 53–55).

Our cultural worldviews, as touched on already, influence this risk perception too (Bramen et. al., 2012).

2.1.4 - Note on Challenges

Establishing the possible solutions to the climate crisis rests in our ability as a society to change how we live, how our economies function, and even the stories we tell about our place on earth (Klein,

2014, p. 4). The dominant narratives of neoliberalism persist within the polluted public sphere alongside a spectrum of barriers that prohibit motivation to take action against climate change. The confounding, invisible characteristics of the crisis and the psychological and cognitive processes that surround climate change communication exacerbate the challenges ahead.

Q

Part B
On Narratives

Section 2.2 - On Narratives

2.2.1 - Why Narratives?

It is not the objective of this dissertation to start at the beginning of the history of narrative; instead, I proceed by simply recognizing the endurance of narrative.

To overcome indifference and inaction that stem, in part, from counter narratives, climate change communicators must succeed at advancing compelling narratives derived from an inventory of stories that speak to the alarming threat as well as a sustainable path forward.

The ubiquity and success of narratives as a tool for idea-building and change-making is well-documented. For tens of thousands of years we have communicated via storytelling (Gottschall, 2013, p. xiii). We still communicate through story. Author Margaret Atwood says, "You're never going to kill storytelling because it's built into the human plan. We come with it" (Rothman, 20212, para. 20). Barthes (1982) adds that, "Under this almost infinite diversity of forms, narrative is present in every age, in every place, in every society; it begins with the very history of mankind and there nowhere is nor has been a people without narrative" (p. 79). From Jesus and Shakespeare to Dr. King and Lady Gaga, stories have continued to resonate for one reason or another (Romm, 2012).

Film director and screenwriter Jean Luc Godard explains the reason for this endurance of narrative: "Sometimes reality is too complex. Stories give it form" (Public Libraries Singapore, 2021). Stephen Jay Gould concurs:

> The mind, basically, is a pattern-seeking machine. I think that's true of our ancestors as well. We graphed consciousness into that so we tend to seek patterns because that's what mammals do and then we tell stories about them. I think we're pretty much conditioned to look for a pattern and to try to interpret it in terms of certain stories. (2000 Interview with Steven Jay Gould, Harvard University, 2008)

Edward O. Wilson adds:

> People must belong to a tribe; they yearn to have a purpose larger than themselves. We are

obliged by the deepest drives of the human spirit to make ourselves more than animated

dust, and we must have a story to tell about where we came from, and why we are here.

(Wilson, 1999, p. 6)

Stories that propagate environmental discourse, or bring about the environmental narrative, are no different. Innumerable accounts have paid tribute to the natural world just as creation stories have attempted to explain our relationship to the environment—from Indian folklore about deities who watch over the forests, to a sequence in the Epic of Gilgamesh in which Enkidu is punished when he cuts sacred trees; from the Greek myth about Orion's punishment when he threatens to murder all living animals, to the many incarnations of Indigenous tales that speak of the land itself "breathed into being by human consciousness" (Davis, 2003). Other tales, rituals and cultural practices of early hunter-gatherer societies are deeply rooted in the rhythms of their environments; the religions of many civilizations, including Buddhism, Taoism, and various branches of Christianity, teach the need for "oneness" with nature (Moezzi, Janda, & Rotmann, 2017; Dryzek, 2013; Pepper, 1996).

But narrative can both explain and instruct. For Joseph Romm (2012), stories are a form of rhetoric—"the art of influencing both the hearts and minds of listeners" (p. ix). Stories work because they are the way we comprehend reality, explain it to ourselves, and explain it to each other. They are a vital tool in climate change communications because they are also a way to persuade and coordinate (Bevan, Colley, and Workman, 2020).

2.2.2 - Narrative Theory

To best understand how narratives can be deployed and enacted in climate change communication requires a brief consideration of narrative theory.

In broad terms Bal (2017) states that, "Narratology is the ensemble of theories of narratives, narrative texts, images, spectacles, events—cultural artifacts that tell a story" (p. 3). Through this lens, a theory "helps to understand, analyze, and evaluate narratives" (Bal, 2017, p. 3). Since a narrative theory systematically provides a set of general statements about reality, we can use such theories to better identify the characteristics, or fundamental rules of narrative that bring about such realities in the climate storyworld.

When we observe narrative characteristics across "cultural artifacts" we can describe a "narrative

system" (Bal, 2017, p. 3). A system then permits us to examine the variations that "are possible when the narrative system is concretized into narrative texts," or ways of telling (Bal, 2017, p. 3). The corpus on narrative might consist of "novels, novellas, short stories, fairy tales, newspaper articles" and much more as others have argued (Bal, 2017, p. 4); climate change comic strips for example (Cook, 2020). Transmedia storytelling expands this corpus even more so.

To put a boundary around that corpus of narrative texts is not the scope of this dissertation work either. I simply recognize that commonalities among narrative theories lend themselves to new transmedia storytelling strategies at large.

2.2.2.1 - Narrative Defined & Described

Before we proceed we need clarification on the two lenses of narrative.

First, in an attempt of a definition for the term we might seek out narrative rules through a deductive process that leads us towards some general narrative structure consisting of conditional units that can be combined for certain affect. In the traditional sense of the definition, narrative is generally agreed upon as a "representation of a sequence of events," as scholars before us narrowed in on the commonality of event, sequence, and representation (Ryan, 2008, p. 22–24). However, I present this definition while paying attention to the dilemma seeded by Barthes (1982):

> Either a narrative is merely a rambling collection of events, in which case nothing can
> be said about it other than by referring back to the storyteller's art, talent, or genius—
> all mythical forms of chance—or else it shares with other narratives a common structure
> which is open to analysis, no matter how much patience its formulation requires. (p. 253)

Addressing the perplexity surrounding a fixed definition of narrative Barthes (1982) affirms that, "There is a world of difference between the most complex randomness and the most elemental combinatory scheme," but he acknowledges that, "it is impossible to combine (to produce) a narrative without reference to an implicit system of units and rules" (p. 253).

Barthes (1982) continues:

But however many levels are proposed and whatever definition they are given, there can be no doubt that narrative is a hierarchy of instances. To understand a narrative is not merely to follow the unfolding of the story, it is also to recognize its construction in "stories," to project the horizontal concatenations of the narrative "thread" onto an implicitly vertical axis; to read (to listen to) a narrative is not merely to move from one word to the next, it is also to move from one level to the next. (p. 259)

To seek a better understanding of narrative structure—that is, the conditional unitss and rules of narrative—is to inform the architecture of new climate narratives (i.e., the prevailing doom-and-gloom narrative has limitations).

In addition to the concrete definition of narrative, we might also explore the topic of narrative through a description as we ask ourselves as Ryan has before us: "What does narrative do for human beings?" (Herman, Jahn, Ryan, 2005, Narrative, para 6). Setting aside the text-type definition, narrative then, becomes an abstract overarching lens, or a way of seeing and thinking about the world as previously suggested by Saul (2018) in Section 1.1.2.1. In this way, narrative is understood to be born from and influence "all thoughts and dreams, myths, ideas, inspirations, intuitions brought into being by the human imagination since the dawn of consciousness" leading us to understand narrative as a conceptual framework—made up of a library of indexed stories that help us build storyworlds in our heads—that provide a purposeful interconnected view of our world (Davis, 2003). Through this interpretation narrative perspective exists beyond the concrete and might be best experienced as a conceptual reflection across general discourse (Moezzi, Janda, & Rotmann, 2017). Herman, Jahn, and Ryan (2005), with the collective assistance of others, expands the description of narrative into the realms of the following:

Narrative allows human beings to come to terms with the temporality of their existence (Ricoeur 1984–1988); narrative is a particular mode of thinking, the mode that relates to the concrete and particular as opposed to the abstract and general (Bruner); narrative creates and transmits cultural traditions, and builds the values and beliefs that define cultural identities; narrative is a vehicle of dominant 59 ideologies and an instrument of power (Foucault 1978); narrative is an instrument of self-creation; narrative is a repository of practical knowledge, especially in oral cultures (this view reminds us of the etymology of the word

'narrative', the Latin verb gnare, 'to know'); narrative is a mold in which we shape and preserve memories; narrative, in its fictional form, widens our mental universe beyond the actual and the familiar and provides a playfield for thought experiments (Schaeffer 1999); narrative is an inexhaustible and varied source of education and entertainment; narrative is a mirror in which we discover what it means to be human.

They continue:

> One says 'narrative' instead of 'explanation' or argumentation' (because it is more tentative); one prefers 'narrative' to 'theory,' 'hypothesis' or 'evidence' (because it is less scientistic); one speaks of 'narrative' rather than 'ideology' (because it is less judgemental); one substitutes 'narrative' for 'message' (because it is more indeterminate). (Prince, 1982, as cited in Ryan, 2008, p. 22).

2.2.2.2 - Narrative Structure

Perspective aside for now, I focus next on narrative structure with an appreciation for one of our tasks which will identify a set of narrative conditions. Bal (2017) assists in this endeavour as she first defines "text" as:

> A finite, structured whole composed of language signs. These can be linguistic units, such as words or sentences, but they can also be different signs, such as cinematic shots and sequences, or painted dots, lines, and blots. The finite ensemble of signs does not mean that the text itself is finite, for its meanings, effects, functions, and background are not. It only means that there is a first and last word to be identified; a first and last image of a film; a frame of a painting (p. 5)

Alongside Bal (2017), this research project used narrative theorist David Herman's classic text Narrative, as a primary reference.

Herman (2007) calls narrative "a basic human strategy for coming to terms with time, process and

change…[or] accounts of what happened to particular people—and of what it was like for them to experience what happened (p. 3). In fact, Herman (2007) suggests, just as it is possible to "construct a narrative" about science, that is, "to tell a story about who made what discoveries and under what circumstances," it is also possible "to use tools of science—definition, analysis, classification, comparison, etc.—to work toward a principled account of what makes text, discourse, film, or other artifact a narrative" (p. 3).

Furthermore, traditional "structuralists" like Barthes argued for a "cross-disciplinary" approach to the analysis of narrative (Herman, 2007, p. 5). William Labov and Joshua Waletzky conceived a model predicting the personal experience narratives of face to face interactions and literary scholar Tzvetan Todorov coined the term, "la narratologie," or narrative, to "designate" what he and other structuralists, such as Claude Bremond, Gerard Genette, and A.J. Greimas, thought of as a model for the "science of narrative" (Herman, 2007, p. 5). These structuralists extend the idea of Ferdinand de Saussure's linguistics and his idea of "pilot-science" and the work of Russian Formalist literary theorists who studied prose narratives from "Tolstoy's historically panoramic novels to tightly plotted detective novels to Russian fairy tales" (Herman, 2007, p. 5).

What are the most fundamental conditions of narrative then?

Noteworthy thinkers have contributed to the concepts behind narrative design principles (Herman, 2007). Using the Soviet folklorist and scholar Vladimir Propp's original work on "disruptive events" or "acts of villainy," as the "motor of narrative" Todorov summarized the following succession as a means to create a narrative (Herman, 2007, p. 10). Todorov speculated that narratives follow a trajectory:

• Leading from an initial state of equilibrium ...

• Through a phase of disequilibrium ...

• To an endpoint at which equilibrium is restored (on a different footing) because of intermediary events—though not every narrative will trace the entirety of this path. (Herman, 2007, p. 10)

In doing so, Todorov highlighted the intuition of "conflict," or the "thwarting of characters' intended actions by unplanned events, which may or may not be the effect of other characters' intended actions" as components of a narrative (Herman, 2007, p. 10).

While an "event-sequence" that sets up some kind of "noteworthy (hence 'tellable') disruption" is needed, it is not in itself enough (Herman, 2007, p. 10). A "foregrounding of human experientially,"

as previously described by Monika Fludernik, is crucial, since "narrative prototypically roots itself in the lived, felt experience of human or human-like agents interacting in an ongoing way with their cohorts and surrounding environment" (Herman, 2007, p. 10). In other words, "unless a text or a discourse encodes the pressure of events on an experiencing human or at least human-like consciousness, it will not be a central instance of the narrative" (Herman, 2007, p. 11).

Herman (2007) makes a distinction between "classical" and "postclassical" narrative approaches, while he emphasizes the contributions of the Russian Formalists who helped give rise to the "narrative turn" decades later.

Moreover, for our purposes here, it can be noted that select thinkers over the years have contributed much to our understanding of narrative structure: For example, in *Poetics*, Aristotle (384–322 BC), introduces the basic premise of a beginning, middle, and end, and "peripeteia"—or the reversal—as "a change by which the action veers round to its opposite" (Aristotle, trans. 1975); in Die Technik des Dramas, Gustav Freytag (1816–1895) defined a five-structure, or a dramatic arc, that included exposition, rising, climate, falling action, and resolution (Freytag, 1863/1901); and in *The Hero with a Thousand Faces*, Joseph Campbell (1904–1987) popularized the "monomyth" or the "hero's journey" which designated as many as seventeen parts in a story template.

We can return to Bal (2017) who adopts structuralist concepts for a more recent account of narrative structure. For Bal (2017), "These elements are organized in a certain way into a story" and the arrangement of the elements can "produce the effect desired," "(p. 7); Bal (2017) suggests several processes are involved in arranging elements to bring about such effect, "be this convincing, moving, disgusting, pleasing, or aesthetic" (p. 7). They include:

• The events are arranged in a sequence which can differ from the chronological sequence;

• The amount of time which is allotted in the story to the various elements of the fabula is determined with respect to the amount of time which these elements take up in the fabula;

• The actors are provided with distinct traits. In this manner, they are individualized and transformed into characters;

• The locations where events occur are also given distinct characteristics and are thus transformed into specific places;

• In addition to the necessary relationships among actors, events, locations, and time, all

of which were already describable in the layer of the fabula, other relationships (symbolic,

allusive, traditional, etc.) may exist among the various elements; and

• A choice is made from among the various 'points of view' from which the elements can

be presented. The resulting focalization, the relations between 'who perceives' and what is

perceived, 'colours' the story with subjectivity. (Bal, 2017, p. 7)

Herman (2009) also provides a contemporary reference for narrative structure. Accordingly, we should at minimum consider that:

    • Narrative is about problem solving;

    • Narrative is about conflict;

    • Narrative is about interpersonal relations;

    • Narrative is about human experience; and

    • Narrative is about the temporality of existence. (p. 24)

2.2.3 - Narrative Conditions: A Fuzzy-set

In the pursuit of some semblance of a narrative framework that might be available for climate change communicators interested in some form of social change, Ryan (2007) offers: "Rather than regarding narrativity as a strictly binary feature, that is, as a property that a given text either has or doesn't have," we might work with "a fuzzy-set" of narrative conditions that centres "on prototypical cases that everybody recognizes as stories" (p. 28). From this perspective Ryan (2007) asks us to consider the varying spectrum of narrativity that comprises the semantic, or the spatial, temporal, and mental, as well as the formal and pragmatic dimensions (p. 29).

As a reference for my transmedia storytelling analysis Ryan's (2007) narrative conditions include:

Spatial

• Narrative must be about a world populated by individuated existents;

Temporal

• This world must be situated in time and undergo significant transformations;

• The transformations must be caused by non-habitual physical events;

Mental

• Some of the participants in the events must be intelligent agents who have a mental life

and react emotionally to the states of the world;

• Some of the events must be purposeful actions by these agents;

Formal and Pragmatic

• The sequence of events must form a unified casual chain and lead to closure;

• The occurrence of at least some of the events must be asserted as fact for the storyworld;

and

• The story must communicate something meaningful to the audience. (p. 29)

As such, I consider the role and application of Ryan's (2007) narrative characteristics in the evaluation of the Degree of Narrativity.

2.2.4 - Degree of Narrativity

With an interest in developing a novel transmedia storytelling model—which places narrative at the centre of communicative action—I propose that future climate change communicators should evaluate the Degree of Narrativity in their campaigns; that is:

The measure of a campaign to fulfill a set of narrative conditions within an individual storyline that is controlled and diversified in order to advance a central idea, or core narrative.

With Ryan's (2007) narrative conditions kept in mind, I also recognize that environmental narrative, broadly speaking, "Includes any type of narrative in any media that foregrounds ecological issues and human-nature relationships, often but not always with the openly stated intention of bringing about social change" as proposed by Weik von Mosser (2017, p. 3). It is the latter idea of narrative to bring about social change that intrigues me most.

2.2.5 - Note on Narrative Intuition

Throughout this literature review on the topic of narrative I became more cognizant of the concept of Narrative Intuition such that assimilating and absorbing a set of conditions applicable to narrative would heighten a practitioner's ability to create effective campaigns. For this reason, I include a short note on Narrative Intuition next.

Scholars have described intuition as "irrational function" and "perception via the unconscious" (Jung, 1971); or it is the use of "nonconscious emotional information" to make "conscious decisions" (Lufityanto, Donkin, & Pearson, 2016, p. 1). Simon (1992) thinks, "Intuition is nothing more and nothing less than recognition"; he states, "The situation has provided a cue; this cue has given the expert access to information stored in memory, and the information provides the answer" (p. 155). In its simplest sense, Damasio (1994) made reference to our "gut feeling," or the "signals occurring below the radar of our awareness" to describe intuition (p. xii). Still, others have called intuition an inner voice or a sixth sense. It's a hunch: When the house is on fire, and the floor is about to collapse, the intuitive firefighter has a "sudden urge" (Kahneman, 1994, p. 237); that is, they know without knowing, when to get out.

More specifically, scientist turned filmmaker Randy Olson, pinpoints the importance of intuition, particularly as narrative is concerned in science communication. He states:

> If multiple individuals within an organization achieve Narrative Intuition, a narrative culture can develop. This culture can establish expectations and standards for a minimum level of narrative quality. Norms can change when everyone is expected to have a certain level of familiarity and competence with narrative dynamics. (Olson, 2015, p. 21)

Like Olson, narrative theorist Walter Fisher extends our thinking of Narrative Intuition into the realm of logic to better make sense of the application of narrative structure. According to Fisher (1989), people "experience and comprehend life as a series of ongoing narratives, as conflicts, as chapters, beginnings, middles, and ends" (p. 24), and we use a "narrative logic," or "narrative rationality," to craft and test this experience (Fisher, 1989, p. 47)

Moreover, Fisher (1989) specifically identifies the basic principles of this logic—this rationality—using "narrative probability" and "narrative fidelity," whereby:

Rationality is determined by the nature of persons as narrative beings, their inherent awareness of narrative probability, what constitutes a coherent story, and their constant habit of testing fidelity, whether or not the stories they experience ring true with the stories they know to be true in their lives (p. 64).

What is more for Fisher (1989) is that this "coherence," observed through narrative probability, is concerned with a story's "integrity…as a whole" and if it "hangs together" while this "fidelity" or "truthfulness" is interested in "reliability" or whether "individual components represent accurate assertions about social reality" across narratives (p. 47).

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Part C

On Transmedial Narratives

Section 2.3 - On Transmedial Narratives

2.3.1 - Why Transmedial Narratives?

Narratives, in content and form, persist and endure using a "fuzzy-set" of familiar conditions as previously described by Ryan (2007). However, the success of climate change narratives is tied to the ability of these narratives to be recognized and understood despite oppositional narratives and audience disengagement generally.

While narratives drawing attention to the nature of the climate breakdown persist, audience engagement with these narratives ebbs and flows (Hertsgaard & Pope, 2019; Nisbet, 2019). Moreover, climate narratives that are sustainably-focused or solutions-based are often drowned out by the ubiquitous doom-and-gloom narratives that counter this messaging. Climate change communicators should pursue diverse narrative-building strategies; but consideration of how these narratives are disseminated might be just as important.

The way we share stories remains emergent and ever evolving. It is not the objective of this dissertation to explore storytelling ways across this entirety of this expansive domain; instead, I proceed by simply recognizing the newly appreciated role and efficacy of transmedial narratives, or transmedia storytelling.

Transmedia storytelling involves systematically dispersing integral elements of a narrative across multiple media for the purpose of creating a unified and coordinated emotional experience (Jenkins, 2009a, 2009b). The connecting of these narratives can be thought of as "worldbuilding" and the linked narratives that together produce that emotional experience can be thought of as "storyworlds." Freeman (2018) notes the momentum behind this phenomenon:

> Across the globe, people now engage with all sorts of media content across multiple platforms, following stories, characters and worlds—but also brands, charities and, indeed, news stories—across a spectrum of media channels. (p. xiv)

Transmedia storytelling is gaining wider relevance beyond fictional entertainment as digital technologies expand and become more and more integrated with social media and online platforms (Freeman & Gambarato,

2020), and in other technologies that include "strategically motivated, democratically augmented media" (Freeman & Gambarato, 2020, p. 11). For Freeman and Gambarato (2020), transmedial narratives are part of a "phenomenon" that has led to development of transmedia studies across the academy and industry so that, "transmediality has come to materialize in the media landscape" (p. 1).

This characteristic points to an equation in which the breadth and/or depth of narratives, as well as the ease of access to narratives, leads to intensified levels of audience engagement. While media content is spread "across a spectrum of delivery channels," audiences are encouraged "to migrate repeatedly across those various channels," facilitating multiple points of entry into the given "storyworld" (Freeman, 2018, p. xiv). Moreover, while the use of "different media platforms such as television, radio, print media, and, above all, the internet and mobile media" allow for the telling of "deeper stories," it is "content expansion," rather than "the repetition of the same message across multiple platforms," that is "the essence of transmedia storytelling" (p. 1386). With avoidance of redundancy between media in mind, Freeman and Gambarato (2020) explain the impact of such expansion:

> The building of experiences across and between the borders where multiple media platforms coalesce, altogether refining our understanding of the phenomenon as specifically a mode of themed storytelling that, by blending content and promotion, fiction and non-fiction, commerce and democratization, experience and participation, affords immersive, emotional experiences that join up with the social world in dynamic ways. And in doing so, [transmedia storytelling] becomes more than the sum of its parts—weaving through industry, art, practice, and culture. (p. 11)

The notion of the "building of experiences" suggests participation in a "storyworld"; and this sort of engagement, facilitated and encouraged by transmedia storytelling, Freeman (2018) terms "mechanisms of interactivity":

> Such as the selection of the elements to be explored, the option to read a text, watch a video, enlarge photographs, access maps, click on hyperlinks, and share information through social networks. Audience engagement deals with participation via, for instance, remixing content and creating original user-generated content. (p. 1386)

It is through this level of intensified engagement, this interactivity, that transmedia narratives have the potential to make climate change—a phenomenon that remains spatially, temporally, and socially apart from us—far more graspable, understandable, and relevant to audiences.

Transmedia narrative thinking gained momentum through commentary from Scolari, Bertetti, and Freeman (2014) who note "the expansion of the narrative is … at the same time a social, commercial, and semiotic necessity of certain tales" (p. 2). It has relevance also to econarratology, which, according to James and Morel (2020), "Has many permutations ahead of it as it incorporates a wider array of ways to experience narrative" (p. 15).

2.3.2 - Transmedial Narrative Theory

To begin, while transmedia storytelling might seem ubiquitous by nature, the development of transmedia narrative theory remains in its infancy (Freeman & Gambarato, 2020; Gambarato & Tarcia, 2016; Lam & Tegelberg, 2019; Phillips, 2012; Ryan, 2015). Gambarato (2013) suggests that while "theoretical and analytical considerations around the development of transmedia projects are evolving," they are still "widely open" and this is likely because transmedia storytelling "is a relatively new subject that does not yet have its own specific methods and methodology of analysis" (p. 81). In fact, as recently as 2015, Ryan (2015) posed the question, "is there such a thing as transmedia storytelling? (p. 2). Ryan (2015) ponders the qualities of the young field:

> While we cannot deny the existence of a cultural phenomenon known as transmedia storytelling, we can ask whether it is a form of storytelling or primarily a marketing strategy, whether it is really new, what its various forms are, and what narratology can do about it beyond acknowledging its existence. (p. 2)

However, with reference to Barthes' (1982) earlier quote regarding the "infinite diversity" of narrative forms (p. 79), Thon (2016) notes that the French structuralists of the 1960s and 1970s "already considered" narrative to be "fundamentally transmedial" (p. 2); in Barthes's own words, "narrative is international, transhistorical, transcultural: It is simply there, like life itself" (Barthes, 1978, p. 79). Yet, Thon (2016) adds: "Many of these early narratologists focused less on this diversity of narrative media (or the

relation between their specific mediality and the transmedial properties of narrative representations)" than on the commonalities of narrative structure as I discussed in Section 2.2.2.

Nascent as the transmedia storytelling theory might be, one origin of the transmedia term can be traced back to the German term Gesamtkunstwerk, or "total artwork," as described by the German composer Richard Wagner, who determined that a "single artwork" could be expressed by dance, music, and literature or "different forms of art … without the loss of autonomy among them," so that "the sum of its parts" could form a "transmedia supersystem" (Gambarato, Alzamora, & Tárcia, 2020, 3. Methodological Stance/ Transmedia Fundamentals, para. 1). According to Gambarato, Alzamora, and Tárcia (2020), the concept of a supersystem emphasizes the nature of "nested systems and subsystems" that exist without hierarchy as one system is no more relevant than any other and therefore they remain "complementary" (2. The Transmedia Effect/Systemic Complexity in Transmedia Storytelling, para. 10). Much of the system thinking around transmedia stems from system theory wherein essential system parameters such as connections, integration, and complexity are at the forefront. Gambarato, Alzamora, and Tárcia (2020) put this in context: "A transmedia project is a storyworld capable of supporting multiple narratives across various media platforms and formats. Thus, complexity implies a higher degree of connection and integration" (2. The Transmedia Effect/Systemic Complexity in Transmedia Storytelling, para. 17). They further note:

> Complexity … is a fundamental parameter for its relation not just with the intricate parts that compose a transmedia story but for all the implications in the interplay between these parts and the social environment where they are inserted. Connection refers to the system's relations and therefore can reveal complexity by the number and diversity of these relations. Integration is related to the emergence of subsystems, affecting the systemic complexity via the number of subsystems and their shared properties. (2. The Transmedia Effect, para. 10)

Marsha Kinder, who coined the phrase "transmedia intertextuality," made reference to the supersystem a decade before Jenkins popularized the frequently referenced term transmedia storytelling. The synergy between the two terms is outlined by Kinder (1993):

A supersystem is a network of intertextuality constructed around a figure or group of

figures from pop culture who are either fictional (like TMNT, the characters from Star

Wars, the Super Mario Brothers, the Simpsons, the Muppets, Batman, and Dick Tracy) or

"real" (like PeeWee Herman, Elvis Presley, Marilyn Monroe, Madonna, Michael Jackson,

the Beatles, and, most recently, the New Kids on the Block). In order to be a supersystem,

the network must cut across several modes of image production; must appeal to diverse

generations, classes, and ethnic subcultures, who in turn are targeted with diverse strategies;

must foster collectability through a proliferation of related products; and must undergo a

sudden increase in commodification, the success of which reflexively becomes a media

event that dramatically accelerates the growth curve of the system's commercial success.

(p. 122–123)

Synergy aside, the point to highlight here is that Jenkins's transmedia storytelling term gained

prominence and has seen "widespread adoption," as well as, insightful and ongoing "interrogation" (Freeman

& Gambarato, 2020, p. 1).

2.3.2.1 - Media Defined & Described

In the pursuit of a theoretical understanding of transmedia storytelling we can acknowledge the

clearly understood Latin prefix "trans-," meaning "across, beyond, through, and transverse, conveying the

idea of transcendence"; but Gambarato, Alzamora, and Tárcia (2020), among many others, point out that

understanding media is not so simple.

To briefly review, Gambarato, Alzamora, and Tárcia (2020) suggest, if the transmedia phenomenon

is indeed "a contemporary logic of communication" (1. The Semiotics of Transmedia Storytelling/Transmedia

Dynamics, para. 1), then "we must consider the different modalities of media today (Introduction/The Prefix

Trans-, para. 3), in addition to digital connections and traditional mass media. There is also need to identify

modern media in the context of the manifestations of all cultures and therefore media "encompasses different

textual, material, discursive, and cultural aspects" (Introduction/The Prefix Trans-, para. 4). To narrow in

on media, Gambarato, Alzamora, and Tárcia (2020) understand it as "a kind of interaction environment

that establishes dispositions and configures ways of acting through the network that media environment

constitutes" and they "consider any means of communication, digital or analog, that allows individual or

collective expression of ideas, social interaction, and cultural exchange as a media environment" (Introduction/ The Prefix Trans-, para. 5).

Ryan (2014) advances the concept of media—alongside the term storyworld—since "the choice of medium makes a difference as to what stories can be told, how they are told, and why they are told," as components of the storyworld (p. 25). In fact, for Ryan (2014) there is a deliberate need to clarify the "very loose way" these terms get used (p. 25). Even more so, according to Ryan (2014), there is a need to explore the "difficulties involved in turning them from conveniently vague catchphrases that can be used in many contexts into the sharp analytic tools that will be needed to impart narratology with media consciousness" (p. 25).

In *Storyworlds Across Media*, Ryan (2014) states that if we think of narrative and media together we gain some clarity of the ambiguity of the media term; that is, "By shaping narrative, media shape nothing less than human experience" (p. 25). In the context of Weik von Mosser's designation of environmental narratives, climate change "media" can then take on the form of:

• Channels of mass communication, such as newspapers, television (TV), radio and the Internet;

• Technologies of communication, such as printing, the computer, film, TV photography, and the telephone;

• Specific applications of digital technology, such as computer games, hypertext, blogs, e-mail, Twitter, and Facebook;

• Ways of encoding signs to make them durable and ways of preserving life data, such as writing, books, sound recording, film, and photography;

• Semiotic forms of expression, such as language, image, sound, and movement;

• Forms of art, such as literature, music, painting, dance, sculpture, installations, architecture, drama, the opera, and comics; and

• The material substance out of which messages are made or in which signs are presented, such as clay, stone, oil, paper, silicon, scrolls, codex books, and the human body. (Ryan, 2014, p. 26)

Ryan (2014) continues: "Medium or media has multiple meanings" and while working out a single

definition of the term has both advantages and disadvantages she instead would rather settle on three criteria that help us comprehend media as a "polyvalent" term (p. 5, 26). I summarize Ryan's dimensions for media to gain a foothold on this "problematic word" and expanding complex topic (Moloney, 2019, p. 3545).

Using a lens which Ryan (2014) calls "media-conscious narratology," she first identifies a "semiotic" approach to understanding mediality which examines the "narrative power of language, image, sound, movement, face-to-face interaction, and the various combinations of these features," so that these "types of signs" can be further analyzed (p. 29–30).

In her second dimension of mediality, Ryan (2014) proposes a "technical" approach which examines "how technologies configure the relationship between sender and receiver" (p. 30). Through this "media-defining" technical lens Ryan (2014) explores the nature of how technologies, derived from "page or screen," affect "dissemination, storage, and cognition" and what "affordances" media permit for storytelling such as "interactivity" (p. 30). Using this technical dimension Ryan (2014) addresses "mode of production" and "material support" that affect how media is produced and consumed (p. 29).

In the third dimension Ryan (2014) extends the idea that mediality can be viewed through a cultural lens which focuses on the "behaviour of users and producers as well as on the institutions that guarantee the existence of media" (p. 30). By some sense, Ryan is identifying the process of worldbuilding through this cultural approach since she asks questions concerning the production and selection of a certain "kind of stories" and identifies this "public recognition of media" as part of the storyworld which we will discuss later (p. 30).

While Ryan's semiotic, technical, and cultural dimensions of mediality have been "broadly accepted" in the literature, as of the publishing of Gambarato, Alzamora, and Tárcia (2020, 3. Methodological Stance/ Transmedia Fundamentals, para. 5), these same authors do point to criticisms provided by Moloney (2019) who notes that:

> Her three parallel approaches to media are designed as lenses of analysis rather than structures for practice, and her division of media into the semiotic substance of language, image, music, and movement neglects the object and interaction and dismisses the potential of odour and flavor as media. (p. 3548)

Moloney's criticism only serves to reveal the cumbersome nature of the minutiae involved in

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defining the media term. For my purposes, I acknowledge Ryan's thinking's around media as it relates to the use of media form.

I turn to a few more terms that help us define topics surrounding media.

2.3.2.2 - Media Form & Media Channel

Media form and media channel merit recognition in the context of transmedia storytelling.

Moloney (2019) summarizes that media form may be described as languages, semiotic phenomena, and as modes. More specifically, media forms might include "text, audio, motion picture, photograph, illustration, artifact, lecture, music, dance, performance, game, and more" (Moloney, 2019, p. 3553). What is important to note here is that media channels are derived from media forms and for the purposes of this dissertation research, the following media forms will be emphasized:

• Image (Still);

• Image (Motion);

• Language (Written);

• Language (Oral);

• Music; and

• Object, or any combination of these characteristics.

Furthermore, audiences interact with media through some interface of publication. Media channel can then be summarized as the way in which media forms are received by audiences; Moloney (2019) assists here again as he thinks of a media channel as a conduit of technology. While criticism around these and other terms persist, Moloney (2019) identifies media channel with the following simple descriptions: "A connection point with an audience" (p. 3557) or a discrete publication space; for example, we can think broadly about the Internet, radio, a magazine, or an auditorium, as points of connections, or the interface where stories reach an audience; social media including YouTube, Facebook, and Instagram are also examples of media channels accessed via desktop computers or mobile devices.

2.3.2.3 - Multimedia & Crossmedia

Before a review of the existing descriptions of the transmedia term, both multimedia and crossmedia should be explained to shed some light on the differences between these three terms. Moloney (2019) suggests that, "With multimedia, many media forms are used—from text to audio, motion pictures, photographs, or graphic data visualizations, among others" and "those forms combine to tell a story more comprehensively" in a "single media channel" (p. 3560). By comparison, crossmedia "means to tell a story in many different media channels … but it is the same story, the same set of facts in largely the same arrangement" (p. 3561). More concisely, Moloney (2019) notes that multimedia is "one story, many media forms, one media channel" and crossmedia is "one story, many media channels." (p. 3560–3561)

As we shall discuss next, Moloney (2019) thinks of transmedia as "many stories, many media forms, many media channels" (p. 3561).

2.3.2.4 - Transmedia Storytelling Defined & Described

Transmedia storytelling as a process of worldbuilding has been widely adopted. However, one clear definition of the phrase eludes us, so there exist varying definitions of transmedia: According to Jenkins (2006), a "transmedia story unfolds across multiple media platforms with each new text making a distinctive and valuable contribution to the whole" (p. 95–96), and "transmedia storytelling is the art of world making" (p. 21); Gambarato (2013) thinks "a transmedia narrative tells altogether one big pervasive story, attracting audience engagement…it is not about offering the same content in different media platforms, but it is the worldbuilding experience, unfolding content and generating the possibilities for the story to evolve with new and pertinent content" (p. 82); Gambarato and Tárcia (2016) believe transmedia storytelling technologies involve "creating content that engages the audience by using techniques to permeate audience members' daily lives (p. 1); Moloney (2019) noted that transmedia storytelling "implements the many media forms of multimedia and delivers them on the many media channels of crossmedia" (p. 3561); and Gambarato, Alzamora, and Tárcia (2020) summarize that the transmedia phenomenon can be conceived as "spontaneous clustering of texts or formats by different authors" (3. Methodological Stance/Transmedia Fundamentals, para. 2), or "the deliberate distribution of narrative content across multiple media" or "a hybrid form well characterized by the transmedia effect … which the clustering of texts merges with the deliberate multi-

platform distribution of content" (3. Methodological Stance/Transmedia Fundamentals, para. 2).

Fortunately, Jenkins (2019) provides a resting point for this discussion when he states that part of the challenge surrounding the term transmedia is that any given perspective may require us to expand and sharpen our understanding. He notes:

> To me, transmedia was about a set of relationships across media, not a single model for how different media might collide. We need lots of different models for the forms that transmedia might take as different creative teams pursue different functions in relation to different stories for different audiences in different national contexts. When my students ask me whether something is or is not transmedia, I usually ask them in what ways it may be useful to read it as transmedia. (p. xxix)

In this line of thought Jenkins (H. Jenkins, personal communication, 2020) adds a simple grammar rule might apply:

> Transmedia is an adjective and it needs a noun to modify. So there's not a thing called transmedia, there is transmedia storytelling, there is transmedia documentary, there is transmedia branding, there is transmedia activism … transmedia simply means across media and describes some kind of systemic or structured relationship of content that flows across media or where media reinforce or build on each other.

Lastly, Ryan (2014) provides some clarification on the transmedia storytelling terminology:

> The term transmedia storytelling suggests that narrative content forms a unified story, which means a self-contained type of meaning that follows a temporal arc leading from an initial state to a complication and resolution. This arc is what Aristotle had in mind when he described stories as having a beginning, a middle, and an end. But story arcs do not lend themselves easily to fragmentation and dispersion into multiple documents. Imagine how annoying it would be to read the beginning of a story in a novel, then to have to go to a movie theatre to get the next episode, then to have to buy a comic book, and finally to

have to play a computer game in order to find out how it ends. This is not how transmedia storytelling works. Transmedia storytelling is not a serial; it does not tell a single story, but a variety of autonomous stories, or episodes, contained in various documents. What holds these stories together is that they take place in the same storyworld. (p. 4)

2.3.3 - On Storyworld

If narratives are indeed "mental models" or "mental representations" of "situations and events unfolding in time," as previously described by Herman (2009) in Section 2.2, then narratives have the ability to create emotional reactions, elicit dialogue, and set public agenda as they always have in Althusser's "system of representations" (Althusser, 1970; Hall, 1985); Foucault's dominant ideologies (Foucault & Gordon, 1980; Foucault & Burchell, 2019) and "ontology of the present" (McHoul & Grace, 2003, p. 87); Freud's world of reality; Heidegger's poiesis, or "the bringing-forth of a world" (Ivakhiv, 2013, p. 6); Marx and Engels's forms of consciousness; Lakoff's frames and metaphors (Lakoff & Johnson, 2003; Lakoff, 2014; Lakoff & Wehling, 2012); Schaeffer's thought experiments; and the "traditional ecological knowledge" put forth by Indigenous peoples around the world (Berkes, 2009, p. 151), to name but a few of the philosophical lenses— or ways of knowing—that have presented rationale to make sense of modernity.

Narrative, then, can be articulated with as many varying occurrences: There are meta-narratives, master narratives, and macro-narratives—and the narrative universe—and there are little narratives, small narratives, and micro-narratives (James, 2015, p. xiv); and according to Herman (2009), these narratives work to build storyworlds, or "the world's evoked by narratives" (p. 105).

In this context, Ryan (2014) differentiates the specificity of storyworld:

The concept of storyworld differs from what literacy critics have in mind when they speak about 'the world of Marcel Proust,' 'the world of Ingmar Bergman,' or 'the world of Friedrich Hölderlin.' In this traditional but informal sense, 'world' stands for various ideas: The social and historical setting typical of the author's works (the Proust example), the major themes and recurrent images of this work (Bergman), and the author's general ideas and philosophy of life (Hölderlin)—or what we call, not coincidentally, a 'worldview.' (p. 32)

For Ryan (2014), the "narratological concept of storyworld differs from this interpretation of 'world'" in the following ways:

> • It is something projected by individual texts, and not by the entire work of an author, so that every story has its own storyworld (except in transmedial projects, where the representation of a world is distributed among many different texts of different media);
>
> • It requires narrative content, so the applicability of the concept of storyworld to lyric poetry is questionable; and
>
> • It cannot be called the 'world of the author' because in the case of fiction, authors are located in the real world while the storyworld is a fictional world. If a storyworld is anybody's world, it is the world of the characters. (p. 32)

Not all text worlds are storyworlds. Ryan (2014) makes a case that a philosophical text, which arranges abstract topics and explores general ideas, and a travel guidebook, which is mostly descriptive, differ from other texts that, "Represent events that unfold in time and create changes of state within their world" (p. 32–33)—"the former texts have a world, the latter a storyworld" (p. 33). Ryan (2014) continues: "A storyworld is more than a static container for the objects mentioned in a story" (p. 33); instead, "it is dynamic model of evolving situations, and its representation in the recipient's mind is a simulation of the changes that are caused by the events of the plot" (Ryan, 2014, p. 33). Relatedly, Lovato (2018) thinks of the storyworld as a "narrative canon defined by the producers, including a set of characters, scenarios, objects, times, actions, conflicts, and dialogues that make sense and are credible within the narrative" (p. 252).

Worldbuilding—transmedia storytelling—that leads to the creation of a storyworld has notably been a process ongoing for centuries. That is, there have always been transreaders and "multimodal users who dominate different languages and semiotic systems, [and] who are capable of moving in complex textual networks" (Lovato, 2018, p. 240). Wolf (2012) remarks that we use the storyworld "to amaze, entertain, satirize, propose possibilities, or simply make an audience more aware of defaults they take for granted" (p. 115). Early versions of storyworld development involved what Ciancia, Piredda, and Venditti (2018) recognized as historical or mythical characters (e.g. King Arthur and pantheons of Greek and Roman gods) who were featured within "fantastical and unknown worlds" (p. 115). Because access to these worlds was challenging, Wolf (2012) suggests the "age of exploration" was created as audiences followed their favourite

characters into such worlds. In doing so, "The imaginary worlds became a way for people to read fictional and non-fictional stories related to either realistic places or fantastical and mysterious ones" (p. 116).

Interestingly, as storyworld relates to the existential climate change crisis, Wolf (2012) draws attention to both utopian and dystopian worlds while referencing that "the utopian tradition can be traced back to antiquity," where, for example, the Garden of Eden is contemplated, and the "idea of a dystopia," emerging from descriptions of Kallipolis, the beautiful city in Plato's Republic, which becomes "a society falling into tyranny" (p. 85). Wolf (2012) poignantly notes that, "The difference between a utopia and dystopia largely depends on the point of view of what someone considers desirable for a society" (p. 85). Wolf (2012) continued:

> Authors criticized conditions through the use of utopias gone wrong, places that look utopic
> at first glance, but are later revealed to be terrible, oppressive places, or places designed to
> suggest that if certain trends in society continue, undesirable conditions will result. (p. 95)

Relatedly, Wolf (2012) would go on to recognize that the rise of mass media, which challenges the builders of imaginary worlds since "mass media brought its audience a far richer and more detailed version of the world than mediation had ever done previously" (p. 114), might work in tandem with transmedia storytelling. This treatment would serve to bring audiences closer in touch with real climate storyworlds (Ryan, 2015, p. 14).

2.3.3.1 - Fiction & Nonfiction Storyworlds

The prevalent nature of made-up storyworlds might suggest that worldbuilding is limited to franchises that exist as fictional, fantastic, or futuristic, but Ryan (2015), states "there is, however, no reason why transmedia storytelling could not take as its subject matter realistic storyworlds, or even the real world" (p. 14). For example, journalism "can contain many different testimonies and documents, each of which can be presented in the medium that best fits the nature of the information" (Ryan, 2015, p. 14), so this form of communication can benefit from transmediality while journalists try new ideas and seek out new practices. Gambarato (2015) puts this concept in context:

> The story is number one and works on multiple levels, or dimensions, creating a dynamic

storytelling experience and leaving space for the content to expand across different media platforms. A storyworld is developed to support the expansion of content and multiplicity of media channels. Both TS [Transmedia Storytelling] and slow journalism embrace new technologies (mobile, locative media, for instance) and devices (smartphones, tablets, etc.) to tell compelling stories able to reach a diversified public. (p. 4–5)

Moloney (2018) focuses on transmedia journalism and makes a distinction between the fictional storyworld, which "expands" and permits characters to move throughout a timeline, and the nonfiction storyworld, which is more interested in constraint, so "topic coverage, who and what the subjects will be, and where coverage will stop" can be defined (p. 86). He adds, "as the real world is interconnected in an all-but-unlimited way, haphazard expansion of subjects and ideas … is likely if clear borders are not drawn" (Moloney, 2018, p. 86), and this activity could be cognitively intensive if not monitored. What is critical for nonfiction worldbuilding is the "delimitations on the issue, topic, characters and focus of the project—the storyworld" (Moloney, 2018, p. 87). Moloney (2018) further states what might be even more critical is the "constant iteration from within the borders of the storyworld," or the "design thinking" process which will "inevitably improve the outcome" (p. 91).

On interpretation and mental construction of storyworld Ryan (2014) also addresses the difference between a "fictional world" and a "storyworld" noting that the "storyworld is a broader concept than fictional world because it covers both factual and fictional stories" (p. 33). The storyworld is then composed of stories that reference both "real" and "imaginary" worlds (p. 33), yet Ryan (2014) also acknowledges that a fictional storyworld is "automatically true," but a nonfictional world made up of "mutually incompatible versions of reality" will require the audience to "decide for themselves whether the story is true" (p. 34). Lovato (2018) has also spent time observing the differences between fiction and nonfiction storyworlds. She attests:

Nevertheless, the starting points of transmedia productions of fiction and nonfiction differ. At the beginning of a fiction project, everything is yet to be created. However, in nonfiction, everything is about to be found, to be discovered. Documentalists and journalists deal with people, testimonies, documents, real scenarios that will progressively be transformed into characters, actions, dialogues, conflicts, the turning points of our transmedia stories. Moreover, the protagonists of a transmedia nonfictional project may intervene, actively

participate and modify the planned plot from the story canon. Based on this participatory condition, transmedia documentaries have a great capacity to become tools of social empowerment. (p. 248)

Importantly, Ryan (2014) bridges our discussion of the potential application of storyworld in climate change communications alongside ideological forces at play, when she calls upon Richard Gerrig's book *Experiencing Narrative Worlds*, which informs us that, "Without the concept of world, one cannot speak of narrative as a lived experience" (p. 43). The concept of storyworld then permits "readers, spectators, and players" to "conjure a certain type of representation" and this is why they matter.

2.3.3.2 - Plot-dominated & World-dominated

Ryan (2015) also extends the foundational importance of storyworld in transmedia storytelling with references to "plot-dominated" and "world-dominated" narrative genres (p. 5). For our purposes, Ryan (2015) notes:

In plot-dominated genre, the storyworld is mainly a container for the characters and their actions, and the plot could easily be moved to another type of world … In a world-dominated genre, by contrast, the plot acts as a path through the storyworld that reveals the diversity of its landscapes, the variety of its biological species, and the particularities of its social system. The more richly imagined a storyworld is from the beginning, the more stories can be told about it, and the more discoveries it offers to the user. This is why world-dominated narratives present much better material for transmedia storytelling than plot-dominated ones. (p. 5)

2.3.3.3 - Content of Storyworld

To come into contact with storyworld involves what Ryan (2014) refers to as the "application" of "narrative resources" (p. 37). These resources merit some consideration.

We can begin by identifying two types of "narrative elements" that make up storyworlds (p. 37).

They include "intradiegetic" elements, those which exist within the storyworld, and extradiegetic elements, which are not literally part of the storyworld, but play a crucial role in its presentation" (Ryan, 2014, p. 37). Ryan (2014) informs us that varying elements can exist within or outside of the edge of the storyworld (p. 37). For our purposes we can use the following examples to detail the difference between these respective elements. Much like the scenario where narration and the narrator may or may not exist in the storyworld, the camera used by visual transmedia storytellers to achieve the "documentary" style observed in some climate change nonfiction films is an intradiegetic element since the "shaking of the camera" is used to exhibit that a journalist is on-location or in-the-field. Conversely, Ryan (2014) mentions the camera shake that occurs in the fiction film Saving Private Ryan is an extradiegetic element since the audience is not expected to believe there is a camera operator on the beach who is exposed to gunfire (p. 38–39). Music provides another good example:

> Film theorists have long been aware of the distinction between diegetic music—music that originates inside the storyworld and that the characters can hear—and extradiegetic music, which controls the expectations and emotions of the spectator but does not exist in the storyworld. (p. 39)

Secondly, Ryan (2014) also makes a distinction between the "world-internal" and the "world-external" so that an "object" either exists within or outside of the storyworld; that is, a futuristic technological carbon-storage solution yet to be invented cannot exist in a present day nonfictional film created by climate change advocates (but a hypothetical illustration of such technology might) (p. 40).

Similarly, Ryan (2014) notes that the application of the concept of storyworld requires a transmedia storyteller to choose between a third characteristic: "The distinction between "single-storyworld" and "many-storyworlds texts" (p. 41). For example:

> The various elements of a transmedial system can either expand a storyworld through processes that respect previous content or create logically distinct, though imaginatively related, storyworlds through modifications and transpositions that alter existing content. (Ryan, 2014, p. 42)

In this case, "While texts may project many different storyworlds, a given storyworld may also unfold in many different texts" such as in "oral cultures" and in transmedia storytelling as I have been discussing (p. 41).

We gain further insight into a fourth dimension of storyworld when Ryan (2014) ponders "how the mental construction of storyworlds is affected by the types of signs that a medium uses" (p. 42). Here, Ryan (2014) makes a case for the difference between "language-based" and "visual media," since the former method requires interpreters to do "extensive filling-in work because language speaks to the mind and not directly to the senses," unlike visual media that, "saturate the senses and leave much less to the imagination" (p. 42).

2.3.4 - Transmedia Storytelling Principles & Models

2.3.4.1 - Principles

Arguably, it is Jenkins (2006, 2007, 2009a, 2009b) who popularized the burgeoning ideas behind transmedia storytelling—or worldbuilding—so an evaluation of his seven principles that describe the forms of production, circulation, and consumption of transmedia stories is a sensible place to begin a discussion that will inform the conception of a novel model for transmedia storytelling specifically designed for climate change communicators.

It should be noted, however, that scholars who reference Jenkins's principles believe Jenkins was simply exploring these presented concepts and may not yet have refined them completely. Jenkins reflects on this commentary as well: "Is this an exhaustive list? Probably not" (para. 25). Other scholars have shared some concerns with this set of ideas as well but the principles have served to guide modern day transmedia storytelling in a number of ways (Freeman & Gambarato, 2020; Moloney, 2018; Gambarato & Alzamora, 2016).

2.3.4.2 - Spreadability & Drillability

Jenkins's first transmedia storytelling principle set involves what he describes as spreadability versus drillability. Spreadability is referenced as "the capacity of the public to engage actively in the circulation of

media content through social networks and in the process expand its economic value and cultural worth" (Jenkins, 2009b, para. 14). With drillability in mind, Jenkins (2009b) cites Jason Mittell who suggested that, "We might think of such programs as drillable rather than spreadable," because viewers are encouraged "to dig deeper, probing beneath the surface to understand the complexity of a story" (para. 15). Mittell's comments shared by Jenkins (2009b) elaborate on the idea that, "Spreadable media encourages horizontal ripples, accumulating eyeballs without necessarily encouraging more long-term engagement" (para. 15). In this context, it appears Jenkins is stipulating a transmedia project can be spreadable or drillable. In addition to this, Jenkins, Ford, and Green (2013) note that, "When material is produced according to a one-size-fits-all model, it imperfectly fits the needs of any given audience" and "instead, audience members have to retrofit it to better serve their interests" (p. 27). For Jenkins and colleagues, "Spreadability" is then concerned with how "viewer engagement" might "encourage further participation" as audiences carry out this non-passive exercise. Gambarato, Alzamora, and Tárcia (2020) sum up the objective of Jenkins's spreadability and drillability concepts, respectively: It is "the viral spread of a story through user sharing" and "the search for more details, or official content expansion" (4. Application of the Transmedia Design Analytical and Operational Model to Journalism/Transmedia Journalism Fundamentals, para. 3).

2.3.4.3 - Continuity & Multiplicity

Jenkins (2009a) next compares his principles of "continuity" and "multiplicity" whereby the idea of a "unified experience" is created through transmedia storytelling, particularly in transmedia entertainment (para. 18). Jenkins (2009a) addresses "continuity" noting that while a transmedia story might be distributed across various media with separate story lines, there should be some form of "coherence" and "plausibility" throughout the "definitive version of the story" (para. 20). Commenting on Jenkins's principles Moloney (2015) remarks that, "Continuity is often the first place" that a transmedia story might lose its audiences since "as a story builds in complexity it can be difficult to track many of the details" (p. 77). Continuity then is the expression of an "established canon" (Gambarato, Alzamora, & Tárcia, 2020, 1. The semiotics of transmedia storytelling/Transmedia communication model, para. 15).

By contrast, Jenkins (2009b) describes "multiplicity" as "unauthorized extensions" of "the mothership"—the primary work which anchors a project—"which may nevertheless enhance fan engagement and expand the audiences understanding of the original" narrative (para. 22). In some ways, Jenkins's

multiplicity permits "us to conceive of alternative configurations of transmedia" (para. 23). Jenkins (2009b) uses the Marvel superhero franchise as an example: Spider-man exists in the main Marvel universe depicted in the heavily marketed cinematic movies but also in Spider-Man India (which sets the story in Mumbai) or Spider-Man Loves Mary Jane (which stands alone as a romance comic series for young female readers). For Jenkins (2009b), multiplicity then is "the possibility of alternative versions of the characters or parallel universe versions of the stories" (para. 19).

2.3.4.4 - Immersion & Extractability

Like the first two sets of principles, immersion and extractability are identified as a dichotomous pair in Jenkins's (2009a) transmedia storytelling framework. These two concepts function as an expression of the "perceived relationship" of a transmedia story and "everyday experiences" (para. 1). By "immersion" Jenkins (2009a) means that, "the consumer enters into the world of the story" while in "extractability" the audience "takes aspects of the story away with them as resources they deploy in the spaces of their everyday life" (para. 4). Jenkins (2009a) describes the experience of looking into "panorama boxes," on display in a museum, which show "little miniature worlds" that exhibit the parallel worlds seen in "video games" and can be experienced in additional media forms (para. 1). In both of these instances, or "alternative forms of storytelling," as described by Gambarato, Alzamora, and Tárcia (2020, 4. Application of the Transmedia Design Analytical and Operational Model to Journalism/Transmedia Journalism Fundamentals, para. 4), the audience is immersed into the storyworld. Extractability extends this storyworld experience so that elements of the storyworld come into play outside the museum. Beyond the experience in the museum the "fan" can take "plastic figurines" or "massive models of key characters, props, and settings" and interact with these elements in their own lives; the rise of virtual reality (VR) and its adoption into journalism has made for immersive storytelling as well (Godulla et al. 2021), though in the case of extractability, users can be influenced in both "philosophical or behavioural" ways that affect their "thoughts and actions" (Moloney, 2018, p. 169).

2.3.4.5 - Worldbuilding

Jenkins (2009a) introduces his worldbuilding concept, appreciating that storyworlds can "link

together stories scattered across publications" and the usefulness of this transmedia storytelling principle is examined in a quote from one of Jenkins's screenwriter colleagues (para. 6):

> More and more, storytelling has become the art of worldbuilding, as artists create compelling environments that cannot be fully explored or exhausted within a single work or even a single medium. The world is bigger than the film, bigger, than even the franchise—since fan speculations and elaborations also expand the world in a variety of directions. As an experienced screenwriter told me, "When I first started you would pitch a story because without a good story, you didn't really have a film. Later, once sequels started to take off, you pitched a character because a good character could support multiple stories. And now, you pitch a world because a world can support multiple characters and multiple stories across multiple media." (Jenkins, 2006, p. 114)

Jenkins (2009a) uses L. Frank Baum, the author of *The Wizard of Oz*, or the "geographer of Oz," to illustrate the effectiveness of worldbuilding (para. 7). What started as a "single book" evolved to be a "comic strip series (recently reprinted), stage musicals, and films" and subsequent iterations of the world "added new places and characters to the overall mix" (para. 7). Jenkins (2009a) continues, later Oz books "were novelizations and elaborations of stories introduced through these other media" and "consistently, the logic of these stories were focused on journeys and travel, so that the Oz franchise was constantly uncovering more parts of the fictional world" (para. 7). Here, worldbuilding plays out in similar ways to the earlier mentioned faculties of immersion and extractability since these principles provide "ways for the consumers to engage more directly with the worlds represented in the narratives" (Jenkins, 2009a, para. 9). Jenkins (2016) elaborates on the idea of worldbuilding:

> Most forms of transmedia are structured through a process of worldbuilding. The concept of worldbuilding emerged from fantasy and science fiction but has also been applied to documentary or historical fiction. Worlds are systems with many moving parts (in terms of characters, institutions, locations) that can generate multiple stories with multiple protagonists that are connected to each other through their underlying structures. Part of what drives transmedia consumption is the desire to dig deeper into these worlds, to trace

their backstories and understand their underlying systems. Fictional texts imagine and design new worlds; documentaries investigate and map existing worlds. (para. 12)

Jenkins (2009a) has also suggested that not all stories permit worldbuilding. Ryan (2014) provides this context:

But if we conceive of a world as some kind of container for individual existents, not all texts project a world. For instance, a philosophical text that deals with abstract topics and general ideas does not create a world, even though it does speak about the real world. Among the texts that do represent individual objects, some (such as travel guidebooks or ethnographic reports) are purely descriptive while others represent events that unfold in time and create changes of state within their world. The former texts have a world, the latter a storyworld. (p. 32–33)

For the purposes of my dissertation research I note here again that the process of worldbuilding creates a storyworld designed by narratives that can open up dialogue about climate change. Moloney (2015) highlights some important aspects of worldbuilding as well:

In telling fictional transmedia stories worldbuilding is a process of creation. In journalism, however, defining a storyworld is an act of delimitation. With fiction, the workload involved in creating stories that develop a complex storyworld is an effective limit on its growth. However, journalists work with storyworlds that already exist. The task here is to define the limits of the storyworld (or scope of coverage) carefully. (p. 129)

Delimitation of transmedia storytelling is then the act of storytellers creating some form of manageable context rather than "expansion" (p. 149), so their audiences move beyond "exploration" of the storyworld, and instead gain some level of "mastery" (p. 84) that can be found in the "real world storyworld" (p. 149). In reference to delimitation Moloney (2015) notes "as any subject taken from the real world interconnects infinitely with every other aspects of our lives, more than a broad subject identification is required" to prevent "a fuzzy, poorly delineated storyworld so large it defies mastery" (p. 84).

Gambarato, Alzamora, and Tárcia (2020) address the notion of delimitation of a storyworld while referencing "the complexity of transmedia supersystems, as pervasive narratives, which can evoke a sense of disorder, disorientation, confusion, and even chaos" (2. Transmedia Effect/The Complexity of Worldbuilding in Transmedia Storytelling, para. 1), but while complexity can be "chaotic, entropic, it can also be organized, ordered" (2. Transmedia Effect/The Complexity of Worldbuilding in Transmedia Storytelling, para. 1).

2.2.4.6 - Seriality

Jenkins (2009a) introduces the fifth principle of "seriality" noting the difference between story and plot:

> The story refers to our mental construction of what happened which can be formed only
> after we have absorbed all of the available chunks of information. The plot refers to the
> sequence through which those bits of information have been made available to us. (para.
> 13)

He continues, "A serial, then, creates meaningful and compelling story chunks and then disperses the full story across multiple instalments" (para. 14). Jenkins (2009a) remarks that there is work to be done to better appreciate the "sequencing" (para. 15) of transmedia components and whether it matters in what order you consume them and Gambarato, Alzamora, and Tárcia (2020) reflect on seriality as a way of "keeping the audience's attention for a significant amount of time" (4. Application of the Transmedia Design Analytical and Operational Model to Journalism/Transmedia Journalism Fundamentals, para. 4).

2.3.4.7 - Subjectivity

Subjectivity as expressed by Jenkins (2009a) predominantly finds application in the fictional worlds we have seen created in franchises like Star Wars, The Dark Knight, and The Matrix whereby "unexplored dimensions" extend characteristics of the storyworld and its characters via "transmedia extensions" that, "broaden" and "show us the experiences and perspectives of secondary characters" (para. 9). For example, media texts such as games or comics might explore the unrevealed lives of the "bounty hunters" that were

not featured in the widely seen Star Wars movies. For Jenkins (2009a) these extensions permit audiences to compare and contrast "multiple subjective experiences of the same fictional events" (para. 16).

Moloney (2015) addresses the nomenclature around the subjectivity term in the context of transmedia storytelling and journalism and notes that the implementation differs. That is, generally speaking, the journalist is in theory seeking out the truth through the most objective lens possible so that subjective biases remain absent from the story coverage. Instead, for Moloney (2015) the journalist has the responsibility of applying subjectivity as they search out multiple sources for a story and report with a balanced account from "both supporters and detractors into a story" (p. 86). Subjectivity in the context of a journalism endeavour could take on the role of "singular stories" that run alongside additional reporting and in doing so this work will offer up alternative "viewpoints on a subject or issue" (p. 86). In this vein, Moloney (2015) suggests subjectivity provides an "opportunity to express the complexity of views of the same world" (p. 86).

On the topic of subjectivity Gambarato, Alzamora, and Tárcia (2020) speak to the "complexity of worldbuilding in transmedia storytelling is the amalgamation of what could be considered the main text and paratext" (2. The Transmedia Effect/The Complexity of Worldbuilding in Transmedia Storytelling, para. 15), where the paratext is "all the material supplied by the author, editor, publisher, and so on that surrounds the main text" (2. The Transmedia Effect/The Complexity of Worldbuilding in Transmedia Storytelling, para. 15).

2.2.4.8 - Performance

For my purposes the most interesting aspect of Jenkins's performance principle is its relation to "transmedia activism," which "deploys themes, characters, and situations" from a distinct narrative, "to motivate real world social change, as a logical extension both of performance and of the tension between extractability and immersion" (Jenkins, 2009a, para. 24). In this case Jenkins (2009a) is making reference to not only "fan performance," where audience members "can make their own contributions," but also through activities such as the storytelling in the "director's commentary" that breaks down "behind-the-scenes" of the production process. The latter then are nonfictional "documentary" accounts of a popular story; the former might be a YouTube video where fans "re-enact" a scene (para. 23).

Moloney (2015) simplifies fan performance for us when he describes this act as "fans telling bits of the story" or performing an "action" such as voting for a participant on American Idol show (p. 86).

Relatedly, Barthes and Heath (1978) provides an interpretation of the principle on performance when he noted, "we know now that a text is not a line of words releasing a single theological meaning (the message of the Author-God) but a multi-dimensional space in which a variety of writings, none of them original, blend and clash" (p. 146); in other words, to continue with Barthes and Heath (1978), "to give a text a [single] Author is to impose a limit on that text" (p. 147). Moloney (2015) adds further commentary: "The contemporary mediascape wants to be participated in rather than simply consumed by its publics" (p. 87). Moloney (2015) quotes Huey for our context here:

> It all started when an envelope full of letters arrived in my mailbox. They came from high school students at the Red Cloud Indian School after they had seen a photo story of mine on Pine Ridge in 2009. Their letters challenged me to see a different side of the Reservation. As a photojournalist who has been working on the Pine Ridge Indian Reservation for the past 7 years, I've always struggled with how to share the incredibly complex story of this community. I've never been able to tell all the stories that I want to tell on Pine Ridge, and I've come to realize that even if I could, I can't tell them the way the people want them told. To solve this dilemma, I joined forces with web pioneer Jonathan Harris, the creator of cowbird.com—a visionary, embeddable, storytelling platform. Together we built this community storytelling project so that the people of Pine Ridge could author their own story. This new relationship between the story subject and the publication opens up a new kind of transparency and dialog rarely seen in mainstream journalism today. (Huey, 2012, as cited by Moloney, 2015, p. 88–89)

Moloney (2015) concludes: "Journalism, like other media, still shows caution over how far to let this kind of work enter the official story" yet there is "a great difference … between the role of source and the role of author" and "the latter is a more meaningful contribution to a storyworld in all media from entertainment to journalism" (p. 88).

2.3.5 - Transmedia Conditions: A Summary

Beyond Jenkins's principles a small group of scholars pursue model building with relevant

methodological tools to facilitate the analysis of transmedia storytelling projects (Gambarato, Alzamora, & Tárcia, 2020). However, these models, while informative, have been criticized for their "extremely detailed framework," which is "impractical for implementation" (Gambarato, Alzamora, & Tárcia, 2020, 3. Methodological Stance, para. 1). In addition, the application of the existing models in climate change campaigns might not be suitable because these models adhere to the roots of the transmedia storytelling field in the entertainment industry that often involve fictional characters and storyworlds—e.g. Captain America and the Marvel Universe—that present unique circumstances which might differ from the real world reality of climate change communications. Early thinking around transmedia storytelling also worked with Hollywood budgets that climate change campaigns have not had access to or might never will.

For the presentation of the TREES Model, the collective wisdom of Srivastava (2013), Ciancia (2015), Ciancia, Piredda, and Venditti (2018), Canavilhas (2018), Lovato (2018), Moloney (2018) and Gambarato, Alzamora, and Tárcia (2020), offer up a summary of guiding questions to use in transmedia storytelling project design. From this group of scholars the prominent role of these transmedia storytelling conditions exist:

• Multiplatform Integration: Full integration between media forms and channels across platforms. The content should be multi-platform, since the effectiveness of each type of content depends on its use in the specific platform for which it was initially created. The use of the Internet is mandatory;

• Entry Points and Expansive Content: Each controlled and diversified storyline must be composed by independent chunks of information and these pieces of the storyline should be sufficiently meaningful to be used as an entry point into the narrative. These chunks should have links to more than one character or event of the same story to allow multiple reading paths and, consequently, enable a personalized navigation for each user as the dimension of the storyworld increases through expansive content; and

• Audience Engagement: The user should be able to contribute to the story by adding elements that can change the content. This participation may vary between low complexity (comments in the news or posts) and high complexity (joining contents that change and/or

expand the course of the narrative through performative actions).

2.3.6 - Degree of Transmediality

With an interest in developing a novel transmedia storytelling model—that places a greater emphasis on multi-platform storytelling within transmedia campaigns—I propose that future climate change communicators should evaluate the Degree of Transmediality in their campaigns; that is:

The measure of a campaign to fulfill a set of transmedia conditions to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced.

2.3.7 - Note on Transmedia Acumen

Throughout this literature review on the topic of transmedia narratives I became more cognizant of the concept of Transmedia Acumen such that using context-based judgement and decisiveness—for example, with respect to the selection of media forms and channels to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced would heighten a practitioner's ability to create effective campaigns. For this reason, I include a short note on Transmedia Acumen next.

On a class syllabus at the University of Southern California Jenkins (2019) notes there are "theoretical tomes" alongside "production handbooks," such that the students were required "to combine thinking and making" as they learned and adopted transmedia practices (p. xxviii). For Jenkins Transmedia Acumen involves decision making that concerns the "forms that transmedia might take as different creative teams pursue different functions in relation to different stories for different audiences in different national contexts" (p. xxix). On this matter Ryan (2014) suggests "the choice of medium makes a difference as to what stories can be told, how they are told, and why they are told" (p. 25), and it is our Transmedia Acumen that affect how entry points can best provide access to a storyworld since Jenkins (2006) also reminds us that, "Each medium does what it does best" (p. 95–96).

Gambarato, Alzamora, and Tárcia (2020) have also commented on Transmedia Acumen as this

dissertation is concerned. They note "a transmedia project is a storyworld capable of supporting multiple narratives across various media platforms and formats" which involves "a higher degree of connection and integration" for a campaign practitioner to configure (2. The Transmedia Effect/Systemic Complexity in Transmedia Storytelling, para. 17); for Gambarato, Alzamora, and Tárcia (2020) this complex planning and pivoting involves not only the "intricate parts" of a transmedia story that can be "organized" and "ordered" within a "transmedia supersystem" but also:

> All the implications in the interplay between these parts and the social environment where they are inserted. Connection refers to the system's relations and therefore can reveal complexity by the number and diversity of these relations. Integration is related to the emergence of subsystems, affecting the systemic complexity via the number of subsystems and their shared properties. (2. The Transmedia Effect/Systemic Complexity in Transmedia Storytelling, para. 11)

Jenkins's pioneering voice of authority on the matter of Transmedia Acumen puts it this way: "I love that attempts to develop a field theory of transmedia have given way to efforts to describe different configurations transmedia might take in different contexts or in the service of different goals" and "I welcome the shift from discussing interactivity toward a more nuanced consideration of participatory practices" (Jenkins, 2019, p. xxix). While Jenkins remains keen to learn how audiences can be brought "more fully into the mix," he also remains intrigued by the notion that there is "productive tensions" between transmedia storytelling "perspectives that are grounded in claims of medium specificity (whether in terms of different media sectors or the contributions different media affordances offer)" (Jenkins, 2019, p. xxix). Freeman and Gambarato (2019) assist with this introduction of my term Transmedia Acumen when they note that "the very definition of transmediality might remain decidedly in flux, meaning different things to different people at different times" (p. 2), but that "there is a consistent and clear emphasis on understanding transmediality," as an "experience via technology" (p. 11), that is in both the hands of the creator and the hands of the audience. Moreover, for Freeman and Gambarato (2019), our Transmedia Acumen permits us to build these "experiences across and between the borders where multiple media platforms coalesce, altogether refining our understanding of this phenomenon as specifically a mode of themed-storytelling" that, "affords immersive, emotional experiences that join up with the social world in dynamic ways" (p. 11).

V

Part D
On Emotional Engagement

Section 2.4 - On Emotional Engagement

2.4.1 - Why Strategic Narratives?

In one of the most recent assessments of narrative found within the climate change communication literature, Bevan, Colley, and Workman (2020) single out the term "strategic narrative" as a means to engage the public (p. 2). Bevan, Colley, and Workman (2020) reference "a story with purpose" as the defining aspect of a strategic narrative. Strategic narratives are then used by actors "to persuade and coordinate individuals and groups through making sense of events and themes with a plot and characters" (p. 2).

Bevan, Colley, and Workman (2020) have argued for the need to adopt strategic narrative thinking across climate science communication, particularly for those interested in advancing policy that aims to limit anthropogenic global warming to 2°C above pre-industrial levels. These authors report that strategic narratives could create "buy-in" across sectors to address this concern (p. 2) and "a strategic narrative—a dynamic and persuasive system of stories, organically generated and encouraged between government, business, and civil society"—can galvanize collaboration and motivate the necessary action (Bushell, Colley, & Workman, 2015, p. 971).

While attention towards the use of strategic narratives to abate the climate change crisis has gained some ground, there is much to learn about the use of narrative in climate change advocacy. Bevan, Colley, and Workman (2020) lead us towards some new insights when they review a preliminary account of the strategic narrative definitions, found across diverse fields, and summarize their findings: From the multitude of definitions two key elements appear consistently:

• The use of strategic narratives as a persuasive tool; and

• The use of strategic narratives as a coordinative tool. (p. 3)

In doing so, Bevan, Colley, and Workman (2020) present a working definition: "Strategic narrative refers to a narrative that has been deliberately constructed to have a coordinative and/or persuasive effect" (p. 3).

Bushell et al. (2017) put the need for a strategic narrative in the context of my dissertation as they identify one main reason for the "action gap" that exists between "globally accepted targets for limiting global temperature rise to safe levels (2°C target, 1.5°C ambition) and the sum of the contributions by individual

countries" (p. 39); that is, there is a "failure to agree on and articulate the complex range of solutions, and the need to implement those solutions, in a compelling way" and "any strategy, and the policies subsumed by it, have little meaning unless communicated effectively" (p. 39). Narratives then, as sense-making schema, could engage audiences with climate change in order to "help close the gap between climate policy and action" as these "stories portray the central characters involved in climate change in different ways, be it as heroes, victims, or villains," and "these constructions can in turn be interpreted in different ways by diverse audiences" to make their own sense of climate change (p. 41). Bushell et al. (2017) add that, because narratives are "stories which can explain the situation, define a problem that disrupts the order of the initial situation, and then provide a resolution to that problem, which re-establishes order" (p. 39), narratives engage people with climate change as "social products" created through "a collective and continuous reconstruction and retelling process" that permits audiences to "shape and interpret the unknown by fitting [climate] into a familiar pattern through which events transpire" (p. 42). This line of thinking runs parallel to earlier work presented by Marshall Ganz who concludes:

> When we cognitively map the world, we identify patterns, discern connections, and hypothesize claims and test them—the domain of analysis. But we also map the world affectively by coding experiences, objects, and symbols as good or bad for us, fearful or safe, hopeful or depressing, and so on. (Ganz, 2011, p. 274–275)

2.4.2 - Engagement Theory

In *Understanding Engagement in Transmedia Culture* scholar Elizabeth Evans presents a discussion on engagement—as it relates to this dissertation—to address confusion surrounding the term. Evans (2019) laments that "despite becoming a buzzword within both the screen industries and screen-related scholarship, engagement remains ill-defined, instead accumulating a variety of meanings depending on the context it is used in" (p. 2); Evans (2020) further notes media scholars think of engagement as a "catch all term to encompass anything audiences do with screen media" so scholars "use the term unproblematically" after making the assumption that viewers know "what is meant by it based on the wider context" (p. 4). Other authors have accounted for the omnipresent confusion to varying degrees as well: Napoli (2010) states "the growing prominence of the concept of engagement has yet to result in any kind of clarity or consensus

as to what engagement actually means" (p. 95–96), while Corner (2017) notes, "engagement is a broad, descriptive term rather than an analytic one" (para. 3)

Alongside this uncertainty there exists some definitions of engagement that transmedia storytellers might find useful to evaluate the success of their projects; Evans (2020) argues that most definitions use the emergence of the term as a "key indicator of success" (p. 5). Evans (2020) begins her own summation of a set of definitions by acknowledging that engagement connotations exist across: "Sensory experiences; interactivity; social media use; community performativity; fandom; market research; the use of video on demand (VOD); civic participation; or just generally experiencing a form of screen content" (p. 4). Within this range of engagement application authors have presented these interpretations: Plantinga (2018) believes "we engage with a screen story when we allow ourselves to be immersed in it, to respond to the characters, and to feel the emotions that the screen story elicits" (p. 107); Napoli (2010) purports that "engagement itself contains six components: Attentiveness, loyalty, appreciation, emotion, recall, and attitude" and "engagement in turn leads to a behavioural change, where an individual does something away from the content" (as cited in Evans, 2020, p. 5); Jenkins, Green, and Ford (2013) suggest "engagement-based models see the audience as a collective of active agents whose labour may generate alternative forms of market value (p. 116); Askwith (2007) defines engagement as the "sum total of the viewer's behaviours, attitudes, and desires in relation to the [media] object" (p. 49); Beddows (2012) argues "engagement is expressed by more than a single behaviour or action" and instead "it should be understood as the expression of a relationship to media content which can be characterized by multiple behaviours and attitudes" (p. 73); Freeman and Gambarato (2020) understand that engagement has various meanings but it encompasses the notions of emotional involvement, motivation, and willingness to act; and still others recognize engagement across a hierarchal spectral experience, from "low to high," or "positive to negative," or more so "disengagement" (Evans, 2020, p. 6).

At the same time that uncertainty around the term prevails, transmedia storytellers have weighed in on the importance of securing a working concept of engagement for the purposes of evaluating the impact of their projects. Recall, because transmedia econarratology is mostly interested in how audiences witness, process, and engage with narratives that shape people's attitudes, values, and behaviours (James & Morel, 2020, p. 12), transmedia storytellers have the challenging task of measuring such audience parameters. Moreover, Gambarato and Tárcia (2016) have made it clear that one of the central premises of transmedia storytelling is achieving intensified levels of audience engagement, along with two other core characteristics, including the use of multiple media platforms and the expansion of storyworld content.

To approach a guiding definition of engagement, Evans (2020) makes the point that, "Engagement is not exclusive to experiences with screen media and understanding and interrogating it is not the sole purview of screen or media studies" (p. 6). Notably, engagement research is ongoing across such diverse fields as sociology, political science, media psychology, education, and branding and marketing studies to name just a few. Evans (2020) continues:

> Much of this research connects engagement to motivation, as a way of understanding how individuals become so interested in something (a task, subject they are learning, political issue, or consumer product, for instance) that they either remain committed to it (completing the task or understanding a topic more) or go on to perform additional actions (voting, calling a political, buying the product and so on. (p. 6)

Evans's (2020) summary of existing engagement definitions effectively works to establish some boundaries. Within this context she further describes the need for "empirical evidence," or qualitative and quantitative "analysis," to better grasp how audiences engage with transmedia storytellers. What is more, Evans (2020) differentiates audiences from practitioners, two groups she identifies as key stakeholders for engagement; she also realizes that how we measure engagement is often the choice of the scholar (Evans, 2020).

2.4.2.1 - Affective Narratives

Chapman, Lickel, and Markowitz (2017) note that strategic narratives need to account for affect, or the positive and negative feelings and emotions that audiences get when they engage in climate change stories. However, there is more than one way to do so.

For example, one study reported, "The most motivating emotions are worry, interest, and hope," while a second contrasting case study suggested "messages designed to induce feelings of hope and optimism … may actually lower motivation" (p. 2). Chapman, Lickel, and Markowitz (2017) agree that there is a need to reassess affect and emotion in climate change communication, and in doing so they offer up some cautionary insight; using David Wallace-Wells's *New York Magazine* article, entitled *The Uninhabitable Earth*, they elaborate:

Some prominent scientists have pushed back against the article in part arguing that such

pessimistic coverage depresses and demoralizes the public into further inaction. Others

have praised the piece for its honest portrayal of the challenges we face while highlighting

the potential for such writing to induce strong emotional responses in readers, such as fear,

anger and resolve. (p. 2)

That is, the "bifurcation between go positive and go negative" does not work for Chapman, Lickel, and

Markowitz (2017) who warn that the search for "the right emotional recipe" of a narrative oversimplifies the

challenges of climate change communication that should really take into account "how different segments of

the population respond to these appeals" (p. 2). That emotions are thought of as "simple levers" that can be

pulled to "promote desired outcomes" has led to our "misuse and misunderstanding" of what "fear and hope"

can do to motivate or inhibit public engagement with climate change (p. 1). Moreover, Chapman, Lickel, and

Markowitz (2017) address the complexity of using affect and emotion to address the climate change crisis

since many studies still "debate … the current evidence" and "dominant approaches to studying climate

change communication do not support definitive, simplistic, and overly broad assertions" (p. 2). Finally,

while Chapman, Lickel, and Markowitz (2017) advise that, "Researchers and practitioners should attend to

and clarify the roles of affect and emotion-based messages for different forms of short-term and long-term

climate change engagement" (p. 3), they also decry that not enough studies exist that recognize the role of

affect and emotion in climate change communication strategies. This remains an important area of inquiry

and implementation.

To better appreciate this "bifurcation" described by Chapman, Lickel, and Markowitz (2017, p. 2),

we can pay attention to our response as we read the following two passages:

But if this project—the longest heated pipeline ever planned—gets built, it will also take

out wide swaths of farmland, almost all of it tilled by peasant farmers. Some have already

been evicted, and are living in concrete houses in a "resettlement village." But many are

still on the land, and still fighting, in much the same way, and for many of the same reasons,

that Indigenous people in the American West have been steadfast in their battle against the

Dakota Access pipeline. (McKibben, 2020, para. 4)

And:

> "Praise be to you, my Lord." In the words of this beautiful canticle, Saint Francis of Assisi
> reminds us that our common home is like a sister with whom we are our life and a beautiful
> mother who opens her arms to embrace us. "Praise be to you, my Lord, through our Sister,
> Mother Earth, who sustains and governs us, and who produces various fruit with coloured
> flowers and herbs." (Francis & Irwin, 2015, p. 7)

Was the feeling state you experienced positive or negative as you read the text? According to human geographer Anthony Leiserowitz, affect is "a person's good or bad, positive or negative feelings about specific objects, ideas, or images" (Leiserowitz, 2006, p. 46). Importantly, Weik von Mosser (2014) recognizes that affect is also "our automatic, visceral response" to media (p. 1), and affective texts are of course, those which are "broadly construed to include sights, sounds, smells, ideas, and words, to which positive and negative affect or feeling states have become attached through learning and experience," which act as stimulation for audience engagement (Slovic, et al. 2007, p. 1335).

The consequence of affect plays out in climate change narratives as both positive and negative feeling states elicit varying responses. Podcast hosts of *How to Save a Planet*, Alex Blumberg and Ayana Elizabeth Johnson, provide commentary on this affect as it relates to climate change:

> There's been a lot of great reporting on climate, especially in the last few years, but it's
> been kind of hard to connect with. It's either like doom-and-gloom, or it's so fluffy that it's
> not going to get us where we need to go. (Gentleman, 2021)

Furthermore, in his frequently referenced work on the perception of risk, the psychologist Paul Slovic tells us that affective texts are part of an "affect heuristic" (Slovic et al., 2007), a reliance on rapid and automatic feelings, and Leiserowitz suggests the affect heuristic is "an orienting mechanism that allows people to navigate quickly and efficiently through a complex, uncertain and sometimes dangerous world … by drawing on positive and negative feelings associated with particular risks" (2006, p. 48). For Slovic and Leiserowitz the affect heuristic can both invite people into a narrative, or otherwise discourage them from entering. Slovic et al. (2007) summarizes:

We cannot assume that an intelligent person can understand the meaning of and properly act upon even the simplest of numbers such as amounts of money, not to mention more esoteric measures or statistics, unless these numbers are infused with affect. (p. 1349)

Other scholars have made a case for narrative effect in this capacity. For example, the affect heuristic is at play in the dual-system thinking analyzed by Kahneman (1994), who suggests that mental shortcuts are relied upon rather than time-consuming rationale calculations to make decisions. In *The Affect Theory Reader* Melissa Gregg and Gregory Seigworth also place affect into context for us when they state that affect:

Is found in those intensities that pass body to body (human, nonhuman, part-body, and otherwise), in those resonances that circulate about, between, and sometimes stick to bodies and worlds, and in the very passage or variations between these intensities and resonances themselves. (Gregg & Seigworth p. 2010, p. 1)

It is then clear that strategic narratives should pay attention to affect as well (Weik von Mosser, 2017).

2.4.2.2 - Ineffective Narratives

Despite the identified potential of narrative, Bushell et al. (2017) are also quick to address that as many as seven existing climate change narratives are ineffective for various reasons. The narratives include:

• The "Gore" narrative of "scientific discovery" that concludes with "certainty that climate change is unequivocally caused by humans";
• The "End of the World" narrative warns of "a catastrophic future climatic event unless people change their behaviour";
• The "Every Little Helps" narrative which identifies individual "protagonists" who "propose solutions";
• The "Polar Bear" narrative which depicts polar bears as "helpless victims … who are seeing their habitat destroyed by the actions of villainous humans";

• The "Green Living" narrative, which presents "a society which has transitioned to a sustainable green way of life";

• The "Debate and Scam" narrative where "heroes" are "skeptical individuals who dare to challenge the false consensus on climate change which is propagated by those with vested interests"; and

• "Carbon Fuelled Expansion," which situates the "free market … at the centre of this narrative" to present "action on climate change as an obstacle to the freedom and well-being of citizens" (p. 46).

Most notably, Bushell et al. (2017) note there "are a number of interlinked sociological, psychological, and political effects which disconnect people from acting on climate change" and their assessment "finds that those narratives in the climate change discourse that argue for action appear to be ineffective, and are certainly less effective than many of the narratives which have been promoted by climate change sceptics" (p. 47). According to Bushell et al. (2017), these narratives do not work because they "often disengaged their audiences from the problem" and fail to "appeal to basic human psychology, social norms, and our knowledge of past experiences" (p. 47). The authors point out a number of additional reasons for the ineffectiveness of existing climate narratives. See Bushell et al. (2017) for a thorough report of this rationale that includes such factors as the "information deficit model"; "inappropriate messengers conveying the narrative"; "cognitive dissonance around the scale"; "alarmist language"; "complexity and all-encompassing nature of the problem making audiences feel helpless"; "lack of coherent messaging"; "conflict of interest … within cultural group"; among others (p. 46).

Interestingly, Bushell et al. (2017) do not propose a specific alternative narrative and instead lament generally on the need for "a unifying strategic narrative" with certain characteristics (p. 4). In their words:

An effective strategic narrative should provide a concise statement of what it is doing, why, and how that links a positive vision of the future with the individual actions of members of its own societies and members of other societies whom it wishes to influence. (Bushell et al., 2017, p. 20)

Returning to Bevan, Colley, and Workman (2020) we can evaluate the findings of an analysis on five

additional strategic climate change narratives to serve as a reference for this dissertation. These narratives included: (1) "12 Years to Save the World"; (2) "Collapse is Imminent"; (3) "You're Destroying our Future"; (4) "Climate Emergency"; and (5) "Our plastic straws are choking the planet" (p. 7–10).

Bevan, Colley, and Workman (2020) point out some flaws with these five strategic narratives, revealed by three different theoretical lenses, namely Ringsmose and Børgesen's framework; the Narrative Policy Framework; and Greimas's Actantal Schema (p. 4–5). While their case for analysis using distinct lenses seems incongruent and laboured by some measures—this might have been their objective—we can pull out some useful criticisms. For example, the "12 Years to Save the World" non-prescriptive narrative does not clearly introduce characters, it uses past stories that might not be surprising, the temporal logic is confusing, and the timescale on the deadline is unclear (p. 6–7). In the "Climate Emergency" narrative weaknesses are also accounted for: Character roles are vague; the emergency call lacks some elements of urgency and in some cases might be contradictory; stories lack details that might otherwise transport audiences; and the promise of actions do not align with policy (p. 6–7).

Concurrently, Bevan, Colley, and Workman (2020) direct our attention to some positive take aways that exist in the makeup of these five strategic narratives. For my purposes I highlight some of their insights here, but see Bevan, Colley, and Workman (2020) for an exhaustive account.

The "Collapse is Imminent" narrative, portrayed by the group Extinction Rebellion in protests across Europe, speaks to "truth" and "scientific evidence" and treats "climate change with the urgency it demands" while "everyday citizens" can relate to a "starker" version of this previously told story; individual protesters are highlighted and the "drama of protests in general" is seen as an effective narrative element; there is a "clear call-to-action" and "clear political demands" so the messaging is indeed straighforward: "the climate crisis is such that some kind of societal collapse is near inevitable" (p. 6–7). The "Our Plastics Straws are Choking the Planet" narrative is favoured over others for the following reasons: Dramatic, unforeseen images of ocean plastics waste have engaged the "conscious consumer" as well as "enlightened businesses"; documentaries have provided "engaging stories of suffering species and ecosystems"; "trusted" narrators like David Attenborough have voiced their concern; "clear behaviour changes … at the "individual level" have been shared alongside measures at "mass scale" (p. 6–7).

Additional narratives present across the climate change corpus have been identified and scholars like Arnold (2018) have performed comprehensive curatorial tasks to label these overarching narratives. For example, there is the "egalitarian story of profligacy"; the "individualistic story of price"; and the "hierarchical

117

story of population" (p. 35).

More specifically, Bilandzic, Kinnebrock, and Klingler (2020) have commented on the effects of science narratives and described "four prototypical stories" with clear implications for emotions (p. 152). Bilandzic, Kinnebrock, and Klingler (2020) found "narratives of progress through research" are "beneficial" and "full of potential, ultimately helping society to further develop and increase its citizens' quality of life" as scientists are depicted as "adventurers" and "brave heroes" who are "productive" and "trustworthy" (p. 152). They also noted "narratives of risk through research" portray the "dangers" of research and "its possible effects on society" which are elaborated alongside the "risks, uncertainties, and controversies" that become part of "master plots" that present science and scientists as "good" or even as "evil" or "mad," not much unlike the "dilemma of Pandora's box, Frankenstein's monsters, or runaway science" (p. 153). Bilandzic, Kinnebrock, and Klingler (2020) further suggest the "progress" and "risk" narratives need to be understood as "prototypes" in that they can "appear in high and low intensity" and also "in combination with each other" (p. 153). In a third identified science narrative, "plot-oriented" stories "centre around events unfolding and actions being carried out" so audiences better understand "how an idea for a research project was developed and how the study was conducted; a fourth prototypical narrative uses, "experientiality" and "human consciousness" to focus on people and their "ideas, thoughts, feelings, and motivations" to explain the "character-oriented" narrative.

Despite the growing number of climate change narratives, scholars generally agree these narratives have not been adequate to abate the climate change crisis.

The author Amitav Ghosh, who comments on the lack of success in climate change narratives, places the use of narrative into the explicit climate change conversation for us:

> Ghosh examines the customary frames that literature has applied to Nature and concludes, with sadness, that climate change events are too powerful, grotesque, dangerous, and accusatory to be wrestled into the fine and refined language of literary fiction. Even essential vocabulary is unlovely. Words like naphtha, bitumen, petroleum, tar, fossil fuels evoke repellent sensations. Ghosh's tentative conclusion is that new hybrid literary forms will emerge, that alter the very act of reading. (Ghosh, 2016, as cited in Abbott, 2017, p. 369)

2.4.2.3 - Engagement with Transmedia Logics & Locations

To return to Jenkins—the pioneering voice behind the most commonly referenced seven principles of transmedia storytelling—is to introduce two new terms that advance our discussion on engagement. For Jenkins (2018), understanding transmedia dynamics can be accomplished recognizing transmedia logics and locations. Jenkins (2017) explains: "By transmedia logics, I mean two interrelated things: The goals a transmedia production is intended to serve, and the assumptions made about the desired relationship among transmedia consumers, producers, and texts" (p. 222). As transmedia is of concern, Jenkins (2017) understands logics within the scope of transmedia planning; that is, what is the goal of transmedia storytelling? Jenkins (2018) elaborates as he provides examples of the types of goals that transmedia producers pursue: "Early work centred on transmedia characters, stories, performances, and promotion, but more and more interest surrounds transmedia documentary, learning/education, mobilization/activism, diplomacy, and so forth" (para. 16). Others have commented on the goal-oriented task of transmedia storytelling. Bicalho (2018) notes:

> Transmedia dynamic offers new possibilities for movements with social change initiatives.
> There are decentralized actors who create entry points for issues and solutions linked to
> the topic across multiple platforms and languages. This favours the creation of strategies
> to generate social impact, influencing the perception and construction of communities. (p.
> 208)

And, on this notion, Freeman and Gambarato (2020) emphasize the role of the Internet to reach transmedia storytelling goals. They note the Internet and the extent of our digital technologies undoubtedly play a significant role in, "(1) disseminating transmedia content, (2) making content easily available worldwide, (3) reaching a diversified range of audiences, (4) enabling audience engagement, and (5) contributing to a participatory culture, for instance (p. 4). Freeman and Gambarato (2020) continue:

> But the possibilities to enrich the audience experience via online activities, live events, and
> analogue initiatives, are immense because they can dramatically contribute to the feeling of
> immersion; the sense of belonging, and the emotional response of audiences. (p. 4)

Moreover, by transmedia locations, Jenkins (2018) means:

Location refers to the context from which transmedia products emerge, so that the struggle of indie media producers in Manhattan to find a business model to sustain alternative reality games, often in collaboration with the advertising, publishing, or recording industries looks different from, say, the transmedia strategies currently shaping Hollywood franchises, such as the extended universes of Marvel, Star Wars, Harry Potter, or Avatar. And these look different from locations where transmedia production is state-subsidized to promote multiculturalism, education, or social change, all goals that dominate in countries where media production is shaped by public service priorities. (para. 14)

Simply put, Evans (2020) interprets transmedia locations alongside the "context of "transmediality, including where it is made and experienced" (p.9), and she points to transmedia locations and logics as a way to better comprehend how transmedia storytelling can "encompass a much wider range" of storytelling across and within various "spaces and places" (p. 9).

Most importantly, for Evans (2020) is a proponent of the "pervasive" nature of narrative building across various media—propelled forward by audience engagement—that begets a "transmedia culture" (p. 9). Because of this prevailing culture, the strategy and tactics surrounding the use of transmedia storytelling, and in particular, transmedia distribution strategies, according to Evans (2020), should see increased attention.

2.4.3 - Engagement Conditions: A Bifurcation

To further a discussion regarding the Degree of Engagement is to once again return to Jenkins's transmedia storytelling framework that I described in Section 2.3.4 because some of his principles are specifically interested in qualities of engagement such as circulation (i.e., spreadability) and consumption (i.e., drillability), and still other principles are interested in the actions that audiences take after an experience within a storyworld (i.e., immersion, extractability, and performance). By contrast, Jenkins's other five principles seem to be more generally focused on elements of the Degree of Narrativity (e.g. continuity of the core narrative) or in the "worldbuilding" process at large.

With this in mind, while criticism exists around the applicability of Jenkins's principles, they

still serve as a starting place to evaluate engagement across transmedia storytelling projects. Evidence of this application exists in Lam and Tegelberg (2019)—one of the only known assessments that specifically draws attention to the potential use of transmedia storytelling in climate change communications—and with Moloney (2018), whose transmedia storytelling synthesis remains applicable. Of note, where Lam and Tegelberg (2019) continue to reference the components of Jenkins's framework as "principles," Moloney (2018) prefers to describe these transmedia concepts as "qualities" or "goals," and thinks these terms might be more suitable; I tend to agree, but have an original offering of my own, so I advance on the notion that Jenkins's "principles," "qualities," or "goals" might be best understood as conditions such that they find relevance and a place across my presented lenses of Degree of Narrativity; Degree of Transmediality; and Degree of Engagement.

There is more to say on this important matter.

2.4.3.1 - Hand of the Creator, Hand of the Audience

In my presentation of the TREES Model, it is necessary to determine that Jenkins's existing principles appear to be located in two separate camps; that is, control is placed in the *Hand of the Creator* to achieve continuity, multiplicity, worldbuilding, seriality, and subjectivity, since transmedia storytelling practitioners primarily make choices first about the inherent project design that includes these "principles" or "qualities," or control is in the *Hand of the Audience* because it is only through user engagement with content that the dimensions of spreadability, drillability, immersion, extractability, and performance can foster. In other words, the latter five principles of transmedia storytelling only manifest their full maturity through user engagement and audience participation, whereas the former five qualities can be implemented by practitioners without engagement necessarily activated (i.e., this is why they regularly appear to play a role in narrative building or Degree of Narrativity).

Even more to the point, if this dichotomy is indeed true, then there exists some rationale to do some sorting of the principles in Jenkins's original framework into categories that might lead climate change campaigners towards a practical implementation of transmedia storytelling. As such, we can think of Degree of Engagement as outlined next.

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2.4.4 - Degree of Engagement

With an interest in developing a novel transmedia storytelling model—that provides practitioners with a way to elicit emotional responses and actionable events from the audience—I propose that future climate change communicators should evaluate the Degree of Engagement in their campaigns; that is:

The measure of a campaign to fulfill a set of engagement conditions to elicit increasingly deeper emotional responses from audience members with the intent to incite participation and actionable events from those individuals who build connections within the storyworld.

2.4.5 - Note on Emotional Engagement

Throughout this literature review on the topic of engagement I became more cognizant of the role of emotions to create meaningful connections with members of the audience such that a campaign's stories ultimately affect how supporters live out their lives. For this reason, I include a short note on Emotional Intelligence and its relevance to affect next.

In what is arguably one of the most referenced texts on the topic of affect, in *The Affect Theory Reader*, Gregg and Seigworth (2010), note:

Affect arises in the midst of inbetween-ness: In the capacities to act and be acted upon. Affect is an impingement or extrusion of a momentary or sometimes more sustained state of relation as well as the passage (and the duration of passage) of forces or intensities. That is, affect is found in those intensities that pass body to body (human, nonhuman, part-body, and otherwise), in those resonances that circulate about, between, and sometimes stick to bodies and worlds, and in the very passage or variations between these intensities and resonances themselves. Affect, at its most anthropomorphic, is the name we give to those forces—visceral forces beneath, alongside, or generally other than conscious knowing, vital forces insisting beyond emotion—that can serve to drive us toward movement, toward thought and extension, that can likewise suspend us (as if in neutral) across a barely registering accretion of force-relations, or that can even leave us overwhelmed by the

world's apparent intractability.

Indeed, affect is "transitive," in "constant variation" (Bertelsen and Murphie, 2010, p. 140); and affect is "personal, literally more familiar," (Bertelsen and Murphie, 2010, p. 140) such that affect is an "emotion or feeling," as the "broader affective intensities" enter into the nervous system, "eventually to become recognizable as they register"—emotions manifest as physical states when we are angry or happy, and feelings are "complex strings of ideas traversing emotions as they remap them" (Bertelsen and Murphie, 2010, p. 140). As mentioned, affect is also "sticky," as described by Ahmed (2010, p. 29), who thinks of affect as "what sticks, or what sustains or preserves the connection between ideas, values, and objects" (p. 29). On this connection, Ahmed (2010) offers a warning such that we need to appreciate a "distinction between good and bad feelings" that surround affect but that it might not be the case that all "bad feelings are backward and conservative," or "closed," and not all "good feelings are forward and progressive," or "open," (p. 30)—as climate change is concerned much scholarly work has made a case that both good and bad feelings can engage us with the issue of the crisis in one manner or another (Chapman, Lickel, & Markowitz, 2017).

For Heidegger, affective experiences affect us, such that we are "mooded beings" (Elpidorou & Freeman, 2015) and our "attunement," or our "mood" constitutes the human condition and connects us to the world (Hadjioannou, 2019); for Freud, affect motivates the behaviour of an individual as felt emotions, conscious or otherwise (Freud, 1915/1957, p. 177); for Nietzsche, "Under every thought there is an affect" and affects are "inclinations" or "disinclinations" that not only shape thought and experience, but individuals (Ansell-Pearson et al, 2019, p. 8); for Spinoza affects are states of mind, including but not limited to desire, pleasure, and pain or sorrow, and we have the "power to affect and be affected" (Spinoza, 1952, p. 395); and for Deleuze affect is in us, as passion, affection, disposition, or state, and we are endowed with, or possessed of affect (Davidson, Park, & Shields, 2011, p. 4). It is an "intensive force" (Ott, 2017, p. 1).

As we tangle affect and emotional engagement Massumi (2002) provides a pause when describing affect as "an energetic dimension" or "capacity" and emotion as "a selective activation or expression of affect" on "the basis of memory, experience, thought, and habit" (p. 282–283).

On the topic of Emotional Intelligence I simply want to approach the notion that a full range of emotions—and affective states of experience—have the capacity to increase or decrease our capacity to act (Davidson, Park, & Shields, 2011, p. 5). I also want to acknowledge that action involves the four domains of Emotional Intelligence, which include: (1) self-awareness (i.e. the ability to know a feeling and why we are

feeling a certain way); (2) self-management (i.e. the ability to handle distressing emotions in a productive way as well as attune positive emotions such that they align with our passions); (3) social awareness or empathy (i.e. the ability to know what someone else is feeling); and (4) relationship management (i.e. intergroup behaviour that works to coordinate and persuade) as described by Goleman, Boyatzis, and McKee (2013, p. 39).

2.4.6 - To Engage, To Bear Witness

On Spinoza's capacity *to act* we can comment on bearing witness.

To bear witness, as the historian Marianne Fulton notes, is "to make known or confirm, to give testimony to others" (Fulton, 1989); Fulton (1989) continues, "Being there is important, being an eyewitness is significant, but the crux of the matter is bearing witness." Put another way, climate change needs witnesses. Life Magazine photographer, Henri Cartier-Bresson, agrees: "We supply information to a world that is overwhelmed with preoccupations and full of people who need the company of images … We pass judgment on what we see, and this involves an enormous responsibility (Moussawi, 2017, para. 1).

On the act of bearing witness, in *Regarding the Pain of Others*, the American prescient writer and philosopher Susan Sontag shares that, "Witnessing requires the creation of star witnesses" (p. 33). Best exemplified by early and heroic war photographers, whose aim it was "to vivify the condemnation of war," these star witnesses brought back haunting images of "mutilated bodies," that, "for a spell," showed "a portion of its reality to those who have no experience of war at all" (Sontag, 2003, p. 12). In photographs, Sontag (2003) concludes, are the "means of making 'real,' or 'more real,' matters that the privileged and the merely safe might prefer to ignore" (p. 7); that is: "Look, the photographs say, this is what it's like. This is what war does. And that, that is what it does, too. War tears, rends. War rips open, eviscerates. War scorches. War dismembers. War ruins" (p. 8).

Here, I also want to suggest to bear witness is to feel. Joëlle Gergis, in an excerpt from the anthology *Fire, Flood and Plague*, explains:

If you've ever been around someone who is dying, it may have struck you how strong a person's life-force really is. When my dad was gravely ill, an invisible point of no return was gradually crossed, then suddenly death was in plain sight. We stood back helplessly,

knowing that nothing more could be done, that something vital had slipped away. All we could do is watch as life extinguished itself in agonizing fits and starts. As a climate scientist watching the most destructive bushfires in Australian history unfold, I felt the same stomach-turning recognition of witnessing an irreversible loss. (Gergis, 2021, para. 1–2)

On this poignant matter, Rachel Carson comments:

It is not half so important to know as to feel … once the emotions have been aroused—a sense of the beautiful, the excitement of the new and unknown, a feeling of sympathy, pity, admiration or love—then we wish for knowledge about the object of our emotional response. Once found, it has lasting meaning. (Carson & Pratt, 1965, p. 45)

X

Section 3.1 - Methodology

3.1.1 - An Ethnographic Approach

In this section I provide an overview and contextualization of the ethnographic approach employed in my dissertation. Tummons (2017) acknowledges that, "There is no shortage of methods, methodology, and paradigms" for ethnographic research and while each of the available approaches provide some strengths, they are all encumbered by specific criticisms that scholars continue to point out (p. 151).

Despite the recognized challenges observed by Tummons (2017), he also notes that ethnographic research, "is a way of thinking about aspects of everyday life, work, experience, and practice that foregrounds the individualities of the researcher and the perspectives of the people with whom the researcher is working" that enables an understanding of "the ways in which the work done by all of these people is organized at a social level" (p. 154).

The 'way' in which transmedia storytelling is employed by the ocean advocacy non-profit organization SeaLegacy and by the evidence-based research, education, and policy focused non-profit organization the David Suzuki Foundation is a focal point within this research and is the reason why an ethnographic methodology was used to evaluate the ideas brought about in my research questions and hypotheses.

Additionally, my research methodology draws on the insights provided by Bryman and Bell (2021) and Tummons (2017) and focuses on general ethnography practices as well as institutional ethnography (IE) approaches; IE is "a framework for interpretivist inquiry" (Tummons, 2017, p. 149).

Key instructions in IE speak about:

• A 'local' level (i.e., "work that is experienced, talked about, and made sense by people at the local level," but also the 'translocal' (i.e., "those social, administrative, or geographical spaces that are outside the boundaries of people's everyday experience") that shape the local through mediated "texts" including words and images, and presumably a combination of texts that exist across media (e.g. transmedia);

• 'Ruling relations' that coordinate the work; and

• 'Institutional texts' that aid in coordination. (Tummons, 2017, p. 149)

Aspects of IE are applicable to my methodological approach along with the specific methods of 'text-reader conversation.' That is, institutional discourse in the form of strategic documents which "regulate local work activities" and 'talking with people' (i.e., interviews).

My ethnographic methodology acknowledges 'work knowledge' (i.e., "A person's own experiences of their work") and also 'stand point' (i.e., a point of entry into 'discovery') so that I would remain as unbiased as possible during my data collection phases.

Section 3.2 - Methods

As part of my research, I carried out the following four methods using an ethnographic research approach, to determine the Degree of Narrativity, Transmediality, and Engagement of across two presented case studies. In the sections that follow I summarize the methods used within this dissertation that include:

- Interviews;
- Web surveys;
- Content sampling and analyses; and
- Coding and software

3.2.1 - Interviews

Within ethnographic research the interview method permits a key informant to speak "for the first and perhaps only time … about the ordinary of their lives with someone whose focus is just that and whose job is to listen" (Smith, 2005, p. 139). The interview as "a locus for shared meaning-making" or 'dialogic inquiry' is valuable as the 'first dialogue' (i.e., the interview), along with the 'second dialogue,' (i.e., the reading of the transcript), permit the co-construction of meaning and experience between the informant and the researcher (Tummons, 2017, p. 151; Smith, 2005).

For the purposes of my research I used semi-structured interviews. The semi-structured interview process permitted an informal dialogue with free flowing conversation that was aided by spontaneity and occasional probing when a question or answer deserved attention. The semi-structured interview was chosen to open up the dialogue between myself and the key informant while some structure and preparation allowed for consistency; that is, my primary questions were always considered but I did not necessarily follow them in any order or use each one throughout the interview process. Furthermore, some lines of thought identified in early conversations were revisited in subsequent interviews. The semi-structured interview permitted informants to interpret the topic and the discussed texts independently from each other and myself. Throughout the interviews I made every effort to not agree, disagree, or provide biased probes, though admittedly, this might have occurred on some occasions a phenomenon that Bryman and Bell (2019) notes is not unusual. My interview guide was informed by the preparatory notes in Bryman and Bell (2019).

For the interviews, I used both open and closed-ended questions observing the value of both types of questions. That is, open-ended questions permitted answers defined by the respondents "own terms" and closed-ended questions minimized variability and promoted standardization (Bryman & Bell, 2019). As defined by Bryman and Bell (2019) I used a range of questions that addressed both the personal and the factual, as well as others that elicited people's knowledge, attitudes, beliefs, values, and opinions.

To setup the key informant interviews I was in touch with an existing contact via email and/or phone and then used a snowball sampling technique to connect with other staff members who were introduced to me via my primary contact.

For all participants I conducted <60 minute interviews in person on-location or via video conferencing software; interviews were recorded with a Zoom H6 Handy Recorder at key informant's office or via virtual meeting software, including Zoom and Skype. On some occasions I conducted key informant interviews via a phone call. During the interviews I also took notes, which I wrote out manually after obtaining consent from the interviewees.

In all cases, key informants were informed of the purpose of my research as well as that their responses were anonymous and voluntary, and findings would only be shared through summaries unless written consent via email was provided to identify a key informant's name and title. Key informants digitally signed an ethics approved certificate (i.e., #STU 2019-081) administered by the Office of Research Ethics at York University in Toronto, Ontario, Canada to participate in the interview component of my research.

Key informants were chosen based on a review of contemporary climate change campaigns; individuals were identified as both legacy leaders and pioneers in the transmedia storytelling discourse and space.

Key informant interviews with these transmedia storytellers informed my process of building a new TREES Model as the interviews provided undocumented insights that considered important strategy and tactics surrounding transmedia storytelling. Furthermore, key informant interviews provided access to institutional texts that existed both in the public forum and as confidential documents that included strategic communication plans.

In the case of the key informant interviews, regulation of any introduced bias was carried out by the expertise of the informants I worked with, and through the process of being "reflexive;" that is, I acknowledged any interpretation of the data collected was a co-constructed exercise advanced by the key informant and myself and accepting that those procedures did not exist independent of each other (Bryman

& Bell, 2019; Tummons, 2017, p. 148–149).

Moreover, the goals and objectives of each transmedia storytelling campaign were identified during the key informant interview process.

3.2.1.1 - Interview Populations

Key informant interviews were conducted with two distinct populations that included:

• Case Study #1: Five staff from SeaLegacy (SL) (see Table 1)

• Case Study #2: Nine staff from the David Suzuki Foundation (DSF) (see Table 2).

SeaLegacy

An existing relationship with SeaLegacy co-founders Mittermeier and Nicklen was established after I worked with these individuals on a National Geographic Magazine assignment covering the plight of manatees in Florida (White, 2013). Mittermeier provided initial contact information to connect with additional SeaLegacy staff noted in Table 1.

Table 1:

Key informants on staff or consulting with SeaLegacy.

Key Informant	Role
Shawn Heinrichs	Co-Founder and Lead Storyteller
Emy Kane	Consultant
Sam Kretchmar	Consultant
Cristina Mittermeier	Managing Director, Co-Founder and Lead Storyteller
John Weller	Senior Fellow and Lead Storyteller

David Suzuki Foundation

An existing relationship with David Suzuki Foundation was held by my primary supervisor Dr. Jose Etcheverry. Etcheverry provided initial contact information to connect with additional David Suzuki Foundation staff noted in Table 2.

Table 2:

Key informants on staff or consulting with the David Suzuki Foundation.

Key Informant	Role
Sherry Yano	Associate Director, Sustainable Communities
Anna Binta Diallo	Design, Digital Strategy, & Web Specialist
Brendan Glauser	Director of Communications
Diego Creimer	Interim Co-Director General
Jay Jameson	Digital Manager
Jodi Stark	Public Engagement Specialist
Olga Shuvalova	Communications Specialist
Theresa Beer	Communications & Policy Specialist, Climate Solutions

3.2.2 - Content Sampling & Analyses

My ethnographic approach primarily focused on content sampling and content analyses during the inspection of texts published by SeaLegacy in The Greatest Sanctuary campaign and by the David Suzuki Foundation in the Charged Up campaign. In my research, I define content analysis as an approach to the analysis of documents and texts that seeks to quantify and qualify content in terms of predetermined categories in a systematic and replicable manner as described by Bryman and Bell (2020).

Content sampling and analyses were conducted to evaluate the following:

• Degree of Narrativity;

• Degree of Transmediality; and

• Degree of Engagement

For the purposes of this dissertation I acknowledge that the texts included in this study are exemplars of media use; that is, the totality of media in each case study is not necessarily reflected in the data, but rather, the media chosen provide a subset—a snapshot—of the evolving media resources for each campaign.

3.2.2.1 - An Analysis of the Degree of Narrativity

This dissertation asserts that the Degree of Narrativity in a climate change campaign is evaluated by the presence and fulfillment of narrative conditions that advance a core narrative using multiple storylines that are diversified and controlled. Within transmedia storytelling campaigns there can exist an arrangement of these narrative conditions. I used a qualitative content analysis approach to determine the fulfillment of narrative conditions across texts. This qualitative approach, as defined by Bryman and Bell (2020), permits a researcher to "uncover the deeper meanings in the material" (Content Analysis, para. 1).

More specifically, content sampling to determine the Degree of Narrativity consisted of a survey of Core media channels and strategic documents originating in my case study materials. While key informants initiated this sampling by pointing me in the right direction, the evaluation of the Degree of Narrativity was an inductive procedure that was realized as I became more comfortable with the content present in each case study. That is, content sampling was principally focused on textual and semiotic readings and an analysis that sought to identify key elements of Ryan's (2007) defined narrative conditions. For example, since storyworlds should consist of existents, or characters, I looked for evidence of this narrative condition across each case study.

As a subsequent step to evaluate the Degree of Narrativity I contextualized any found application of each of Ryan's narrative conditions with pragmatic examples to elucidate their presence in The Greatest Sanctuary and Charged Up campaigns.

As a final layer to the evaluation of the Degree of Narrativity I coded texts with specific keywords as I reviewed transcripts in MAXQDA. For example, strategy plans that I gained accessed to provided additional evidence that narrative conditions were being used; that is, the lexical search drew my attention to a possible narrative strategy or tactic I might have overlooked. I used the codes in Table 3 for this procedure.

Table 3:

Narrative condition codes used in the case study analysis.

Dimension	Condition	Description	MAXQDA Keyword(s)	Code
Spatial	Characters	Narrative must be about a world populated by individuated existents	Existent; character	NC1
Temporal	Transformation	This world must be situated in time and undergo significant transformations	Time; transformation; significan	NC2
	Non-habitual Event & Conflict	The transformations must be caused by non-habitual physical events	Non-habitual; event; unpredictable; conflict; struggle; challenge	NC3
Mental	Emotional Reactions	Some of the participants in the events must be intelligent agents who have mental life and react emotionally to the states of the world	Emotion; reaction; response; feeling	NC4
	Events Are Purposeful Actions	Some of the events must be purposeful actions by these agents	Purpose; action; goal; objective; plan; motiv	NC5
Formal and Pragmatic	Story Structure & Closure	The sequence of events must form a unified casual chain and lead to closure	Structure; closure; resolution; beginning; middle; end; disrupti; equilibrium; situation	NC6
	Facts & Truth	The occurrence of at least some of the events must be asserted as fact for the storyworld	Fact; truth; authentic; real; nonfiction	NC7
	Meaningful Lesson or Moral of the Story	The story must communicate something meaningful to the audience	Meaning; lesson; moral; value; right; wrong; good; bad; behaviour	NC8

3.2.2.2 - Diversified & Controlled Storylines

Storylines were identified using content analysis of texts that had been imported into MAXQDA software in the form of transcripts. As I analyzed these transcripts and observed reoccurring narrative threads, or story elements that could be grouped together because they moved an individual story forward, I labelled that content with a storyline SL-ID#; that is, our basic understanding of a story is that it involves characters (non-humans included) who perform actions.

This inductive process served to identify any number of storylines that existed in The Greatest Sanctuary and Charged Up campaigns after a sample of texts had been examined. To be clear, storylines were only identified in Core content, as opposed to Peripheral, Partner, and News content created by alternative sources, audience members on social media, or news outlets, so while it will always be assumed additional storylines might arise, the focus of this examination is on storylines in Core content. The increasing number of storylines is one premise of transmedia storytelling which is made more expansive as when users engage in content and create their own works, though these can often be difficult to trace without significant resources

and time.

3.2.2.3 - An Analysis of the Degree of Transmediality

This dissertation asserts that the Degree of Transmediality in a climate change campaign is measured by its structure, or the organization of a transmedia storytelling campaign, and the number and extent of constituent media elements that can be examined as media channels derived from media forms including, but not limited to images (still and motion) and language (written and oral) as well as music and physical objects.

3.2.2.4 - Media Channels

Media channels in this dissertation research are identified as connection or entry points into the specific campaign storyworld; that is, media channels are where audience members interact with diversified and controlled storylines. Media channels in each case study were identified after key informants provided access to key texts or instructions to find existing online content. I also used online search queries to locate assets; this randomized searching was performed throughout the duration of this research as new content was occasionally added online by participant populations throughout the course of this research. In the case of social media channels random sampling was performed.

As media channels were discovered they were coded with a specific MC-ID#.

3.2.2.5 - Data Points

More specifically, the following data points assisted with the identification of storylines and media channels, along with a suite of other text/media characteristics, including media form. This data was entered into a Numbers spreadsheet:

- Media Channel ID#
- Media Channel
- Date of Publication (if known)
- Story Source (url)

- Story Title (or headline)

- Specific Story Form

- Story Summary

- Storyline ID#

- Media Text Type

- Media Form

- Image (Still) (y/n)

- Image (Motion) (y/n)

- Language (Written) (y/n)

- Language (Oral) (y/n)

- Music (y/n)

- Object (y/n)

- Internet (y/n)

- Book (y/n)

- Auditorium (y/n)

- Gallery (y/n)

3.2.2.6 - An Analysis of the Degree of Engagement

The Degree of Engagement in transmedia storytelling remains an integral aspect of this communicative action. In light of this, Jenkins's (2009a, 2009b) transmedia storytelling principles were used to analyze the Degree of Engagement.

This assessment was an inductive procedure that evolved over time as I became more and more familiar with a specific storyworld, storylines, media channels, and the extent of the case studies at large. Content sampling was principally focused on textual and semiotic readings and an analysis that sought to identify key elements of engagement—as informed by Jenkins's (2009a/2009b) applicable principles.

For the evaluation of the Degree of Engagement I also coded texts with specific keywords as I reviewed transcripts in MAXQDA. For example, strategic documents that I gained accessed to provided evidence that transmedia storytelling strategy and tactics were in play and were engaging audiences; where my original content analysis did not find this evidence, the lexical search drew my attention to possible

engagement. I used the codes in Table 3 and Table 4 for this procedure.

Table 4:

Transmedia storytelling principle codes used in the case study analysis.

Transmedia Principle	Description	MAXQDA Keyword (s)	Code
Spreadability	The viral spread of a story through user sharing; or "the capacity of the public to engage actively in the circulation of media content through social networks and in the process expand its economic value and cultural worth" (Jenkins, 2009a, para. ?)	Spread; viral; share; social	TSP1
Drillability	The search for more details via content expansion; or the ability of the audience "to dig deeper, probing beneath the surface to understand the complexity of a story" (Mittell as cited by Jenkins, 2009a, para. ?)	Expand; expansi; complex; drill, details; info	TSP2
Continuity	(i.e. coherence and plausibility throughout the definitive version of the story; the established canon, core narrative, or "unified experience" (Jenkins, 2009a, para. ?)	Canon; unifi; experience; definitive; single	TSP3
Multiplicity	Alternative versions of the characters or parallel universe versions of the stories	Multi; versions	TSP4
Immersion	"The consumer enters into the world of the story" (Jenkins, 2009b, para. ?)	Immerse; enter; into	TSP5
Extractability	Elements of the storyworld are taken away by audience members to be used in their own lives	Extract; take; bring; draw	TSP6
Worldbuilding	(i.e. expansive storylines that permit multiple entry points into the storyworld, yet not too many to elicit confusion; that is, Antarctica is a real place in the world so audiences should have an opportunity to master the content of the worldbuilding process without getting lost)	Worldbuilding; entry; map; boundary	TSP7
Seriality	(i.e. the creation of meaningful story chunks that can be dispersed in a particular sequence to realize additional aspects of the storyworld)	Serial; episode; piece; chapter	TSP8
Subjectivity	(i.e. "unexplored dimensions" extend characteristics of the storyworld and its characters via "transmedia extensions" that "broaden" and "show us the experiences and perspectives of secondary characters")	Subject; secondary; characters; perspective	TSP9

3.2.3 - Coding & Software

3.2.3.1 - Coding

Bryman and Bell (2019) suggest that coding is an integral part of ethnographic research that uses content analysis and content sampling and they note that there are two main elements to a coding scheme, notably a coding schedule and a coding manual. In this dissertation, the coding schedule, or coding form, was a Numbers spreadsheet created in Apple software; blank cells under frozen row and column headers with designated titles provided space to input data points. The coding manual, or code book, which lists the codes

to be used in the analysis, was drafted using both a deductive and inductive process. Sensitizing concepts that informed the creation of some codes were based on my praxis in-the-field and my existing knowledge of key subject matter; that is, even in exploratory inductive work that uncovers data I examined in the texts, I "already know things" and these deductive codes define some of the concepts I am familiar with because of my career. With such deductive reasoning I acknowledge that I have biases and there is in some way the need to "unlearn" what I already know to let the data reveal new insights. As such, I might have inherited an understanding of a specific term and so my code book helps identify those biases. Inductive coding was carried out as I observed higher level topics in the data.

3.2.3.2 - MAXQDA

All coding was carried out in MAXQDA Analytics Pro 2020 computer software. MAXQDA is a "state-of-the-art" qualitative analysis software that can analyze documents, interviews, focus group sessions, text/video/audio files, and images with ease (MAXQDA, Analytics Pro, 2020). The software provides the ability to conduct mixed methods that include statistical and quantitative content analysis tools.

The MAXQDA software was used to analyze and code interview and media text transcripts.

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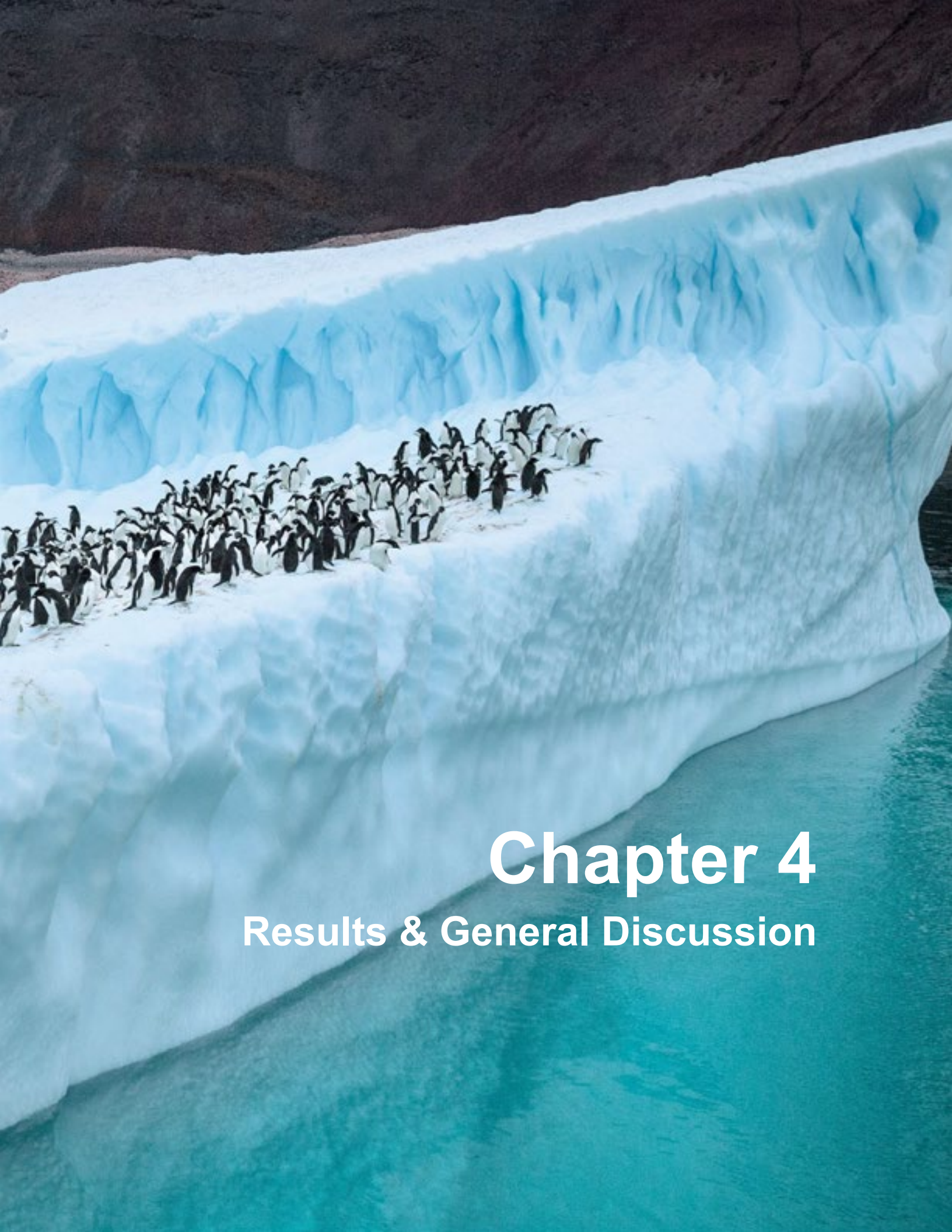
Chapter 4

Results & General Discussion

In this chapter I examine two case studies to evaluate best practices and the structure of a successful transmedia storytelling climate change campaign. The examination uses the framework setup in the literature review in Chapter 2 and specifically assesses research questions that investigate the Degree of Narrativity, Degree of Transmediality, and Degree of Engagement across two exemplary campaigns.

To carry out this exercise I posed the following research questions:

RQ1: How is a successful transmedia storytelling climate change campaign structured?

   a. What is the Degree of Narrativity?
   b. What is the Degree of Transmediality?
   c. What is the Degree of Engagement?

This dissertation addressed the three parts of RQ1 by assessing the communication strategy and tactics used in The Greatest Sanctuary campaign by SeaLegacy in Part A and the Charged Up campaign by the David Suzuki Foundation in Part B. The data analyzed and discussed in Chapter 4 set up the presentation of the TREES Model to be discussed in Chapter 5 and prsented in Appendix B.

Part A
The Greatest Sanctuary

ANTARCTICA

THE GREATEST ACT OF CONSERVATION IN THE HISTORY OF HUMANITY

JOHN WELLER · PAUL NICKLEN · CRISTINA MITTERMEIER · ANDY MANN

FOREWORD SYLVIA EARLE

154

Part A - The Greatest Sanctuary

In Part A of Chapter 4 I will assert that SeaLegacy demonstrates exemplary transmedia storytelling through expert employment of narrativity and transmediality conditions, and this communication action has led to emotional engagement within The Greatest Sanctuary campaign. To support this claim I tested the following hypothesis:

H1: The SeaLegacy ocean advocacy organization effectively performs transmedia storytelling to: (a) advance a core narrative and multiple storylines that are diversified and controlled across (b) integrated media forms and an increasing number of media channels, and (c) this communicative action elicits emotional responses and actionable events in the form of audience engagement and participation with climate change discourse.

I next proceed with an analysis of SeaLegacy's The Greatest Sanctuary campaign.

Portfolio: Antarctica
Pages 148–272

Collection of images made in Antarctica by various SeaLegacy team members. Copyright SeaLegacy unless otherwise noted.

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Section 4.1 - The Greatest Sanctuary: Strategy & Tactics Overview

Who are the primary stakeholders?

SeaLegacy with Only One

Who is the primary audience?

Emmanuel Macron (President of France), Angela Merkel (Chancellor of Germany), Ursula von der Leyen (President of the European Commission), Vladimir Putin (President of Russia), Xi Jinping (President of China), and other leaders from Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) member nations

Who is the secondary audience?

Members of the public

What is the call-to-action for the primary audience?

Protect Antarctica and deliver the largest act of ocean protection in history through the creation of three new marine protected areas (MPAs), as part of the larger campaign against climate change

What is the call-to-action for the secondary audience?

Sign a petition and share content

When does the campaign to take place?

Multi-year timeline with an iterative conclusion in October 2021

Where does the campaign take place? i.e. where is the storyworld?

Antarctica and the Southern Ocean

Why is this campaign important?

Antarctica is facing existential threats that will affect both the health of the global ocean and the stability of our climate, and therefore, all of us

How is the campaign communicated?

Using transmedia storytelling that includes:

• Never-before-seen photography and cinematic videography captured using state-of-the-art equipment over the course of multi-year field assignments

• Extensive social media posting and public engagement

• Partner content sharing

• Political lobbying with campaign assets

Using Core campaign media channels that include:

• 1 website: https://only.one/series/greatest-sanctuary

• 1 petition webpage: https://only.one/act/antarctica

• 1 trailer

• 6-part online video series

• 6-part online article series

• 2-part online explainer panels

• 1 English language coffee table book with X images

• 1 Russian language coffee table book with X image

• 1 fine art exhibit

Using Peripheral campaign social media channels that include:

• An expanding volume of SeaLegacy social media posts

• An expanding volume of user-generated content (i.e., The Tide Members) and social media posts

Using Partner campaign media channels that include:

- 1 National Geographic 360º video

- 1 National Geographic in-print magazine feature

- 1 National Geographic online magazine feature

Using News publications that include:

- An expanding volume of online news articles

- An expanding volume of online news photo essays

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Section 4.2 - The Greatest Sanctuary: Degree of Narrativity

The presence or absence of a set of conditions was evaluated to describe the Degree of Narrativity in The Greatest Sanctuary, with Degree of Narrativity as a measure of a campaign to fulfill a set of narrative conditions within an individual storyline that is controlled and diversified in order to advance a central idea, or core narrative. I also examined the presence of individual diversified and controlled storylines that serve the dual purposes of advancing a core narrative and increasing the dimensionality of the Antarctica storyworld. An examination of any relevance of these strategies and tactics to climate change communications in particular is emphasized.

Furthermore, as I am interested in the conception of a novel transmedia storytelling model, I have also made notes on the applicability of Jenkins's previously examined principles, if and when this is appropriate. This exercise aims to assess how Jenkins's principles might be repurposed and included in my new model to be discussed in Chapter 5.

I posed this research question:

RQ1a: What is the Degree of Narrativity across The Greatest Sanctuary campaign?

4.2.1 - The Greatest Sanctuary: Core Narrative

French philosopher Bruno Latour predicts that climate change action will require "the complete transformation of all the details of existence of seven billion people" (as cited in Hoggan, 2016, p. 57). Core narratives about climate change exist to provide the road map to make such a feat possible. In fact, Barthes suggested this very notion when he alluded to the need to understand narrative beyond the unfolding of a single story, and instead, "Recognize its construction in 'stories,' to project the horizontal concatenations of the narrative 'thread' onto an implicitly vertical axis," which can enable audiences to move from "one level to the next" (Barthes, 1982, p. 259). This "next level" implies the engagement required of audiences to enact an adequate response to the distant and misunderstood issue that is climate change.

All of us navigate our worlds using stories that act as roadmaps in our heads. That is, to relate to climate change is to have an affective experience with the stories that make sense of it and to make sense of

climate change is to experience this topic in its storyworld form, which can be derived from the processes of transmedia storytelling.

SeaLegacy, an environmental organization founded in 2014 by National Geographic photographers Cristina Mittermeier and Paul Nicklen, has reported success with this endeavour using its "unique formula for impact" that focuses "on feedback loops" driven by human-centric visual storytelling" (SeaLegacy, 2017, p. 4); that is, telling human stories, using the core tenets of narrative building and transmedia storytelling best practices, has become central to their climate change worldbuilding communications. For Mittermeier and Nicklen, telling powerful "visual stories that move people from apathy to action "is the essence of their work (SeaLegacy, 2017, p. 28). The organization's story-based campaigns engage the public, motivating them to participate in SeaLegacy's mission as members of 'The Tide,' an online social community of empowered people who secure membership and then digital access to critical expeditions, so that they too can witness climate change (SeaLegacy, 2017). Mittermeier states, "We utilize the power of visual storytelling to engage millions of people every day in a dialogue" about "the solutions" to protect "our planet's largest ecosystem" (Mittermeier, 2019). Nicklen adds, "If we're ever going to change people's behaviours, if we're ever going to be able to change people's perceptions, it's only going to start with an emotional connection, and that's going to happen with photography" (Collins, 2015, para. 4), a medium in which Nicklen is among the world's best storytellers.

At the heart of Mittermeier and Nicklen's environmental sensibility are transmedia stories of "first-hand experiences and observations from the frontlines" (SeaLegacy, 2017). Yet, Mittermeier points out, "We have the terrible habit of using" the "us-against-them type of narrative. So when we started SeaLegacy, I said let's find the narrative that's so hopeful and so positive that people can't help but support it" (C. Mittermeier, personal communication, 2020).

Core narratives (Jenkins's continuity) are central to the worldbuilding process of transmedia storytelling—leading to the production of a storyworld—because core narratives provide an overarching view, especially vital in the case of an abstract issue such as climate change.

SeaLegacy introduces a core narrative throughout their ocean advocacy campaigns.

On page three of SeaLegacy's 2020–2050 organizational impact report, *Our Future Story*, Mittermeier and her team pronounce that, "Restoring ocean health is the most powerful way to save the planet and ourselves," and that this ambitious mandate can be achieved in "one generation" (SeaLegacy, 2020a, p. 2); on page four of the report (see Figure 1), the following prose exists:

Our ocean is in trouble. This is the biggest crisis of our lifetime. Our personal well-being

depends on a healthy ocean; it's the lifeblood of the planet. It makes the oxygen we breathe,

the food we eat, the water we drink. Our ocean fuels our economies, cultures, and souls. We

can't survive without it. But for most of humanity, living in landlocked homes, the ocean

is out of sight and out of mind. Instead of treasuring it, we neglect and abuse it. Wipe out

its species. Trash its habitats. Pollute its waters. And ignore all attempts to save it. Apathy,

ignorance, and greed have poisoned our future. They have left billions of ocean people

feeling powerless, angry, and afraid of what's to come. (SeaLegacy, 2020a, p. 5)

Words such as "ourselves" and sentences that include "personal well-being" and "lifeblood of

the planet" echo SeaLegacy's mission "to create healthy and abundant oceans, for us and for the planet"

(SeaLegacy, 2020a, p. 5), and simultaneously draw our attention to the organization's focus on conducting

work that will impact individuals and global communities at large, since we are all "living in balance with our

ocean and each other" (SeaLegacy, 2020a, p. 8). If narrative is a particular "mode of thinking," as suggested

by Bruner, then SeaLegacy is urging an audience to recognize more broadly how all of us are connected to

and affected by the tragic story of ocean health; this consistent core messaging speaks to Jenkins's idea of

continuity. The concept of core narrative has been central to the organization's communication strategy and

tactics from its inception in 2014, as Mittermeier explains:

We have just made it part of the fabric of the entire ethos of the organization. There's

a narrative in the environmental movement that's best exemplified by organizations like

Greenpeace: The whole angry mob out there fighting for climate change is very us versus

them. That's a warfare type of narrative. I find it's a lot easier to move people to action and

agreement when you use a "let's-be-together-for-something-positive" narrative. Instead of

us versus them, it's all of us together for something. That's the ethos of the organization,

and we try to find that in everything we do. (C. Mittermeier, personal communication,

2020)

Narrative is in everything that they do, according to the report, because SeaLegacy—as an

amplification storytelling organization (Jenkins's spreadability)—believe that, "Stories shape our world," so

Figure 1:

An example of core narrative messaging in SeaLegacy's 2020–2050 organizational impact report.

Our ocean is in trouble.

This is the biggest crisis of our lifetime.

Our personal well-being depends on a healthy ocean; it's the lifeblood of the planet. It makes the oxygen we breathe, the food we eat, the water we drink. Our ocean fuels our economies, cultures, and souls. We can't survive without it.

But for most of humanity, living in landlocked homes, the ocean is out of sight and out of mind. Instead of treasuring it, we neglect and abuse it. Wipe out its species. Trash its habitats. Pollute its waters. And ignore all attempts to save it.

Apathy, ignorance, and greed have poisoned our future. They have left billions of ocean people feeling powerless, angry, and afraid of what's to come.

"by tapping into their power" (SeaLegacy, 2020a, p. 8), they can address two of the main challenges facing environmental communications:

- Systemic and chronic underfunding; and
- An audience that is not large enough. (SeaLegacy, 2020a, p. 13)

Other SeaLegacy team members support the use of core narrative with this goal. Organization co-founder Shawn Heinrichs, an artist and Emmy-award winning cinematographer, photographer, and marine conservationist, knows the need for a core narrative that guides people beyond what individual stories can do:

If you're trying to protect a tiger, you usually talk about some place, something that's happening to someone, that's caused some issue, that's not going to be rectified unless you do something. That's a story. What we're doing, is we're putting a visual story into a more powerful journey that includes experiences so that people intellectually understand it and feel it. (S. Heinrichs, personal communication, 2020)

Heinrichs extends his thinking on the role of core narratives and storytelling to provide affective experiences. He relates:

How does the community come together around their traditions? It's the history of the story. We've been doing this since the beginning of time. This is storytelling in a world population of 8 billion, but we're just as connected if not more. And we have an obligation to bring vulnerable places to them so they can feel what we feel and they can be inspired to act in defence of places and species. (S. Heinrichs, personal communication, 2020)

SeaLegacy colleague John Weller echoed similar thoughts about the human condition advanced by core narrative:

Environmental stories are not about the environment. They can't be. If they're going to be effective. They're about humans. These are human stories. And if you're not connecting

people to the outcome of these environmental issues, then you most definitely have not

done your job ... let's get people to feel this as a personal issue and take personal stake in

it, personal stock in it. And, for the vast majority of people, that means it must be a human

story. It must have a human consequence. (J. Weller, personal communication, 2021)

Relatedly, as the human side of the story is concerned, Mittermeier poses the question, "Can images change how the story ends?" In the Impact Report, she concludes:

They absolutely can, if the narrative begins with the dreams and ideas we want to articulate

for our future. Instead of focusing on the devastation we have inflicted on nature, let's

imagine a world—achievable in our generation—in which our lives are lit by solar energy

and our cities have vibrant green and blue economies. Let's imagine a future that's closer

than we think. A future in which we have stopped the flow of plastics into the ocean,

in which we have harnessed the power of technology to reframe how we are protecting

wildlife, and in which the ocean is very much a part of the solution to climate change.

(SeaLegacy, 2020a, p. 11)

Mittermeier and SeaLegacy team members might not be alone in thinking more about the promise of a core narrative to abate climate change as Kaitlin Yarnall, Chief Storytelling Officer at the National Geographic Society, can attest:

The ability to relate stories is part of what makes us human, it's how we record our history.

Narrative becomes important when we think about how we string our stories together and

what's the larger uber story we're trying to tell. Narrative to me is that through line, the

uber messaging, the conversation with those that are listening over time. Whether people

are conscious of it or not, we're all creating narratives. The power comes in when you're

conscious of how you string micro stories together into a narrative. That's when you can be

effective and persuasive. (K. Yarnall, personal communication, 2020).

Importantly, the deliberate use of core narrative to direct a following was introduced in early phases of The

Greatest Sanctuary campaign. Not only does this central narrative provide a road map for the SeaLegacy organization that reimagines ocean conservation into "transformative, epic journeys" (Jenkins's seriality), but "anyone, anywhere can embark on" these "place-based storytelling" encounters (Jenkins's subjectivity), to revitalize and protect ocean health through their interaction (Jenkins's immersion, extractability, and performance principles are at play here as well) with a digital platform newly built by Only One, a global action collective founded by SeaLegacy, alongside Lonely Whale and Blue Sphere Foundation.

On The Greatest Sanctuary campaign website, a subdomain of https://only.one, viewers happen upon SeaLegacy's core narrative in plain language: "What happens on this remote continent will impact communities around the world. Three new marine protected areas would offer much-needed resilience to climate change. Can we rally to protect Antarctica in 2021?" (SeaLegacy/Only One, 2021b). Mittermeier addresses the necessity of The Greatest Sanctuary overarching core narrative: "The only way we can achieve the future we want is if we're able to imagine it and articulate it. It's a vision. MLK didn't say I have a nightmare" (C. Mittermeier, personal communication, 2020).

While SeaLegacy's strategic communication thinking rests on time-tested narrative structures (see Section 2.2.2.2), they advance on novel narrative building tactics mostly centred around their world class subject matter expertise and visual storytelling, undoubtedly unparalleled in its quality and form—a combination of human skill and access to remote and very special places not too many others get to see (i.e. Jenkins's immersion).

How many people need to engage with core narrative for it to be effective? Weller has investigated this question and reports his understanding of the role of core narrative to engage people in ocean conservation:

> We're working from some theoretical foundations of 3.5% of a population being a tipping point … 3.5% being actively engaged in a specific activity being a tipping point … This [isn't] people who are aware of an issue but people who are actively engaged. So working from that theoretical nugget, the goal is to create a global audience of 300 million people who are actively engaged in the conservation of the ocean. That's the top level goal, and if we could assemble that number of people, then we would have the possibility to truly affect global issues. (J. Weller, personal communication, 2020)

The SeaLegacy organization may only be in its infancy, in comparison to other long-established environmental

nonprofits, having existed for just over 7 years, but Mittermeier has been a leading environmental storyteller for some time now and has the track record to suggest SeaLegacy's efforts are not in vain. In particular, Mittermeier created the International League of Conservation Photographers (iLCP) in 2005, an emergent organization born out of the office of Conservation International, where Mittermeier first held a volunteer position as a photographer and then acted as Senior VP of Visual Communications. In this role, Mittermeier says, "I began exploring the power of imagery and … first realized that our failure to protect the environment stems from a failure to communicate at scale" (Mittermeier, 2019). Early adoption of visual communication and storytelling tactics permitted Mittermeier to realize and spread the strength of SeaLegacy's core narratives:

> We create narrative briefs. Lots of phone calls with the partners on the ground. [Who] are the characters? What are the lines of the story? Is this something that should be photographed or tackled in a different way? … So we're looking at a series of ingredients for what a campaign is going to be like … This is one place where intuition is not enough, you need to run through a strategic framework. (C. Mittermeier, personal communication, 2020)

For Mittermeier, a strategic framework built around a core narrative is a "grand anthem" (C. Mittermeier, personal communication, 2020).

Core narrative building moves beyond theory into the realm of praxis for the SeaLegacy organization, which knows all too well that we "cannot measure success on a story by story basis," and instead we should be building our campaigns into extensive journeys (C. Mittermeier, personal communication, 2020). Mittermeier concludes, "You have to take people through the whole narrative and that's why you build it that way" (C. Mittermeier, personal communication, 2020). Scholars like Bushell, Colley, and Workman (2015) concur that use of a core narrative is "the most effective mechanism to motivate action" (p. 971); and this is particularly true in climate change communications.

4.2.1.1 - The Greatest Sanctuary: Interactive Word Tree

The presence of a core narrative in The Greatest Sanctuary campaign was analyzed using an Interactive Word Tree query performed in MAXQDA. To conduct this analysis I searched for the keywords such as 'health' and 'protect' across transcripts derived from campaign media texts and examined the sentences that both preceded and followed this term in each occurrence (i.e. branch of the interactive tree). Evidence of consistent organizational core narrative messaging—again, Jenkins's continuity—was revealed in sample sentences found across multiple media channels. Key core narrative messaging is noted below with individual ID codes to designate the source of the content:

• The Antarctic is quite closely linked to everything else in the planet with regards to climate (SL-MC2);

• Three new marine protected areas would offer much-needed resilience to climate change (SL-MC9)

• As we enter this new decade, ocean health continues to decline precipitously all over the world. Together, we need to take a stand (SL-MC12);

• We need to open the door to a new age of enlightened ocean conservation—one that is inclusive, global, visionary. And Antarctica holds the key (SL-MC12);

• Today, Antarctica is facing existential threats that will affect both the health of the global ocean and the stability of our climate, and therefore, all of us (SL-MC13);

• The health of innumerable tiny organisms hidden beneath the ice has a direct impact on our existence (SL-MC13); and

• Like the Amazon forest is considered the lungs of our beautiful planet, Antarctica can be considered her heart—a heart by which we are all connected through the ocean and the seas (SL-MC17)

Interestingly, elements of the core narrative appear in external media. Online news articles by Forbes and Virgin respectively entitled *Antarctic commission pursues largest conservation action ever taken* and the largest ocean protection act in history included core narrative language that presumably reached even broader audiences:

• There are places on our planet that, although rich in resources, should be off-limits just because they are so critically important for maintaining planetary balance and ecosystem health (SL-MC22);

• While the world grapples with the undeniable reality of accelerating climate change and declining ocean health, figuring out how each of us can immediately contribute to solutions remains challenging (SL-MC25).

4.2.2 - The Greatest Sanctuary: Narrative Conditions

The transportive nature of narrative is indeed realized through Jenkins's principle of worldbuilding, as processes of transmedia storytelling lead to the creation of the Antarctica storyworld in SeaLegacy's The Greatest Sanctuary campaign.

To create the Antarctica storyworld, SeaLegacy and its collaborators incorporate a full suite of narrative conditions—and transmedia principles to be examined more thoroughly in Section 4.4.2—that can be thought of as the ingredients of worldbuilding; that is, to implement narrative conditions is to effectively build a storyworld and to evaluate engagement with this storyworld is to think more specifically about Jenkins's framework.

I examine samples of narrative conditions employed across The Greatest Sanctuary campaign next. To carry out this exercise I select specific focal media channels identified by their ID code to provide examples of this narrativity prowess, or Degree of Narrativity. These examples are not exhaustive but they have been chosen for their exemplary state and content characteristics. While the narrative conditions provide a framework for my analysis, I also comment sparingly on aspects of transmediality and engagement throughout as a step leading us towards the presentation of a novel conceptual model. Special note is also made when the application of a narrative condition is conducive to climate change communication.

4.2.2.1 - The Greatest Sanctuary: Condition #1 / Individual Characters

A narrative must be about a storyworld populated by individuated existents

Characters have played an integral role in storytelling since the beginning. However, it could be argued that much of existing climate change communications has failed to fully comprehend the invaluable nature of the human presence, or human condition. Instead, we are mostly inundated with Sontag's spectacle, as wide-spread disasters burn our forests and flood our cities, while the sufferers remain faceless, often lost in the crowd. Therefore, while Ryan's (2007) "individuated existents" are concerned with both animate and inanimate objects in a given storyworld, it is people that make the story so this topic will be my focus here.

When Propp (1895–1970) addressed his spheres of actions, the general roles to be played by specific characters, he not only revealed the thirty-one basic structural elements of successful Russian folk tales, but also seven abstract character functions. Similarly, Greimas (1917–1992) identified six actants or particularized narrative actors that guide present day storytellers still. Campbell (1904–1987) also extended the role of a main character when he identified the stages of the hero's journey, as previously discussed.

Throughout their storytelling in The Greatest Sanctuary campaign, SeaLegacy variously employ Propp, Greimas, and Campbell's character roles and this explicit use of traditional character roles can in many ways be seen as a novel play in climate change storytelling since the human condition is often portrayed as only the large-scale impacts that affect places, not specific individuals.

Most notably, Mittermeier and Nicklen each take on the role of the trusted hero (Jenkins's performance). In this vein described previously by Sontag (2003), Mittermeier and Nicklen become expert witnesses in The Greatest Sanctuary campaign as their from-the-front-lines visual storytelling takes centre stage while their descriptive personal experiences are observed across many of the media channels in ever expanding ways (Jenkins's subjectivity)—using the synergy of media forms including still and motion images and oral and written language—these primary characters bear witness to the elements of a warming world and gain our trust through their accurate depiction of scenes and events caught on camera.

In fact, the omnipresent representation of Mittermeier and Nicklen throughout The Greatest Sanctuary campaign—in the trailer, in the video series, and book, among other media texts—might suggest what Barthes and Chatman have alluded to before: Mittermeier and Nicklen are core elements3 of the story-content so they serve as nuclei, or kernels, of the narrative and Antarctica storyworld and their presence in the campaign might very well be necessary for its full effect to be realized. Put more simply, and to address

Herman's perspective on this point, to remove a key aspect of the story is to drastically change the story. To question what The Greatest Sanctuary campaign would be without Mittermeier and Nicklen might be to question the inherent architecture of the campaign as it is through each photographer's creative point of view—the focalization and subjectivity derived from their central storylines—Mittermeier and Nicklen's images tell us what to look at—that entry points into the visceral storyworld are created.

In this case, the promise of the campaign might rest on the shoulders of these heroes: Mittermeier and Nicklen are integral, and successful at transporting people into their expert witness journey as we get more and more involved with these protagonists, yet such a concentrated dependence on these two characters might be an obvious weakness to the campaign should either of them be removed; see Section 4.6.2.1 for an alternative approach to using a focal character. The former intrinsic value of Mittermeier and Nicklen is noted by Emy Kane, a former Director of Digital Strategy for SeaLegacy who states:

> Both Paul and Cristina put a face to the issue. People follow people. Paul and Cristina …
> sharing their lives with so many is such a critical way to bring people in … so they can help
> break down the hard science which for so many people can be a complete road block. (E.
> Kane, personal communication, 2020)

Mittermeier and Nicklen's communication of their personal journeys unfolds during intimate scenes on screen and in excerpts from media channel transcripts in the following examples.

In *Changing Continent* (SeaLegacy/Only One, 2020e), a video found on The Greatest Sanctuary campaign website that details the "devastating impact of warmer weather and melting ice," viewers are introduced to Mittermeier while she makes landfall in Antarctica amongst of colony of stressed penguins. Watching the scene unfold one can easily develop an affinity for Mittermeier as her soft accented voice describes her surroundings:

> It's been heavy downpours the last couple of days. And what happens when it rains heavily
> like this is the chicks get really wet. Their feathers and their little down gets all muddy and
> it just gets heavy and cold. A lot of the chicks die. So we're here this morning to just kind
> of check out and see how they're doing. So hopefully they're okay. (SeaLegacy/Only One,
> 2020e)

On camera Mittermeier is noticeably contemplative, even worried, as her manner and facial expressions suggest (see Figure 2). These character qualities promote empathy and connection with audiences; emotional engagement triggered by the senses permit us to perceive harm and therefore we enter into the storyworld alongside Mittermeier. On screen, Mittermeier's presence qualifies her as a critical observer, a role she will play throughout the campaign.

Similarly, audiences locate likeable traits, even leadership attributes in Nicklen, whose bravery is prevalent across campaign media, and particularly noticeable during an ominous encounter with a leopard seal, depicted in the video *Leopard Seals* (SeaLegacy/Only One, 2020f). Nicklen's character demonstrates expertise and confidence while on assignment in Antarctica:

> And what they're going to do, a leopard seal is going to come up to you. It's going to swim back and forth like this like they do. Back and forth, back and forth, and he's going to come up to your dome and he's going to do this with his mouth wide open. It's intimidating. Like that. He's going to lunge at you a few times. Be super calm, stay very relaxed. Don't get nervous. Don't act scared. But at that point, it's good. She's established her dominance and then you can go to work. And then she's going to probably want to hang out with you. (SeaLegacy/Only One, 2020f)

On multiple occasions in the 6-part video series, and throughout the campaign, Mittermeier and Nicklen reveal unique and complementary sides of their respective personalities and moods. As a trained marine biologist Mittermeier is knowledgeable; as a seasoned journalist having spent considerable time working with Indigenous peoples around the world she is patient and unassuming. In a similar way, Nicklen is just as versed in the polar marine realm, perhaps even more so since he's been diving there for so long, though on film he seems less calculated, so his character is easily excitable, yet temperamental.

In some tender moments in The Greatest Sanctuary campaign onlookers become more acquainted with Mittermeier and Nicklen (Jenkins's drillability), who as professional and life partners, exhibit alluring emotion live on camera. Mittermeier suggests, "I was scared to get in the water with a leopard seal … there's a lot of teeth in that mouth … but like I've done before, if Paul Nicklen gets in the water, I get in right behind him" (SeaLegacy/Only One, 2020f). The impromptu dialogue captured in-the-field permits viewers to put trust in Nicklen, and concurrently the scene reinforces Mittermeier's courage, attributes that make both these

characters so charismatic (see Figure 3).

The Greatest Sanctuary campaign also uses secondary and non-human characters effectively (Jenkins's subjectivity). In the earlier stages the campaign rests on the lesser known character of Weller, since he was the photographer responsible for the bulk of the visual assets that played such a significant role in marketing the success of a previous campaign in the Ross Sea. Weller's visual storytelling strategic thinking has been used in The Greatest Sanctuary campaign as suggested by Mittermeier (C. Mittermeier, personal communication, 2020); he also authored a lengthy article on the campaign website (Weller, 2020) and spearheaded the production of a fine art book to be used as a strategic gift in subsequent campaign efforts to protect Antarctica.

In The Greatest Sanctuary video series we are also introduced to Dion Poncet, the Captain of the Hans Hansson, a renowned rough sea-bearing vessel, as he crosses the Drake Passage and assists SeaLegacy team members on expedition. Audiences first sympathize with Captain Poncet as he laments, "50 knot winds blowing in the opposite direction. The next 24 hours are bad. Really bad" (SeaLegacy/Only One, 2020c). Nicklen places this character in context so he is immediately likeable; Poncet acts out the role of the helper as Nicklen notes, "Dion's not only the perfect captain … he's calm and capable, but he has beared witness to change that has taken place in Antarctica over the last 37 years, from the time he was born" (SeaLegacy/ Only One, 2020c). Poncet's character development is indeed most evident in the campaign video, Antarctic Lifetime, as audiences become even more familiar with his family upbringing. Poncet notes, "All my life I've been coming down here as a child, on a sailboat with my parents (see Figure 4). We were the only boat at the time that was literally going everywhere up and down the peninsula. My mother had a background in biology. She made a lot of the first records of bird colonies in all of these areas" (SeaLegacy/Only One, 2020c). Poncet might serve as another access point to the Antarctica storyworld as audiences learn more about this character's particularly unique and deep knowledge of this faraway place.

Beyond the development of intrepid human characters, additional storylines in The Greatest Sanctuary campaign introduce audiences to an array of charismatic wildlife in often never-before-seen visual footage that realizes new attributes for animal species that make Antarctica home. Perhaps the most salient example of this successful non-human character development is on display in the previously mentioned video *Leopard Seals*, where a seminal and cinematic series of up-close moments with an "efficient, powerful killing machine" is recorded (SeaLegacy/Only One, 2020f). Nicklen's now viral footage, famous around the world thanks in part to a Ted Talk and additional coverage by National Geographic Magazine, would end up
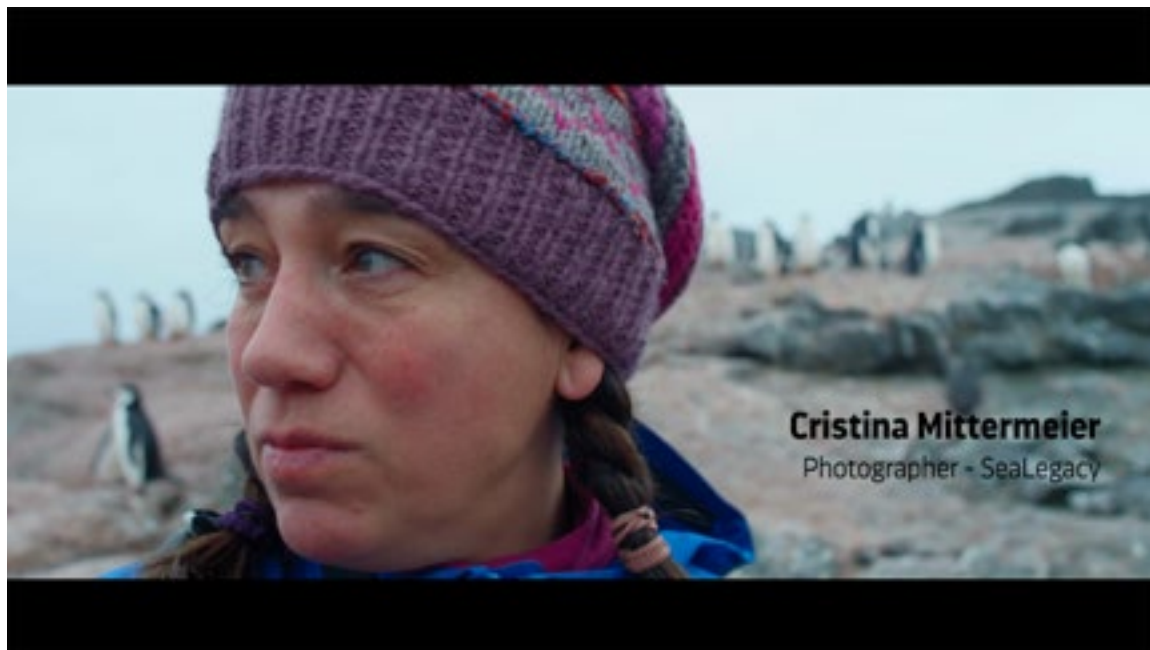
Figure 2:

A contemplative, even worried, Mittermeier is seen in the field in Antarctica in *Changing Continent* (SL-MC3) amongst a seemingly stressed population of penguins.

Figure 3:

In an opening sequence in *Leopard Seals* (SL-MC5), Mittermeier (at right) reflects on working with Nicklen (at left) in the field.

painting this fierce Antarctic predator in new light as a quote from Nicklen in the video can attest: "I got in the water with 30 other *leopard seals* and I never once had a scary encounter. They're the most remarkable animals I've ever worked with" (SeaLegacy/Only One, 2020f).

Nicklen addresses the significant role of the leopard seal, as a non-human character, in this context in an online campaign article entitled Honouring Life in the Ice:

> To protect our planet, we must value each and every species. Take the leopard seal. A significant part of my life's work is dedicated to dispelling the myths about one of Antarctica's most powerful hunters, and about all predators, in an effort to encourage compassion and better understanding. (Nicklen, 2020)

> Feeding on penguins, *leopard seals* are too often seen as villains among a watery cast of characters, and if truth be told, these seals are frightening at first, particularly when you get into the water with them.

> For anyone, including me, plunging into the world of ocean predators is a leap into the unknown. But each time I put my fears aside, the reward is priceless.

> If an image I make moves people to act, changes perceptions of these animals, and helps to preserve their habitats, then the risk is entirely worth it. Predator or prey, we must respect the inextricable connections between species and their environment. We must understand how human activities affect them, and how in turn, they affect us. (Nicklen, 2020)

SeaLegacy has highlighted Nicklen's successful leopard seal encounter throughout their varying campaigns that advocate for ocean health and protection because of the potency of that anthropomorphic storyline, yet lesser known wildlife become characters in the organization's attempt to expand the dimension of the Antarctica storyworld. This is evident in the video *Antarctic Krill* (SeaLegacy/Only One, 2020b). Rodolfo Werner, an expert marine biologist and expedition team member, places the particularly important role of krill in this context: "Krill is a small crustacean. It looks like a little shrimp, and there's a huge biomass of krill in this area. So you need the krill because it's the glue that binds everything together here" (SeaLegacy/Only One, 2020b).

SeaLegacy first aim to emphasize the significant role of the krill by showing moving imagery of these tiny crustaceans swarming en masse (see Figure 5), a sight that depicts the abundance and sheer volume of these creatures in this habitat; but while the visuals are spectacular, particularly if you are seeing the

Figure 4:

A historical photo of the Poncet family in Antarctica is used in Antarctic Lifetime (SL-MC2).

Figure 5:

Krill swarming en masse in *Antarctic Krill* (SL-MC4).
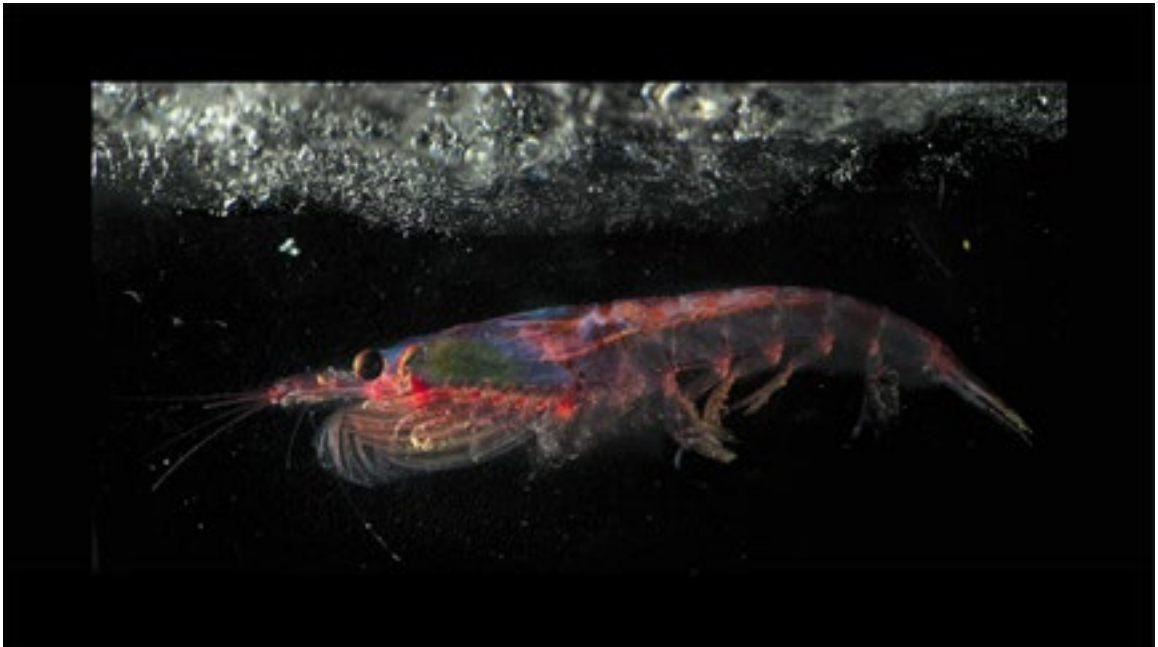
Figure 6:

Close-up portrait of a krill in *Antarctic Krill* (SL-MC4).

underwater scene for the first time, they are not enough to fully introduce this character. Nicklen begins a sequence:

> We've been diving, we've been looking, and the krill are quite deep, and we're just not able to get to the krill, so we're bringing the krill to us … it would just be nice to be able to set them up and have a really intimate macro look at these krill, which are, obviously, the foundation of all of Antarctica for food. So, let's have a close look at these guys. (SeaLegacy/Only One, 2020b)

To personify the krill, high-resolution photographic images were made after the SeaLegacy team setup an impromptu aquarium onboard ship and used a sophisticated lighting set-up to capture the exquisite detail of these foreign arthropods, while placing the subject on a black background (see Figure 6). They also use specialized macro lenses to achieve the effect. By investing the time and logistics to make a character portrait Nicklen and team elevate the status of an otherwise forgotten character. We have seen this conceptual approach to dignify subjects before with the American photographer Richard Avedon.

From Mittermeier and Nicklen, to a suite of secondary characters that play roles as experts while assisting the SeaLegacy team on faraway voyages, to megafauna such as *leopard seals* and humpback whales, to the microscopic krill, The Greatest Sanctuary campaign successfully introduces multiple characters allowing audiences to form relationships with a cast of heroes and lesser known beasts they likely have never encountered. This strategic emphasizing approach to storytelling results from this personalization and personification, a key cog in motivating audiences to respond to and engage with climate change.

4.2.2.2 - The Greatest Sanctuary: Condition #2 / Significant Transformations

The storyworld must be situated in time and undergo significant transformations; that is, the audience needs to experience some form of change

It has become common practice for news organizations around the world to highlight the impacts of climate change with the foreboding articulation of the demise to come, as the introductory lines of SeaLegacy's campaign video, *Changing Continent* (SeaLegacy/Only One, 2020e), can verify. The voiceovers from various news personalities in the video report:

Antarctica has just had its hottest day ever recorded. Scientists at the World Meteorological Organization described the new record as incredible and abnormal. The Antarctic peninsula, where the record temperature was recorded, is one of the fastest warming parts of the planet. The four warmest January's have all occurred since 2016. (SeaLegacy/Only One, 2020e)

In The Greatest Sanctuary campaign, SeaLegacy make a case that ocean health and the persistence of humanity are intimately tied to the fate of Antarctica and the Southern Ocean, where global warming caused by anthropogenic processes is adversely transforming the climate. On this matter of a changing climate Nicklen notes: "When climate change starts to factor in, things become incredibly unstable and things become out of balance very easy" (SeaLegacy/Only One, 2020e).

Yet, many of us have not experienced this transformation, so Mittermeier first recognizes the invisibility of the climate change issue—due to the spatial, temporal, and social distance of the phenomenon—and then understands overcoming this invisibility is best realized through SeaLegacy's heightened commitment to behind-the-scenes immersive visual storytelling that transports people into the climate change story; that is, in The Greatest Sanctuary campaign videos, audiences can see falling ice and listen along to the cracking, as one scene in *Changing Continent* demonstrates:

Did you hear that iceberg break?

No.

You guys didn't hear it up there?

No. I heard a crash. But was it big?

Oh, it sounded like the 4th of July for 10 minutes.

Like a cannon went off. (SeaLegacy/Only One, 2020e)

What SeaLegacy sets out to do is permit audiences to sense these ominous transformations before they might happen: A massive ice shelf crumbles for us all to see in *Changing Continent* (SeaLegacy/Only One, 2020h; see Figure 7 and Figure 8); in other words, a "static" storyworld would not suffice.

Additional lines in the *Changing Continent* transcript reveal how SeaLegacy address the narrative

Figure 7:

An in-tact ice shelf in Antarctica is depicted in *Changing Continent* (SL-MC3), moments before it collapses.
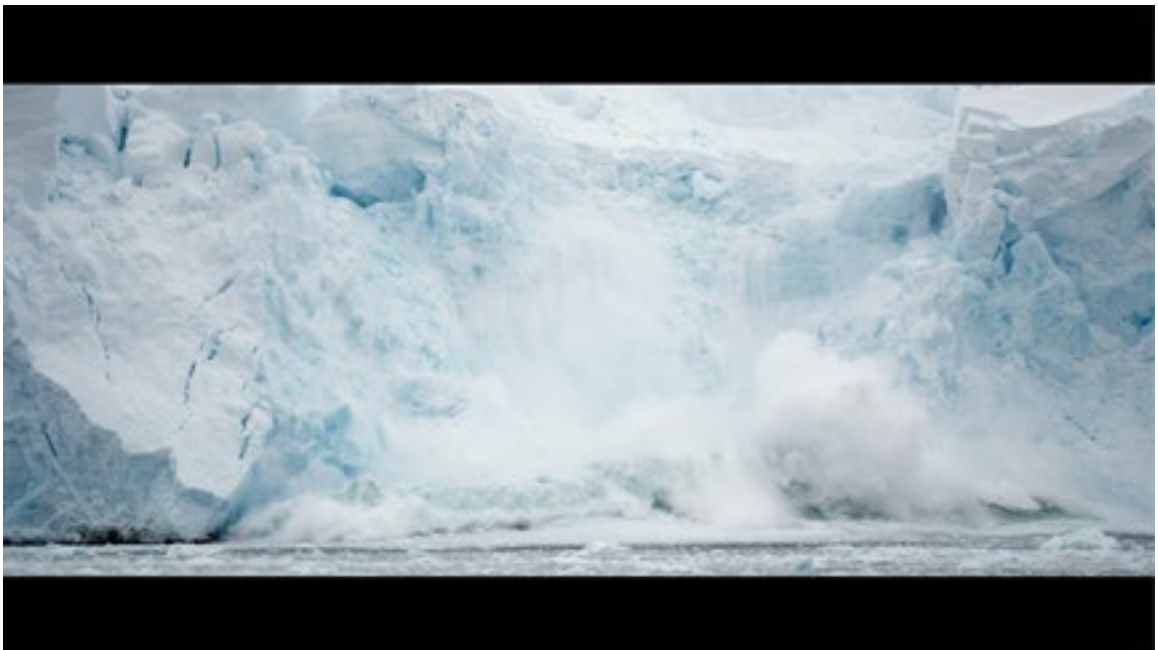
Figure 8:

An ice shelf collapses in a sequence in *Changing Continent* (SL-MC3).

condition that concerns transformation in the Antarctica storyworld they explore. Captain Poncet comments on the world he's known since being a kid sailing the Southern Ocean:

> Unfortunately, lately, in the last five, six years, or so, seems to be like you get more and more precipitation, cloudy weather, and even rain. We're starting to see a lot of rain. That's something very different from 20, 30 years ago. (SeaLegacy/Only One, 2020e)

While it remains difficult to document other aspects of the transformative nature of climate change—ocean acidification is one such topic, glacial retreat is another—SeaLegacy have had varying success addressing the loss of sea ice and in one inconspicuous storyline found deep in the campaign website this is realized. Embedded within an online article, entitled *Putting Colour to the Climate Crisis*, Zaria Forman's exquisite drawings realize "a particular point in time" that she believes illustrates the "urgency of climate change" (Forman, 2020). The Greatest Sanctuary campaign website says about Forman:

> Most of Zaria's drawings are an exact representation of the scene she witnessed; she makes only small modifications to the water, sky, or shape of the ice. In her artworks, Zaria has documented both the unfolding story of ice melt in the polar regions and the resultant rising seas near the equator. (Forman, 2020)

Remarking on her own work, Forman states:

> My drawings explore moments of transition, turbulence, and tranquility in the landscape, allowing viewers to connect emotionally with places they may never have the chance to visit. I choose to convey the beauty of these vulnerable regions, as opposed to their devastation, with the hope of inspiring viewers to help preserve them. (Forman, 2020)

SeaLegacy sought Forman out to open additional entry points into the climate change conversation about protecting Antarctica, as their missions and beliefs align. Forman laments, "These drawings are a portrait of accelerated loss—and a clarion call for faster action against that loss" (Forman, 2020).

Interestingly, SeaLegacy feature the documentation of Forman's drawing process in a time lapse (see

Figure 9). Here, an exemplar of transmedia storytelling is on display as novel characters advance parallel, yet distinct and storylines that speak to the changing climate.

SeaLegacy simply acknowledges that some stories just might take more time than others. Nicklen alludes to SeaLegacy's current challenge: "It took 14 years to create a marine protected area in the Ross Sea. We don't have that much time on the Antarctic peninsula. It is already under intense pressure" (SeaLegacy/ Only One, 2020e).

Mittermeier speaks to the transformation ahead as well:

> It doesn't matter where you live on this planet. What happens in Antarctica is going to have a huge effect on our lives. If we lose the polar regions, the planet's going to be a very different and difficult place to live in. Sea levels will rise. Currents will shift. Coastal populations will be displaced. It's hard for anyone to imagine how different the world would be if this environment fell apart. (SeaLegacy/Only One, 2020e)

So, it is with consideration for the most profound transformation of "The greatest act of conservation in the history of humanity" that SeaLegacy adhere to their overarching core narrative and draw attention to a new fate for Antarctica, one full of hope and optimism, and more specifically three newly designated marine protected areas. The possible future of Antarctica is articulated by Weller, the silent-protagonist noted earlier as the brains behind the origin of the campaign, who describes transformation in the Antarctica book (Weller et al., 2020) in the following way; the passage should really be read in its entirety to do justice to Weller's multi-decade campaigning efforts to protect Antarctica and the surrounding sea. This is just an excerpt:

> The ancient Greeks were strangely correct; the Southern Ocean regulates our climate, recycles sunken nutrients from the deep oceans, and supports one of the most productive ecosystems on Earth. For now. The loss of these functions would indeed be like the Earth toppling over. Our terrifying current events are begging us to learn that we are tightly tied to each other and to our environment. We must work together if we are to survive the coming pandemics of a changing climate and fast-disappearing resources. In the long run, the only way to protect Antarctica is to reduce emissions and keep it frozen. But we must also

Figure 9:

Zaria Forman documents climate change with pastel drawings. She travels to remote regions of the world to collect images and inspiration for her work, which is exhibited worldwide. Forman's drawings were used as media in The Greatest Sanctuary campaign (SL-MC10).

provide all the protections we can to help these ecosystems deal with the coming changes. While we squabble over a few thousand tons of toothfish and krill, the extraordinary creatures of the Southern Ocean are fighting for their very existence. The proposed network of MPAs would be a quarantine for some of the most vulnerable members of our planet. It would be a start in aligning our nations, our cultures, and our efforts for our common good. It would be a step forward to ensure a safe and abundant world for our children. It is a chance to accomplish one of the largest acts of conservation in the history of humanity. It is our global responsibility. (Weller et al., 2020)

Not unlike what fictional storytelling can do for the imagination, Weller's account widens our mental universe—along with Poncet, Forman, and Mittermeier's descriptive storylines—so SeaLegacy's future storyworld, an Antarctica transformed for the better, can be envisioned.

In doing so, SeaLegacy has effectively used narrative building techniques we have seen work before (see Section 2.2.2.2). For example, as team members emphasize the dramatic occurrence of melting of sea ice, they introduce the inciting incident that sets in motion a globally-charged campaign that holds intentions to transform its followers too.

4.2.2.3 - The Greatest Sanctuary: Condition #3 / Non-habitual Events & Conflict

Transformation in the storyworld must be caused by non-habitual physical events; that is, events need to be unpredictable and out of the ordinary to incite a conflict

Documentation of the transformation of Antarctica becoming a protected area is one prominent narrative condition that introduces a series of challenges for SeaLegacy. This journey sets up the organization to face the persistent conflict of climate change, and the harrowing events—flooding, droughts, and wildfires—that scientists have clearly defined will indeed occur more often in the future.

Other unpredictable occurrences are part of The Greatest Sanctuary campaign and verité proceedings make for elaborate storytelling, though these non-habitual events, as Ryan (2007) calls them, often place team members in real world danger. Nicklen's previously described episode on *Leopard Seals* (SeaLegacy/ Only One, 2020f) is the obvious example, but cast members also endure the Drake Passage while travelling to Antartica, one of the roughest and most vomit-inducing bodies of water in the world in *Antarctica Lifetime*

(SeaLegacy/Only One, 2020c); they fly helicopters in the rain above open water in *Changing Continent* (SeaLegacy/Only One, 2020e); and they scuba dive beneath the ice in sub-zero temperatures on several occasions. Gear and camera equipment also regularly breakdown. In short, conducting fieldwork in the polar regions is one of the hardest ways to work as a journalist. SeaLegacy make sure audiences are aware of this factor. An image of Nicklen in-the-field seen in his 2011 Ted Talk highlights this challenging work (see Figure 10). On stage, Nicklen laughs as he looks at himself:

> Here's me in my office. I hope you appreciate yours. This is after an hour under the ice. I can't feel my lips; my face is frozen; I can't feel my hands; I can't feel my feet. And I've come up, and all I wanted to do was get out of the water. After an hour in these conditions, it's so extreme that, when I go down, almost every dive I vomit into my regulator because my body can't deal with the stress of the cold on my head (Nicklen, 2011).

To introduce conflict SeaLegacy also access Propp's act of villainy, Greimas's opponent, and Campbell's enemy, since the peril of industry looms as part of storylines across several media channels. For example, in *Antarctic Krill* (SeaLegacy/Only One, 2020b), the aforementioned Werner, addresses this specific threat from krill fisheries and industrial practices that edge closer and closer to critical marine areas in Antarctica that harbour important wildlife. In this same video Nicklen attests to the sensitive nature of this impending threat: "Every species in Antarctica, ultimately, depend on krill. This is the species that makes this entire ecosystem run" (SeaLegacy/Only One, 2020b).

Suspenseful storytelling moments that realize this conflict in the *Antarctic Krill* campaign video begin at 1:35 as Mittermeier's voiceover—recorded during an interview on-location—sets up the unfolding scene: "Creating marine protected areas provides a certain resiliency to an ecosystem that's otherwise under a lot of other pressures. And fishing is one of those pressures" (SeaLegacy/Only One, 2020b). At 2:08, in situ dialogue interrupts Mittermeier's dictation as audiences hear Nicklen over a radio exchange communication with personnel from the krill fishing boat they wish to approach, and ultimately film. The ten seconds of visuals at 2:47 through 2:57 in the video—shot using a slow-motion frame rate to provide editing choices in post-production—depict a giant net full of krill being hauled onboard, and confirm to audiences that SeaLegacy was present to bear witness to the event. Meanwhile, Mittermeier's post-produced voiceover weaving in tandem with Nicklen's on camera discussion works well to stir the tension, while at the same

the time, advance the story arc in the short sequence. Mittermeier's concluding lines then stress the stakes in play: "It's almost impossible to predict the exact size of that biomass on any given year. There's no scientific consensus on the overall effect that any fishing has on the Antarctic ecosystem" so "there is a current narrative around fisheries and how important that is for certain countries that have economical interest here," while "there's another narrative that has to do with the science" (SeaLegacy/Only One, 2020b). Alternative narratives are usefully re-enforced and evaluated in *Krill Fishing Restrictions* (Kavanagh, 2020), an online campaign article that includes much more detail about this specific storyline including notes on how krill are affected by "the warming of the Southern Ocean and concentrated fishing in coastal areas throughout the peninsula" (Kavanagh, 2020). Similarly, a National Geographic writer extends the worry describing "the shrimplike krill upon which almost all animals here depend for food are being swept up by trawlers from distant nations" (Welch, 2018).

All good stories have unpredictable events that incite conflict and minimize repetitiveness, so despite the danger SeaLegacy team members voluntarily place themselves in, they are aware of the promise of narrative tension to draw viewers in (see Narrative Condition #6). In some ways facing ominous threats are part of the responsibility of these expert witnesses because characters in The Greatest Legacy campaign routinely find themselves overcoming confrontations just to deliver a new perspective of never-before-captured photographs, otherwise their subject matter might become mundane, and their curated portfolio could become "repetitive" (Ryan, 2007), or even worse, not published by key campaign partners—in Nicklen's Ted Talk he confesses that "because National Geographic is a magazine, they remind us all the time: They publish pictures, not excuses" (Nicklen, 2011).

To return to the tale of the leopard seal once again recalls the heightened degree of originality in SeaLegacy's visuals—and the potential for climate change storytelling to go viral as this story did in 2014 thanks in part to postings on Facebook and other outlets—while it further introduces additional unpredictable storytelling moments between predator and prey that serve to draw in audiences because of their raw ability to excite. As such, my words cannot do justice to the visual storytelling portrayal of events that document the lethal hunting strategy of Hydrurga leptonyx, the second largest seal in Antarctica, which targets helpless penguins, chases them down with the utmost of ease, then tears them apart, often playing with the dead or half-injured, for watching eyes to marvel. As the heartbreaking scenes unfold in SeaLegacy's campaign video *Leopard Seals* (SeaLegacy/Only One, 2020f), audiences certainly cannot help but feel sorry for the defenceless marine birds. In many ways SeaLegacy is eliciting a form of trans-species empathy, since human

Figure 10:

Paul Nicklen in the field (Nicklen, 2011).

spectators empathize with non-human animals and feel their pain. SeaLegacy photographer and filmmaker Andy Mann recounts his observations of the brutal conflict to put this point in context for the SeaLegacy team and viewers alike: "We're getting right in the action. It's absolutely amazing. Nature is just such a force to be reckoned with. I'm super glad I'm not a penguin" SeaLegacy/Only One, 2020f).

Yet, as the seminal encounter continues, and Nicklen keeps shooting the underwater conflict before him, even more unpredictably ensues, and the true potential of nonfiction storytelling emerges. Nicklen puts the transpiration of events with a 12 foot long, 1,320 pound animal in this context:

> If somebody had told me beforehand what was going to happen next, I would never have believed them … so she did this threat display for a few minutes, and then the most amazing thing happened. She totally relaxed. She went off, she got a penguin. She stopped about 10 feet away from me. And she sat there with this penguin. The penguin's flapping and she lets it go. The penguin swims towards me, takes off, she grabs another one. She does this over and over. And it dawned on me that she's trying to feed me a penguin. And then she realized I couldn't catch live ones so she brought me dead penguins. I swore that she looked at me like this useless predator's going to starve in my ocean. (Nicklen, 2011)

The earlier mentioned marine villain turned friend, surprises audiences like other atypical human and wildlife relationships have done in the past. And, while Nicklen's encounter with the leopard seal might also entertain, the sequence effectively delivers on a subtle note of the connection—between man and nature—and the need to protect all the living inhabitants of the Antarctica storyworld (see Figure 11).

As a final example, SeaLegacy distribute conflict over the temporal plane of the storyline that concerns whales, as demonstrated by Mittermeier's articulation in a Facebook post made on January 9, 2020, describing a scene with a dead humpback. Mittermeier struggles to identify the cause of death, but has suspicions at the same time:

> You are looking at the carcass of a dead humpback whale. I spent quite a bit of time swimming around its frozen body trying to understand why it died. There was a large laceration on its back, which leads me to believe it was struck by a ship. Humpback whales have made an almost miraculous recovery after we almost hunted them to extinction and

today they return in very large numbers to places like the Antarctic peninsula, where they feed on the rich krill stocks. During this past SeaLegacy and National Geographic expedition, we saw hundreds of feeding, sleeping, playing humpbacks. We also saw cruise ships that—probably in an attempt to keep strict schedules—were cruising at high speed in areas where whales were present. IAATO is the international body in charge of regulating this type of activity in Antarctica, and as tourism becomes more available and popular, they have their job cut out for them to ensure the safety of the wildlife that calls this remote place home. (Mittermeier, 2020)

For anyone who might care about animals the scene is likely upsetting, maybe even disturbing. For anyone who might care about whales in particular, Mittermeier's prose functions to first pulls at heart strings—trans-species empathy again—then her words elicit some sense of greater loss still to come. Moreover, while conflict might be central to this post, the passage also epitomizes the micro storytelling aptness of SeaLegacy as a number of Ryan's (2007) narrative conditions can be found tucked into this single structured-paragraph that could very well be thought of as a narrative in itself that provides the additional texture needed to expand the dimension of a storyworld mostly concerned with the much more significant problem of the climate change crisis (Jenkins's transmedia storytelling drillability principle comes to mind).

It is the prevailing larger-than-life conflict of the climate change crisis that looms throughout the storyworld as a backdrop making the day to day challenges also subordinate in a way; while penguins might struggle and the ice might break SeaLegacy appropriately lean on their core narrative to remind people of the greater stakes in play. In other words bearing witness to the invisibility of the crisis remains a central task as other conflicts arise: SeaLegacy tackle this dilemma and make better sense of climate change using singularly occurring events that shape the relations in the Antarctic storyworld—much like an occurrence of a single hurricane might shape a coastline in the real world.

4.2.2.4 - The Greatest Sanctuary: Condition #4 / Mental Lives with Emotional Reactions

The participants in the events must be intelligent agents who have a mental life and react emotionally to the states of the storyworld

Emotional reactions span The Greatest Sanctuary campaign in an attempt to bring about the tangibility of the human condition affected by a warming world so for our purposes here, it is worth considering a few distinct examples of how SeaLegacy use varying emotional states in this case study. Arguably, they do so with much success. In fact, as I will continue to note, it is clear that The Greatest Sanctuary campaign balances on the transportive power of emotion on numerous occasions. Once again, this narrative condition, involving emotional reactions by "intelligent agents" (Ryan, 2008), mostly focuses on Mittermeier and Nicklen, whose own states of mind manifest emotion on screen and in prose, though others play supporting roles as emotional tone is of note.

In *A Delicate Balance* (SeaLegacy/Only One, 2020a), SeaLegacy effectively marry media derived from image and language in the opening scenes where sweeping aerial views of Antarctica icescapes and ephemeral wildlife meetings with whales, seals, and seabirds, are united with Mittermeier's voice over:

> I think I'm really lucky that I get to come and see this. You feel like you're part of something much bigger. There's no place on earth like Antarctica. It's just so beautiful. It's just so majestic. Nature is running its course here. Everything that needs to be happening is happening and you don't want that to change. (*A Delicate Balance*. (SeaLegacy/Only One, 2020a)

Mittermeier's contemplation of the sublime is palatable, as is the joy and gratitude she undoubtedly exudes. This is reminiscent of my earlier focus on Muir who might have lacked drones and high-definition video at the time, but was just as apt at taking people to the mountains of California using pen and paper. Like Muir, Mittermeier uses a firsthand account of place-based storytelling to comfortably nestle audiences into this foreign world. And, as Muir expected back then, Mittermeier wants audiences to admire the places she feels so devoted to as well (see Figure 12). Here, audiences affectively engage with the storyworld evoked by Mittermeier's uncanny ability to transport us with story. Using her personal and felt experience Mittermeier tells audiences what it is like to be in Antarctica.

Figure 11:

A 12-foot long leopard seal releases a penguin in front of Nicklen's camera in Antarctica during a sequence shown in *Leopard Seals* (SL-MC5).

Figure 12:

This mountain landscape with alpine glow was featured as a double spread on page 26–27 in *Antarctica: The Greatest Act of Conservation in the History of Humanity* (SL-MC-17).

Nicklen follows suit with this storytelling strategy in his own account of Antarctica in a campaign partner video entitled *Polar Obsession 360°* (Lilies & Martin, 2018), a collaboration with National Geographic. In the opening scenes viewers are first acquainted with Nicklen's experienced, now trusted voice, and then once oriented to the 360º video format, they can move their mouse to explore Antarctica as Nicklen does with his camera. That is, as Nicklen and the camera go underwater, so can a viewer, while hearing Nicklen emotionally reflect on a one-of-a-kind defining moment:

> What I love the most about Antarctica is that nothing is afraid of me. It is not a place where I feel lonely. To be floating there in the water, and then like a ghost, a humpback whale comes cruising by and reaches out with a pectoral fin to see what I'm made of or what I'm doing in their waters. It's like coming back to see my old friends … it's my homecoming to the land that you dream of when you're not there. (Lilies & Martin, 2018)

Emotional reactions by characters at key moments along individual storylines are frequent in The Greatest Sanctuary. For example: Heather Lynch, a penguin biologist from Stony Brook University, observes, "So much here is changing so fast that scientists can't predict where it's all headed … something dramatic is under way … it should bother us that we don't really know what's going on," regarding her fieldwork in Antarctica" (Welch, 2018); and Poncet reflects, "All the things you used to experience, the places I went when I was a child—I took it for granted then," "now you realize it's not ever going to be possible again," on speaking about loss in the places he grew up (Welch, 2018).

The same value for emotional currency is placed on the overarching tone of the campaign. The transcript of the campaign trailer, voiced by Mittermeier's inviting sound, is a primary example of this:

> Within our reach is the creation of the largest sanctuary on earth.
>
> So vast, it defies our imagination.
>
> So majestic, it captivates humanity.
>
> So we rise up and take notice, Antarctica's great southern ocean.
>
> The icy heartbeat of our planet.
>
> What happens here affects all life on earth.
>
> Yet, time, which once seemed so infinity, is no longer an ally to this magical kingdom.

As the deadly embrace of our changing climate warms the rest of the world,

the freezing spell cast here by time is being moved on.

But from the ashes of fear, possibility is born.

Let the story of this fabled land be a tale for the ages, join the greatest conservation act is

human history.

The protection of Antarctica's great southern ocean. (SeaLegacy/Only One, 2021a)

Mittermeier's emotive words undoubtably colour the Antarctica storyworld she cares for so deeply. Again, Mittermeier aims to make us feel the same way. The words work to such effect because of the specific choices that beget lines such as "the icy heartbeat of our planet" and "the freezing spell cast here by time" (SeaLegacy/Only One, 2021a). Mystery and mysticism mix to full affect.

Other examples of emotional reaction by campaign stakeholders exist in prose in the form of testimonials in SeaLegacy strategic communication documents as I have alluded to already. Similar quotes detailing a range of emotions also appear in the campaign books that were produced (see Weller et al., 2020 and Figure 13). Interestingly, SeaLegacy use well-known personalities and even celebrities to carry out this objective; Dr. Sylvia Earle, or the "queen of the deep oceans," authors the introduction to the Antarctica campaign book.

Similarly, an emotional reaction is most certainly at hand in a quote from Mann, who comments in greater detail on falling ice in an online article (Weller et al., 2020):

The sound was so thunderous that I felt it in my chest before the actual 'crack.' My immediate thought was that something serious had broken on the ship, or someone was in danger. You cannot hear a sound like that without assuming its repercussions are life-threatening. But my rising panic was replaced with inexplicable awe as I realized the source of the sound, and the front of the calving ice shelf broke away and rocketed into the Antarctic ocean in front of me. The force was overwhelming, and in that moment was the realization that an amalgamation of so many seemingly tiny ripples had caused such a monumental effect. I have been burdened ever since knowing that this event itself was only a tiny ripple of climate change. I was witnessing a crack in the foundation of our environment, and its ultimate impact on humanity will be tremendous. (Weller et al., 2020)

Like the Amazon forest is considered the lungs of our beautiful planet, Antarctica can be considered her heart—a heart by which we are all connected through the ocean and the seas. The Antarctic marine ecosystems are a key and unique component of life in the ocean. In order to maintain this function, it is timely we agree on a representative system of Antarctic Marine Protected Areas. Having had the privilege to see the beauty and the fragility of Antarctica with my own eyes, I am more convinced than ever that it is our role to give this wonderful place the voice it deserves.

~ Stephanie Langerock, PhD
Belgium's Commissioner for Convention for the Conservation
of Antarctic Marine Living Resources CCAMLR

20

Figure 13:

Testimonial by Stephanie Langerock, Belgium's Commissioner for Convention for the Conservation of Antarctica Marine Living Resources CCAMLR, on page 20–21 in *Antarctica: The Greatest Act of Conservation in the History of Humanity* (SL-MC17).

Even more omnipresent in The Greatest Sanctuary campaign are the emotive captions presented across social media. Both Mittermeier and Nicklen, and the SeaLegacy and Only One organizations, archive an expanding curation of testimonials using their Instagram handles that chronicle alluring tales of travel, and importantly, their emotional reactions to specific campaign subject matter. A caption written by Mittermeier posting as @mitty is evidence of this:

> Of all the places I have had the opportunity to work on split photography (shooting photos over/under water), images of *leopard seals* in Antarctica have been the most challenging. Not only do the conditions present bitterly cold water, but the subject has a significant set of sharp teeth matched by an equally sharp curiosity. I followed this leopard seal as it moved around quickly, hiding among the icy towers of this beautiful iceberg. It was hoping to catch a lone penguin but its curiosity kept it coming back to check me out. Making a threat display, the leopard seal would bluff me by opening its mouth and almost enveloping my entire camera housing in its massive jaws. I don't know if it was just looking at its reflection on the dome of my camera or if it simply wanted to see my reaction. Either way, I enjoyed our elegant ballet in the icy waters. The leopard seal is a king in its own kingdom and I was but an awkward visitor to it's very beautiful home. (Mittermeier, 2018, 05, 18)

As awkward visitor authoring her own reaction in prose, Mittermeier tells a unique story behind-the-image, an evolving transmedia storytelling best practice.

But what is more critical is Mittermeier's own emotional reaction has the potential to enhance the viewer's feelings—and curiosity—about the experience. Mittermeier accomplishes this through narrative transportation—audiences get involved in what a protagonist is doing—and with narrative congruency, such that this encounter fills in the gaps of our existing knowledge of the leopard seal. We become more likely to follow along with this storyline as the animal's life history details become familiar. This Antarctic symbol becomes a cognitive shortcut instead of a cognitive strain and the Antarctica storyworld makes a little more sense to us.

Moreover, it is a reflection by the earlier mentioned Forman that perhaps best encapsulates the true potential of uniting the advanced human condition of emotion with climate change discourse for the purposes of making this complex scientific subject relatable. Forman notes:

I scattered my mother's ashes amidst the melting ice. Now she remains a part of the landscape she loved so much, even as it, too, takes on new forms. I learned from my mother how to focus on the positive, rather than the negative, and that lesson has rarely felt more necessary than now. But the thing that gives me hope today is the unequivocal truth that action on climate change has become unstoppable—we're moving in the right direction. (Forman, 2020)

It is because we learn how much the polar regions mean to Forman, and her family line, that a reverence for such wild places arises that audiences can take away with them. This development of emotional attachment to characters and place is key to grounding the abstractness of climate change.

4.2.2.5 - The Greatest Sanctuary: Condition #5 / Events are Purposeful Actions

Some of the events in the storyworld must be purposeful actions by agents

As a non-profit organization with a mission to create healthy and abundant oceans, for us and for the planet, SeaLegacy know and define their purpose particularly well. This mandate was generally addressed in Section 4.2.1 where incarnations of the organization's core narrative were discussed; however, as Narrative Condition #5 is concerned, it is worth further aligning the idea of purposeful actions with the earlier mentioned comments from Bevan, Colley, and Workman (2020), who acknowledge in Section 2.4.1 that strategic narratives are stories with purpose because they persuade and coordinate. In the context of this dissertation, SeaLegacy's core narrative is analogous to a strategic narrative since the organization's core narrative messaging shares the same intent. Ganz (2011) expresses these terms in similar way when he discusses the role of the "public narrative" to "exercise agency"; that is, a public narrative is woven from three lenses: A story of why I have been called or a story of self; a story of why we have been called or a story of us; and a story of the urgent challenge on which we are called to act or a story of now (p. 1). In many ways SeaLegacy advance with all three lenses in mind since individuals respond to a call-to-action; they do so as members of a team of stakeholders; and they have outwardly declared the climate crisis as an urgency requiring mitigation now; see Case Study #2 and Section 4.6.2.6 where the David Suzuki Foundation use Ganz's (2011) public narrative purpose to structure the underpinnings of the Charged Up campaign.

As such, having a focused and achievable purpose is key to overcoming the paralysis that climate

change action often inspires.

Moreover, the ultimate purpose of The Greatest Sanctuary campaign is to persuade key political stakeholders to designate three currently proposed MPAs that would fulfill CCAMLR's commitment to assist with the protection of 30% of the world's oceans; CCAMLR, a governing body of 25 member states and the European Union, have been identified as a primary audience for the campaign because the authoritative members have adopted conservation milestones before when they created the world's largest MPA in the Ross Sea in 2016.

As part of this larger goal, leaning on their award-winning photography and a global network of key informants, SeaLegacy have produced a limited edition coffee table book—a print run of 800 not for commercial sale—that will be used as an advocacy tool when put in front of high-level decision makers; partnering NGOs working on The Greatest Sanctuary campaign aim to place the book in the hands of Heads of State including President Macron, Chancellor Merkel, Ministers of Environment and Foreign affairs, and strategic political stakeholders from France, Germany, the European Commission, Chile, and Argentina. SeaLegacy have noted that handover of the book will be combined with future public-facing events that also aim to persuade with visual storytelling assets derived during the campaign expeditions as the focus.

The Greatest Sanctuary campaign also aims to coordinate—as strategic narratives should do. In time for the 40th annual CCAMLR meeting occurring in 2021 SeaLegacy are coordinating members of The Tide, using the extensive digital reach of the Only One platform, to increase the number of petition signatures that might ensure that a consensus agreement is achieved; in the 2020 CCAMLR convention there was not enough time to address the proposed MPAs because of the COVID-19 pandemic—according to Werner (2020).

As the coordinating goal unfolds key campaign moments provide insight into the strategy behind purposeful actions, undoubtedly advanced and scaled-up using compelling storytelling, particularly in visual form. Realizing the strength of the leopard seal storyline, along with the emotive weight of the hunting and feeding sequences, SeaLegacy returned to Antarctica with the launch of The Greatest Sanctuary campaign in mind:

So in 2017, when we returned 10 years later, the whole purpose was to bring a film camera, a camera crew with us to reenact the whole encounter with a leopard seal. And those are the assets and the article that was written in National Geographic Magazine that was edited

by Sadie Quarry, it was all to launch the campaign. So that was the premise under which

we went, to gather the assets for this creation of Marine Protected Areas. (C. Mittermeier,

personal communication, 2021)

As things stand, SeaLegacy's purposeful expeditions permit the collection of assets that advance the

campaign.

On the petition website page, SeaLegacy's core narrative in strategic form reads: "Call on world

leaders to protect Antarctica and deliver the largest act of ocean protection in history" (SeaLegacy/Only One,

2020d). Relatedly, Bushell et al. (2017) have previously mentioned the advantageous nature of a concise

statement that details the "why," alongside "a positive vision of the future with the individual actions of

members of its own societies and members of other societies whom it wishes to influence (Bushell et al.,

2017, p. 20). Next to this prose is the persuasive instruction to sign the petition which reads: "We urge

you to realize your commitment to protecting the Southern Ocean by creating three vital marine protected

areas in Antarctica in 2021" (SeaLegacy/Only One, 2020d). This narrative binding duality of persuasion and

coordination further advances the campaign.

Relatedly, measuring the impact of storytelling has always been challenging for the environmental

movement that lacks the funds to pay for the high-calibre work; but the value of SeaLegacy's visual

storytelling in The Greatest Sanctuary campaign seems clear and apparent:

So the reason we are involved in this campaign is because we can house the petition … and

we can push our large number of followers to the petition, and we have, and we own, all

the visuals. So we are floating the entire campaign. And all the partners with our visuals.

(C. Mittermeier, personal communication, 2021)

What would The Greatest Sanctuary campaign be without visual storytelling? What would climate

change communications look like without the human condition depicted across SeaLegacy's portfolio of

works? It is the human-interest side of the climate change story that will elicit the much needed emotion to

advance our cause, not the persistent delivery of the facts and figures that have arguably failed to persuade

and coordinate enough people to date.

Mittermeier remains hopeful that visual storytelling can receive enough funding to be part of

the answer, though she is sure of its role and purpose to persuade and coordinate a global audience that realistically needs to respond.

Individual team members acting as agents in the Antarctica storyworld define their purpose too.

To revisit a campaign partner video is to see this purpose materialize. For example, Nicklen explicitly states in Polar Obsession 360°, "It's my job as a photojournalist to capture the importance and the fragility of this place" (Lilies & Martin, 2018). Concurrently, on page 19 of the Antarctica coffee table book, Mittermeier and Nicklen co-author a prologue that reads:

> To roam the last corners of Earth where wild creatures still exist is a privilege reserved for a select few: scientists, adventurers, explorers, and, of course, nature photographers. For the majority of people on this planet who may never feel the chill of Arctic air through the frozen flap of a frigid tent, our images are the closest they will ever come to experiencing the awe and beauty of nature. (Weller, et al., 2020)

For SeaLegacy, as The Greatest Sanctuary campaign is concerned, their purpose as messenger, translator, guide, or expert witness, is to introduce the wonders of Antarctica with enough narrative skill and intuition that it can be appreciated by distant audiences who will become members of The Tide, their online social community that supports ocean advocacy through petition signing among other acts.

More generally, the SeaLegacy organization is focused on conservation outcomes that draw attention to four purposeful areas of their work that centre around a lack of funding, audience size and diversity, the value of nature- and policy-based solutions, and the fostering of social and economic justice. This work includes: The understanding that only 1.3% of all donations in the USA support the environment and only a fraction of that amount is dedicated to marine conservation so there is an urgent need to exponentially increase funding for ocean advocacy; the fact that ocean health affects all of humanity so there is a need to reach audiences beyond the conservation and scientific communities; the awareness that the ocean can heal itself and provide an abundance of resources with policy and management practices in place; and the notion that climate change and social injustices exist at an intersection so there is an opportunity to tackle both crises simultaneously (SeaLegacy, 2020a, p. 50–51).

4.2.2.6 - The Greatest Sanctuary: Condition #6 / Outcomes & Closure

The sequence of events in the storyworld must form a unified casual chain (i.e., story arc or structure) and lead to outcomes and closure

To address Ryan's (2007) Narrative Condition #6 that holds events unfolding in a storyworld should be structured in some way that lead to story closure permits us to recollect Propp's disruptive events and Todorov's state of disequilibrium, so that attention can be drawn to the notion that an effective narrative should involve some form of transformation over time incited by conflict; or a lived, felt experience of what it's like to live through that "subjective awareness"; or what cognitive scientists think of as qualia—and as such, the disruptive event sets up the narrative on a path back towards a state of equilibrium only realized after a series of fortuitous and subsequent events. In many ways SeaLegacy use these tangible disruptive events— and the means to solve them—to make sense of an otherwise incomprehensible and invisible problem.

Others have identified with this basic narrative structure as situation, conflict, and resolution, or more simply as beginning, middle, and end. That successful stories are built with a common structure is to identify with the rules of narrative; SeaLegacy follow suit with such rules but this was not always the case as Mittermeier attests:

> We're learning a lot so it's becoming more methodical, as you can imagine when we started
> going out on these expeditions a few years ago it was all intuitive. Just going out and
> trying to follow the story. But working for Nat Geo you learn a lot about being methodical,
> because you have an editor who's constantly breathing fire down your back. You cannot
> guess your way through the story, you have to have some markers to guide it. We've used
> all the skills we've learned over the years, (C. Mittermeier, personal communication, 2020).

On this narrative sense Mittermeier comments further: "Some people have a better intuition for what's going to make a good story"; she states: "I need a thread that sticks out of a sweater—you start pulling and you end up with a ball of yarn" (C. Mittermeier, personal communication, 2020). Yet, Mittermeier and other climate change communicators need to know which specific thread to pull. She comments on this sense acquired over time:

> The ability to be storytellers is beaten out of us when we are small children and go to school. Instead of allowing us to communicate in stories we are forced to memorize stuff. You listen to a story and you have to go through this analytical process of answering questions about it. Creativity is beaten out of us; it's not rewarded. Memorization is fitting into a mold … But I think more than anything people don't get to practice being storytellers and don't have the opportunity to tell stories. And so you forget … For those of us who are lucky, at some critical point, [we're] given the opportunity to practice storytelling, and if you have a tool like the internet, like social media, where you get feedback on your stories, you start getting better at it. (C. Mittermeier, personal communication, 2020)

Mittermeier continues:

> Some people go through the path of telling every detail in chronological order, and they lose the narrative. A good storyteller can intuitively see how people are reacting and understand the cadence of the story. For me, I really started to look at the great storytellers in history, people like Martin Luther King. He understands how to paint a picture with his words, and he gives you an aspirational goal that you're going to get to, going towards the mountain. "We have a dream." He takes you on this narrative journey on how we're going to get there. (C. Mittermeier, personal communication, 2020)

Mittermeier's "markers" might be analogous to the basic units of narrative such that a structure is in place for all of SeaLegacy's storytelling campaigns. SeaLegacy's 2020–2050 Impact Report (SeaLegacy, 2020a) demonstrates the presence of a narrative structure particularly well as it details the story "contour" revealed by communication expert Nancy Duarte who meticulously analyzed hundreds of presentations to uncover a reoccurring narrative shape; Duarte first found this contour in Steve Jobs's 2007 iPhone launch presentation and in Martin Luther King Jr.'s I Have a Dream speech, then in countless others. While Duarte recognized previously known theoretical narrative form involving situation, complication, and resolution, what was more, she also identified the "what is" and "what could be" pattern that leads to a heightened emotional state through built tension (Duarte, 2010, p. 6); Jobs demonstrated what is and what could be when he used the phrase "reinvent the phone" five times in his speech and King did it when he followed the famous line "I have

a dream" with "one day," setting up a series of stories that would link the present day, with all its civil rights issues front and centre, with what could be a changed world, where racial segregation and discrimination are tempered (Duarte, 2010, p. 164 & 208).

For SeaLegacy, the what is and what could be communication contour is central to their core narrative build, alongside the delivery of individual diversified and controlled storylines, as the report's prose suggests:

> But it doesn't have to be this way.
>
> These are turbulent times. Colliding crises—including COVID-19, climate change, and mass extinction—have disrupted every economic and social system in the world. Incredibly, this chaos has created the opportunity of our lifetime. As a society, we've never been more open to change—to ending the destructive madness that got us here and committing to build back better.
>
> This is our best and last chance to save our ocean. (SeaLegacy, 2020a, p. 7)

More specifically, SeaLegacy's impact report highlights a series of dichotomous case study pairings that contrast ominous and threatening scenarios, much like Propp's disruptive events, with optimistic and harmonious ones, reinforcing the idea that what is today does not limit what could be in the future (SeaLegacy, 2020a, p. 16–39). SeaLegacy use this framework throughout six fact-based scenarios that introduce the idea behind the a call-to-adventure and the subsequent call-to-action, narrative tools that first inform the audience of a gap between complacency and dissatisfaction and then get them to act because of the imbalance that is created. The narrative build in this case also parallels a trajectory laid out before by Todorov who discussed states of both equilibrium and disequilibrium. For example, to address "preserve spaces" in the report (see Figure 14), SeaLegacy notes the fact that "60% of the world's major marine ecosystems that support ocean livelihoods have been damaged," but by "creating marine protected areas (MPAs) in critical locations" we can protect "50% of our ocean by 2044" (SeaLegacy, 2020a, p. 16–17).

SeaLegacy use the what is and what could be dichotomous communication contour to activate our mental model of future storyworlds (Jenkins's worldbuilding).

In fact, this narrative structure exists in even more explicit ways as the strategic framework for The Greatest Sanctuary rests on a similar conceptual story structure—inspired by the "timeless hero's journey"—

PRESERVE SPACES

What is

Currently, most of our ocean is unprotected from destructive human activities. Over 60% of the world's major marine ecosystems that support ocean livelihoods have been damaged. Every day, activities ranging from poaching on the high seas to oil drilling in coastal environments destroy the fragile balance of life. In less than a century, we've wiped out the world's richest, most valuable ecosystems through our careless pursuit of profit and power.

What could be

Creating marine protected areas (MPAs) in critical locations can help turn the tide. Evidence shows that MPAs allow governments to manage the impacts of human activities within specific boundaries. MPAs often eliminate fishing, hunting, and extractive industries entirely.

To restore ocean health, we need to protect 50% of our ocean by 2044. It's a crazy, ambitious target. And we're going to help make it happen.

In 2021, we'll model a new way to accelerate and amplify the positive impact of MPAs. In addition to continuing our work to support the creation of three new MPAs in Antarctica's Southern Ocean, and the implementation of West Papua's revolutionary new Conservation Province, we'll also support a national campaign to encourage the continued development of the Palau National Marine Sanctuary. Plus, we'll journey to Tonga to support efforts to reconnect the kingdom's citizens to their ocean culture, so that they can protect their rich waters from the growing pressures of Chinese business interests.

16

Figure 14:

Page 16–17 in SeaLegacy's 2020–2050 Impact Report demonstrates the organization's use of the what is and what could be communication contour identified in previous speeches such as in Steve Jobs iPhone address and Martin Luther King's I Have A Dream.

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as the campaign moves people through a core narrative built around these five stages:

Call-to-adventure: The Tide is made aware of the urgent need to protect Antarctica because the health of this ecosystem affects them personally; this call disrupts their equilibrium and sets in motion a quest to undertake alongside other members of their community; and the stakes of the climate crisis are laid out if failure persists;

Refusal of Call: SeaLegacy present the grave risks of combating climate change and the danger involved if the call-to-adventure is met; fear and resistance are common feelings among Tide Members because they feel helpless like many others do fighting climate change but the risks compel some individuals to act; if audiences do not act, SeaLegacy remind them of the urgent nature of the climate crisis again;

Meeting the Mentor: As expert witnesses observing climate change from the front lines SeaLegacy works together with a global network of authoritative stakeholders to offer Tide Members the necessary comfort to participate in ocean advocacy campaigning; the Only One platform removes the fear of participation and makes access easy, so learning about Antarctica begins a transformation process with like-minded peers; all the while SeaLegacy provide behind-the-scene visual storytelling to immerse Tide Members in their own unique journey of discovery; SeaLegacy elaborate on a core narrative through diversified and controlled storylines that provide a mental roadmap (a gift) to Tide Members;

Crossing the Threshold: The conceptualization of the Antarctica storyworld creates a separation between the ordinary world (what is) and the special world (what could be created if Antarctica gets the protection it needs) so Tide Members commit to the quest; discovery is paramount as the Tide community find friends and foes and learn more about the unknown; SeaLegacy team members, along with local allies in the storyworld, guide the audience through challenges; and

Transformation: Apathy gives way to agency as Tide Members experience early success

of iterative campaign phases; Tide Members take measures into their own hands and make changes in their own lives to assist with the campaign; transformative decisions reward individuals and the greater community in which they are apart (Only One, 2020)

Mittermeier puts this story structure in more context:

Here's the thing we've learned. When you have a lot of followers like we do, that's one of your tactics, to deploy them, to take an action. Our one platform...it's more of a call-to-adventure. It's not doom-and-gloom and I'm going to preach at you. You want to take people on a journey. It's important to identify what the destination is. The journey may take us years, it's populated by stories. You travel through the journey with stories that are taking you from point A to point B. At key inflection points we have a call-to-action. That's a campaign, a visual campaign. The call-to-action might be about a coral reef and I need everyone to donate five dollars because that's going to plant one coral. The key to the whole thing is you have to tell people how the story ends. (C. Mittermeier, personal communication, 2020)

The obvious conclusion to The Greatest Sanctuary campaign would be the designation of three new MPAs, but like climate change itself, conservation often happens over an extended period, as Mittermeier and others have noted, so resolution of the specific matter on hand for SeaLegacy will take time. In between then and now the organization finds ways to bring closure to present day trials and tribulations, and as journalists working on the frontlines of an unending story, end points for the campaign are measured as day to day successes in-the-field and with week to week accomplishments that advance the campaign forward along an iterative timeline. For instance, donations are raised, expeditions come to a close, new images are shared, exhibits occur, and campaign milestones are achieved.

Despite some ways to go to realize the completion of their campaign, SeaLegacy still have a keen focus on a sequence of events that set the organization up for a successful outcome. In a key strategic communication document they note four phases that lead them to a measurable close to a campaign:

Phase 1: Strategy, or the need to identify how media can pull key levers to drive conservation

outcomes;

Phase 2: Story, or the need to develop narratives and capture media in-the-field alongside

communities;

Phase 3: Global Engagement; or the need to create and distribute content to engage and

activate supporters around the world; and

Phase 4: Local Mobilization, or the need to support local partners with culturally-resonate

media that mobilizes communicates. (Only One, 2020)

4.2.2.7 - The Greatest Sanctuary: Condition #7 / Factual Events

The occurrence of at least some of the events must be asserted as fact for the storyworld

Because Antarctica is a real place in the real world, SeaLegacy are obligated to reveal information

and factual events that permit their audiences to experience this storyworld; this condition is reinforced by

the norm of journalistic integrity (Jenkins's continuity). While many aspects of Antarctica are left to the

imagination—Antarctica is so foreign (as is the concept of climate change)—vivid and compelling images in

The Greatest Sanctuary campaign act as evidence to fill in mental gaps, so audiences swiftly find themselves

immersed in an icy wonderland defined by the truthfulness of its proven existence; that is, SeaLegacy team

members participate and experience real events in Antarctica such that they are not only thinking about this

place. Images, both still and motion, serve to exhibit elements of this storyworld with accuracy, and in turn,

audiences learn to appreciate the majestic beauty of this distant and fragile land, bear witness to the reality of

the serious changes occurring in Antarctica, and therefore may be moved to act should an emotional plea be

fulfilled.

Despite the wide acceptance and acknowledgement of the information deficit conundrum, that

more facts are not the answer, facts are an integral component of the worldbuilding process of transmedia

storytelling particularly because they help build the foundation of the navigable storyworld and the events

that can be experienced there. It is with the foundation of the storyworld in mind that Moloney (2018) places

a critical emphasis on the decisions that limit or extend the boundaries of the non-fictional storyworld in order

to reduce "haphazard expansion" or the cognitive demand that might force people into thinking too much

about a new place before narrative comprehension can be reached. SeaLegacy find themselves responsible

for this delimitation; they also find themselves in control of the shape of the storyworld since even a non-

fiction world is influenced by its creators.

Ryan (2015), yet again, provides a starting place for transmedia storytellers to define some of these limitations that make for successful worldbuilding.

To begin, Ryan (2015) pointed out that in a "world-dominated" narrative "the plot acts as a path through the storyworld that reveals the diversity of its landscapes, the variety of its biological species, and the particularities of its social system" (p. 5), so the more richly designed the storyworld is, the higher the likelihood that audiences find new and rewarding storylines that might encourage them to learn more about such world. Conversely, in a "plot-dominated" narrative the storyworld simply acts as a container for characters and events. Moloney's (2018) transmedia journalism insights still hold true as well: SeaLegacy can introduce broadening dimensions of the Antarctica storyworld but they have the critical role as guides to not create a universe too dense or expansive that audiences could get lost (i.e., minimize Jenkins's multiplicity); it could be argued SeaLegacy achieve this challenging balance because the fifteen stories they feature in The Greatest Sanctuary campaign, could be "mastered" by committed audiences, while future expeditions could still reveal new wonders unaccounted for in previous trips. That is, SeaLegacy use a world-dominated narrative to portray Antarctica since this distant continent is revealed one expedition—one event—at a time as a special and unique destination, complete with its own characteristics, to be further explored and permanently protected as audiences come to love what exists there.

Ryan (2014) points to other characteristics of storyworld creation to help identify the elements of worldbuilding that can be asserted as fact. Only some examples are considered next.

She describes intradiegetic and extradiegetic elements to discern those attributes that exist within the storyworld and those that exist outside the storyworld—or on the edges—respectively, but none-the-less have a role to play in the storytelling that occurs as part of the storyworld. SeaLegacy employ both types of elements across the media channels I analyzed. For example, as we have focused on a few times already, Mittermeier's narration is an integral part of the campaign and in the trailer (SeaLegacy / Only, 2020e), her voiceover functions as an extradiegetic element because an outside manufactured post-production exercise created the authentic account of edited campaign messaging. However, when Mittermeier's character is observed speaking on screen in *Changing Continent* (SeaLegacy / Only, 2020e), where her voice is internal to the Antarctica storyworld, the auditory delivery behaves as an intradiegetic element that advances a storyline. On a number of occasions, Mittermeier and Nicklen's chronicling in the storyworld alternate between inside narrator, or external authoritative expert. Relatedly, the video series in The Greatest Sanctuary campaign

concurrently employs intra- and extradiegetic sound, since we hear complementary music chosen for its dramatic effect at specific climatic moments in the story, but also the ambient sound of ice, or noisy animals recorded on-location. The use of intra- and extradiegetic elements of worldbuilding are a focus in the visual storytelling that SeaLegacy are particularly known for since their work effectively marries on-location field recordings with extensive post-production workflows.

The role of intra- and extradiegetic narrative elements in worldbuilding can also be examined through a comparison of the sequences that depict wide aerial views of icescapes stabilized with state-of-the-art cinematic equipment attached to helicopters and the more from-the-front-lines aesthetic of the shaky documentary work that reveals SeaLegacy team members in-the-field. In the former, the audience is not expected to believe the SeaLegacy crew is airborne—so the cameras are extradiegetic in this case—and the bird's eye view is simply meant as a transportive experience. In the latter, the cameras are intradiegetic elements, since they exist as objects permitting SeaLegacy to do their job as frontline photographers.

In a parallel way, Ryan (2014) also acknowledges the difference between world-internal and world-external so that an object can factually exist or not in a storyworld. In SeaLegacy's case, the three proposed MPAs can exist as an idea in the Antarctica storyworld but the real world manifestation of the areas cannot because their designation has yet to occur. Unlike fictional storyworlds that have the luxury of introducing made-up content, SeaLegacy are concerned with real objects—people, places, and things—that are involved in events in Antarctica so this limits the type of stories they can tell.

A distinction between a single-storyworld and many-storyworlds is a third characteristic of the storyworld that Ryan (2014) introduces as part of the worldbuilding process. That is, should SeaLegacy embark on additional expeditions into alternative polar regions—or other mental or spatial areas for that matter—they have the choice to bring their audiences along for a journey that respects the governing principles of conduct or procedure within the Antarctica storyworld—a real place—or they can choose to alter the established context. Here, the journalistic pursuit limits the ability to adopt new rules as this worldbuilding topic is of mind. Still, SeaLegacy hold the responsibility to define what events can happen where and when with their visual storytelling.

Fourthly, as worldbuilding is concerned, Ryan (2014) reminds us of the role of semiotics, such that our mental constructions of a storyworld are related to the interpretation of the types of signs used to do the storytelling; that is, SeaLegacy use language-based media to advance certain storylines for subject matter that might require extensive filling-in while they rely on effective visual media cues to communicate other events

in the storyworld because of the potency of visuals to saturate the senses (p. 42). That the latter strategic use of visual storytelling is employed by SeaLegacy is likely the root of some early success in the campaign (i.e., nearing in on 200,000 signatures) since the abstract notion of a yet to be determined protected area—requiring much technical examination—could prove difficult to convey to some audiences. Prose might help define some of the non-existing boundaries, and some emotions will be tied to this forecast, but the prospects of the future storyworld, conveyed through events caught by film and photography, will further "move us" as images always will (Ivakhiv, 2013, p. vii).

As a final note regarding events that must be asserted as fact for the storyworld SeaLegacy incorporate information, or explainer text, as part of the content on the campaign website. In Antarctica and the Global Climate on The Greatest Sanctuary campaign website, a panel reads, "As more greenhouse gas emissions worsen the climate crisis, global temperatures climb and more Antarctic sea ice melts." Another says, "With less bright Antarctic ice reflecting sunlight back to space, dark ocean water absorbs more solar energy and ocean temperatures rise. This sparks a loop of more warming, and more melting, and more warming, and so on" (SeaLegacy/Only One, 2021b). These scientific facts suggest climate denialism, or falsehoods, have no place in SeaLegacy's defined storyworld and the much established facts help SeaLegacy build more trust when they present events in Antarctica.

Relatedly, another tangible way SeaLegacy builds the defined boundaries of Antarctica —where events can unfold—is through maps, found as an oversimplified illustration on the petition website (SeaLegacy/Only One, 2020d), and as a detailed topographic image in the coffee table book on page 24 (Weller et al., 2020). But again, there are corners of these maps that still need filling in (see Figure 15).

4.2.2.8 - The Greatest Sanctuary: Condition #8 / Meaningful Story or Lesson
Storylines in the storyworld must communicate something meaningful to the audience

According to Ryan (2007) Narrative Condition #8 is the most controversial of the narrative ingredients involved in transmedia storytelling, or worldbuilding, because it "straddles the borderline between definition and poetics, and because it needs to be complemented by a full theory of the different ways in which narrative can achieve significance" (p. 30). Put more simply, Ryan (2007) is posing a dichotomous relationship between a good and bad story (M. Ryan, personal communication, 2020). Recall, the Degree of Narrativity for my purposes is a qualitative measure of how many of Ryan's (2007) narrative conditions are

Figure 15:

Proposed Marine Protected Areas in the Southern Ocean; 1. South Orkneys MPA (Adopted 2009); 2. Ross Sea MPA (Adopted 2016); 3. Antarctic Peninsula MPA (Proposed); 4. Weddell Sea MPA (Proposed); and 5. East Antarctic MPA (Proposed).

fulfilled; of course, as Ryan (2007) and other narrative theorists have suggested you can still have a narrative if not all the conditions are present. Ryan (2007) questions, "Is this text a narrative?" (p. 30), then notes:

> Some people will be satisfied with conditions #1 through #3 and will classify a text about evolution or the Big Bang as a story, while others will insist that narrative must be about human experience, and will consider #4 and #5 obligatory. Some people will regard a chronicle listing a series of independent events with the same participants as a narrative while others will insist on #6. Those who accept recipes as narratives consider #3 and #7 optional; and there are scholars who draw the line below #8, while others may think that a pointless utterance or a boring account of events can still display a narrative structure. (p. 30)

How many of the conditions should be met for a narrative to achieve significance then? In the context of this dissertation, supported by a partial, yet imperfect analysis of narrative theory, and underpinnings that lean on our understanding of transmedial econarratology, purpose or meaningful significance has been attributed to a strategic or core narrative that has the potential to persuade and coordinate (as discussed in Section 4.2.2.5), but even more broadly, guide members of humanity (e.g. The Tide), not unlike what myths—the most "sacred, exemplary, significant" of narratives—have always done (Eliade, p. I); also see Section 2.2.2.2.

Mittermeier discusses the greater significance to SeaLegacy's core narrative in the context of the bigger picture, with another comment about the Only One platform, The Greatest Sanctuary campaign portal and activation channel where SeaLegacy send people to actually take an action:

> One of our goals is 30 by 30, to protect 30% of the ocean by 2030. That is a global campaign, and it's going to take many partners. All we're doing is taking people through the journey of what it means … we're going to measure how many other organizations come to tell their stories in our platform. How can we use the combined audience to direct more people to work on your call-to-action, your issue. This is not just about Sea Legacy at all. We want to grow this to 3.5% of the global population. That's how many people it would take to really create a movement. (C. Mittermeier, personal communication, 2020)

That the Only One platform serves as a common utility open to the entire ocean conservation community is what is meaningful about SeaLegacy's novel climate change campaign strategy and tactics—according to Mittermeier because the environmental movement does not have "bibles" or an audience "large enough" (C. Mittermeier, personal communication, 2020), the Only One platform is trying to "address both" inadequacies in order to effectively deliver a meaningful message at scale which might answer Saul's (2018) earlier question, What Are We Fighting For? When asked what words Mittermeier uses to describe the significant narrative guiding her, she swiftly suggests one word, before an explanation:

> First of all, it is possible. We know how to do this, to restore health and abundance to the ocean. We have a time frame—it can be done in this generation, the next ten years. What's needed is for people to buy into that vision and then align their values with their resources (C. Mittermeier, personal communication, 2020)

The language is promising and plays a duel role. It answers Saul's question but importantly it sets the tone for next steps. What SeaLegacy is fighting for is healthy and abundant oceans, for us and for the planet. With such a succinct mission SeaLegacy appear poised to play a meaningful and significant role in climate change campaigning to come. That Mittermeier addresses the need to align values is also a sign that SeaLegacy build meaning into the narrative strategic thinking of the organization. If our morals are a belief system that emerge from our core values, then there is a lesson to be learned here as well. And to return to incarnations of SeaLegacy's core narrative is to find such a lesson: "Antarctica is facing existential threats that will affect both the health of the global ocean and the stability of our climate, and therefore, all of us" (Nicklen, 2020).

4.2.3 - The Greatest Sanctuary: Diversified & Controlled Storylines

Alongside the manifestation of a meaningful core narrative in The Greatest Sanctuary campaign I discovered a minimum of 15 individual storylines—across 20 Core media channels—that diversify and control the dimension of the storyworld (see Table 5).

Present storylines were identified through the detection of recurring narrative threads, or story elements that could be grouped together because they moved an individual story involving characters (both human and non-human alike) and actionable events forward in time—this rationale remains our basic

understanding of what is a story.

The exercise further demonstrates a central characteristic of a transmedia storytelling project: Content expansion through diversified and controlled storylines.

Table 5:

SeaLegacy's transmedia storytelling structure in The Greatest Sanctuary campaign as defined by a sample of its diversified and controlled storylines.

Transmedia Principle	Keyword(s)	Storyline Summary
SL-SL1	Cristina Mittermeier	Character: Cristina Mittermeier Action/Events: Intrepid National Geographic photojournalist carries out multiple expeditions to Antarctica to bear witness to the affects of climate change.
SL-SL2	Paul Nicklen	Character: Paul Nicklen Action/Events: Intrepid National Geographic photojournalist carries out multiple expeditions to Antarctica to bear witness to the affects of climate change.
SL-SL3	Protect; MPA; treaty; CCAMLR	Subject: CCAMLR Treaty System for Protected Areas Action/Events: Commission for the Conservation of Antarctic Marine Living Resources meeting; multinational agreements; scientific preserve; research; accomplishments; impending pressures; marine resources; relief; resiliency; fishing consensus.
SL-SL4	Ice; iceberg	Subject: Melting Ice Action/Events: Larsen B ice shelf; tabular icebergs; cathedral icebergs; disappearing ice; calving; leopard seal dependency.
SL-SL5	Emperor; Adélie; Gentoo; penguin	Non-human Character: Various penguin species Action/Events: Impact from climate change; predator/prey relationships; feeding.
SL-SL6	Humpback; whale	Non-human Character: Humpbacks Action/Events: Decimated population; recovery in Antarctica.
SL-SL7	Krill	Non-human Character: Krill Action/Events: Foundation of food chain; importance; fishing process; krill fishing community; benefit to humans; biomass; carbon waste; global carbon cycle.
SL-SL8	Dion Poncet	Character: Dion Poncet Action/Events: Dion Poncet's personal journey as an Antarctic guide and resident of the Southern Ocean who bears witness to climate change from the front lines; growing up in the Southern Ocean; sailing; family life.
SL-SL9	Rodolfo Werner	Character: Rodolfo Werner Action/Events: Rodolfo Werner's personal journey as an marine biologist who bears witness to climate change from the front lines; krill fishing observations.
SL-SL10*	Seabirds; birds	Subject: Removed from study; no story development Action/Events: n/a
SL-SL11	*Leopard Seals*	Non-human Character: Leopard Seal Action/Events: Biology; hunting strategy; human interaction; feeding behaviour; role of predator; prey.

Transmedia Principle	Keyword(s)	Storyline Summary
SL-SL12	Fisheries; fishing	Subject: Industrial Fishing Action/Events: Industrial fishing threatening wildlife; close to sensitive wildlife habitat.
SL-SL13	Climate Change	Subject: Climate Change Action/Events: Melting ice; impacts; cause; sea level rise; effect on humanity.
SL-SL14	Zaria Forman	Character: Zaria Forman Action/Events: Profile of artist Zaria Forman; drawing of ice.
SL-SL15	John Weller	Character: John Weller Action/Events: John Weller's personal journey as an marine biologist who bears witness to climate change from the front lines; krill fishing observations.
SL-SL16	Weddell; crab eater	Non-human Character: Various seal species Action/Events: Biology; geographer; play.

*Note: This storyline was first identified in early coding exercises but never fully developed as an individual thread that would add what I considered to be a greater dimension to the Antarctica storyworld so it was eliminated from the analysis; that is, while mention of "birds" appears in The Greatest Sanctuary campaign, this subject matter did not mature into a story, consisting of "composed of action" and/or "characters" that advance upon a plot.

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Section 4.3 - The Greatest Sanctuary - Degree of Transmediality

The presence or absence of a set of conditions was evaluated to describe the Degree of Transmediality in The Greatest Sanctuary, with Degree of Transmediality as a measure of a campaign to fulfill a set of transmedia conditions to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced. An examination of any relevance of these strategies and tactics to climate change communications in particular is emphasized.

Furthermore, as I am interested in the conception of a novel transmedia storytelling model, I have also made notes on the applicability of Jenkins's previously examined principles, if and when this is appropriate. This exercise aims to assess how Jenkins's principles might be repurposed and included in my new model to be discussed in Chapter 5.

I posed this research question:

RQ1b: What is the Degree of Transmediality across The Greatest Sanctuary campaign?

4.3.1 - The Greatest Sanctuary: Media Forms

The work by Ryan (2007, 2014) that has been a guiding light throughout this dissertation returns to ground a note on media form and media channel as her media-conscious narratology lens (i.e., semiotic substance; technical dimension; and cultural dimension) can be used as a starting place to highlight how well SeaLegacy employ the varying representational strengths of specific media forms which they exhibit in both singular and combinatory ways across diversified media channels in the Greatest Sanctuary campaign (see Table 6). SeaLegacy performs this best practice using transmedia acuity while appreciating the extent to which their selection of media will influence what stories can be produced and how these stories will be received by audiences (Ryan, 2014, p. 25). In other words, SeaLegacy appear to acknowledge Jenkins's (2006) insight concerning the idea that, "Each medium does what it does best", and that transmedia "projects can be almost anything," such that, "a social media campaign to an outdoor film screening in a remote village to the production of a documentary series for Netflix" (SeaLegacy, 2020a, p. 24), can work to create impact and engagement.

As this dissertation is particularly interested in how transmedia storytelling elicits emotional engagement with climate change, a sample list of specific media forms are examined in this section with this specific context, or audience response, in mind.

In The Greatest Sanctuary, "semiotic substance" principally involves meaning-making derived from an image, still or motion; language, written or oral; music; and/or physical objects so that each respective media form makes a "distinctive and valuable contribution" to the whole campaign (Jenkins, 2006). Because it is often the case in transmedia storytelling that a single media form—and its signification—is found in combination with other sign-making forms it helps to recall the discussion laid out in Section 2.3.4 which described that transmediality in practice functions as a system; that is, a supersystem of signs with a sum greater than the individual parts so that SeaLegacy's Antarctica storyworld is evoked by qualities unique to each form and media configuration but also the inherent accumulative effect of media forms working in synergy. For example, our experiences of media differ so that language involves interpretation in abstract and intellectual ways, and images make meaning mostly through space and emotion. SeaLegacy, as emotionally-charged visual storytellers might prefer the latter, but still acknowledge the role and potential of the former; in combination transmedia storytelling is its most effective.

As Ryan's (2014) technical lens is concerned, SeaLegacy employ a full suite of sophisticated means—including helicopters and rebreather scuba equipment—to capture media content using specialized technological innovations and cameras, since they are predominantly involved in visual communication, but they also extend their media-conscious understanding into the realms of modes of production and material support. Recently, the organization expanded their core team to include "social entrepreneurs, strategists, editors, designers, developers, and social media experts" (SeaLegacy, 2017), to afford the necessary organizational comfort that is required to communicate with varying and growing audiences—particularly online. These team members provide insights on the relationships between sender and receiver—the transmission of communication between "one to one, few to many, many to many" or how media might affect "dissemination, storage, and cognition," be it "close or remote in either space or time" (Ryan, 2014, p. 30). For example, content from The Greatest Sanctuary also finds its way into media channels such as fine art exhibits and books and film festivals and virtual reality (Jenkins's seriality), all which require support in ever increasing ways.

Lastly, Ryan (2014) refers to culturally based media as the means of communication that are widely recognized to play a cultural role in society, or more simply, are forms of communication that exhibit "public

recognition" in some form or manner whereby the context does not permit distinction purely by semiotic or technological grounds (Ryan, 2014, p. 30). In SeaLegacy's case, because the organization is particularly interested in the behaviour of users of society and has established its own publication channels which can harness a global reach, there exists rationale for them to investigate this dimension even further. More specifically, SeaLegacy has a strategy in place to discern the types of stories to use (Jenkins's subjectivity, seriality, and multiplicity). For example, there are stories tailored for existing Tide Members to increase donation frequency, but there are also stories that address climate change discourse more generally for broader audiences.

Next, I consider some media forms present in The Greatest Sanctuary campaign while keeping Ryan's (2014) media-conscious lenses in mind.

4.3.1.1 - Image (Motion) + Language (Oral) + Music: Polar Obsession 360º

Polar Obsession 360º (Lilies & Martin, 2018), by SeaLegacy and campaign collaborator National Geographic, uses an innovative media format to create an affective experience for the audience—a sense of transportation as Antarctica is realized as a multi-dimensional location through place-based storytelling and a 360º video (see Figure 16). Here, Nicklen, as an "experiencing" (James & Morel, 2020, p. 131), or "perceiving" agent, acts as a "focalizer" (Weik von Mosser, 2017, p. 33), thus inviting his audience to see what he sees, but more importantly, feel along with him as he describes his sensations in his surroundings, the beings he interacts with, and his sentiment in each of these unfolding moments caught on film.

In the opening scene, viewers can float above icebergs. Upon changing their viewing angle they find Nicklen's bright yellow tent onshore; Nicklen approaches the camera and then gazes out. The perception created with this media form is that you are present, with Nicklen, on assignment in Antarctica. The sound of camera clicks enhances the illusion of proximity.

Eighteen seconds into the video Nicklen introduces himself via voice over—a strategic post-production decision made in case *Polar Obsession 360º* is the first SeaLegacy media channel that a campaign supporter is seeing. The video is as much an extension of Nicklen's personal storyline as it is an authentic look and exploratory immersion into Antarctica, made more visceral as audiences take more time to settle into the storyworld.

At 0:43 minutes in, viewers find themselves transported to the Hans Hansson, where a sense of the

Figure 16:

Nicklen on-location in Antarctica in the *Polar Obsession 360°* video (SL-MC8). The virtual reality film was produced in collaboration with *National Geographic*. The arrows in the top left hand corner permit a user to move the video for an immersive 360º experience.

Figure 17:

This image of emperor penguins using a bubble propulsion technique to rocket out of the sea was featured on page 132–133 in *Antarctica: The Greatest Act of Conservation in the History of Humanity* (SL-MC17).

sea's extreme roughness is apparent as water gushes over the deck; Nicklen's voice shares anecdotes about how tough the Drake Passage really is: "It's the getting there that's the hard part" (Lilies & Martin, 2018). At 1:40 the camera slowly moves us left to right by a cathedral-like iceberg; its scale shifts as you move your mouse and Nicklen laments, "It's like you're entering this dreamland … and the dream is real," upon his arrival in the Southern Ocean; At 2:22 a humpback whale "comes cruising by" and Nicklen reflects on his relationship with these sentient beings (Lilies & Martin, 2018). At 4:11 viewers can get a sense of how large the leopard seal is as it passes by Nicklen's body. Here, motion video and oration combine strategically to evoke the sense of being there and because a viewer is controlling how this place is experienced the journey becomes their own.

Importantly, any sense of connection to this place could lead to a desire for stewardship, or the responsibility to protect Antarctica because it has been personally "experienced."

To produce this immersive experience the raw content for the video is filmed using an omni directional camera or a configuration of multiple cameras that point in opposing directions so that overlapping angles can be recorded simultaneously. Playback typically occurs on desktop computers, mobile devices, or with dedicated head-mounted displays (e.g. goggles). On a flat screen viewers take control of their viewing angle within a scene—as with a panorama feature—by moving their mouse (or their hands if on a mobile). SeaLegacy use the specialized camera rig on-location in Antarctica, so during some sequences in *Polar Obsession 360°* the perspective of the environment is changing on multiple planes during an individuated playing experience; users can choose their own path throughout the storyworld, while Nicklen, who is present both as a character in the film and as an authoritative voice over, guides viewers at each stage or turning point in the story.

At 6:04 Nicklen states the value of this media form: "I need to transport people into this world with this seal and to realize how beautiful it is. And yet how fragile its ecosystem where it lives is" (Lilies & Martine, 2018).

Polar Obsession 360° is a particularly strong example of how SeaLegacy marry their prowess in visual storytelling with their strength in media production and distribution; the combination of media forms permit the organization to successfully exhibit the behind-the-scenes place-based storytelling that is so much a part of what they do. The result is that audiences form a deeper relationship with the Antarctic storyworld because they have been there.

4.3.1.2 - Image (Still): Icescapes

According to Nicklen, "Science does not make that emotional connection that wakes up people" (CBC Radio, 2019), so a photograph has to be a "cross section of art, science, and conservation" (Nicklen, 2021), to motivate people to want to protect Antarctica. Nicklen continues, "If I want people to care about these species and care about these ecosystems and care about climate change, then my photography has to be close, powerful, and intimate" (CBC Radio, 2019).

This proximity to his subject matter is what has made Nicklen's still photography in The Greatest Sanctuary campaign so arresting, even iconic. The close encounters with leopard seals have been much discussed, along with run-ins with whales, and you can observe Nicklen's trademark depiction of dynamism in the Antartica coffee table book (Weller et al., 2020), in an underwater photograph of a penguins just seconds before the animals rocket out of the water through a hole in the ice (see Figure 17). These images are all quintessential Nicklen, but the story behind the penguin picture is worthy of particular note; that is, the vibrant colour of Antarctic ice along with strong compositional elements, such as the repeating leading lines of the light rays and the penguin's movements, offer up artistic merit, but the image also documents the never-before studied bubble propulsion phenomenon of these marine speedsters, visual evidence that attracted giddy scientists interested in this unique wildlife behaviour: "They were using air as a lubricant to cut drag and increase speed" (Hodges, 2012, para. 3). For Nicklen, art and science work well to tell a conservation story too since the penguins become central figures in the campaign storyworld and being close to these characters permit audiences to get to know them even more intimately on an emotional level. Nicklen's triad of content—art, science, and conservation—functions to elaborate our connection to photography in a number of ways.

Others have commented on the elements of a successful photograph to entice an emotional response from viewers and these insights suggest that light and composition are particularly key factors (e.g. Adams, Rowell); Cartier-Bresson, the founder of modern photojournalism, proposed the "decisive moment" is critical too (Cartier-Bresson, 1952)—that moment "when the visual and psychological elements of people in a real life scene spontaneously and briefly come together in perfect resonance to express the essence of that situation" (Suler, n.d); and William Eggleston, the father of colour photography, noted the need for vividness even in the most banal and obvious of subjects to stir emotions.

All of these characteristics—light, composition, moment, and colour—ground SeaLegacy's visual

Figure 18:

A lone penguin on an iceberg provides a reference point to determine the scale of Antarctica and was featured on page 180–181 in *Antarctica: The Greatest Act of Conservation in the History of Humanity* (SL-MC17).

© Paul Nicklen / SeaLegacy

storytelling so that their original works depicting the abstraction of climate change are affectively translated through this choice of medium. These characteristics are even more important when Nicklen and other SeaLegacy team members might not have the luxury of proximity as is the case when documenting the broader dimensions of Antarctica.

Barthes (2010) adds more insight to contextualize SeaLegacy's image-making approach when he addresses "adveniece, or even adventure," a principle or condition of a photograph that "sets me off" (p. 19), or "reaches me," or "animates me, and I animate it" (p. 20). Put another way, while SeaLegacy employ traditional techniques of photography to present Barthes's "studium," the layer of information about a subject matter of "general" interest, they also know a photograph has the responsibility to do more. They know photographs can do more.

To reference *Camera Lucida* a second time is to appreciate this goal of SeaLegacy's still image work. While SeaLegacy want to make individuals "pause" (Barthes, 2010, p. 23), so as spectators we explore their photographs—"I see, I feel, hence I notice, I observe, and I think" (p. 21)—they also want to employ Barthes's secondary element of the punctum, the need to "break," or punctuate the studium, with an element of the image that "pricks" us (p. 27).

This "detail," or this "sting, speck, cut" that "pierces" a viewer (p. 42), described by Barthes (2010), is present in many of SeaLegacy's photographs of Antartica.

A portfolio of icescapes provide exemplary cases since it is only because of the photographer's inclusion of a distinct visual element found in each photo that the monotony of the otherwise uniform icy palette of blue hues is broken; these images are distant from us, yet they are simply stunning because they are documented in soft light to reveal texture, they are composed with symmetry in mind, and they bear witness to a moment in time in Antartica that depicts the tranquility that exists there. However, the magnitude of Antarctica, and the meaning behind such vastness, is only communicated when a single penguin, bird, or whale gets noticed (see Figure 18).

Indeed, the single element has significance for upon this reflection of Antarctica's immensity, the scale of the storyworld becomes attainable. The effect might permit better spatial awareness as we compare the world we know around us with a new sense of what it might mean to be part of Antarctica.

As SeaLegacy's visual storytelling literacy becomes present across the campaign, narrative absorption by audiences follows suit because we are not only close to the inhabitants but the dimensions of the storyworld have been better defined by our increased faculty to perceive.

Moreover, in the absence of visual punctum, SeaLegacy still have a strategy to lure us in: The personification of the characters we have come to know. This might be the case in a post on Instagram where Mittermeier shared a single colour image of a Weddell seal basking on a rock in subdued blue Antarctic light. There is nothing particularly enticing about the drab image to pull us in, we are not close enough to elicit a reaction, nor is there a specific detail to capture our immediate attention, but accompanying the post was a caption full of elaborate language to describe the glacial setting of the storyworld, along with the behaviour of the animal—"A Weddell seal reclines luxuriously on the rocks for a snooze … it closes its eyes and stretches contentedly (Mittermeier, 2020, 8, 24).

For SeaLegacy, the introduction of animals as characters with human-like traits is one of their main methods for connecting audiences to places and species they may otherwise feel disconnected from. In the case of the Weddell seal image that might not perform as well as others, SeaLegacy employ a second technique to garner longer engagement. There is a physical swipe through option to zoom in on the animal for a better look. By combining these two tactics—emotional personification and physical acts of swiping—even mundane images play a role.

Of note, language tests on social media are revealing more and more insights for SeaLegacy with each new post, so that their handling of media juxtaposition can improve. One example explains:

> We tested out a slightly less hopeful and more dire approach to our language. The overall tone came across as somewhat melancholy and we noted a dip in engagement from our audience. We suspect the combination of a single, artistic photo in black and white along with a factual, non-narrative based caption came across as somber and did not catch the attention of our following (C. Mittermeier, personal communication, 2020).

Interestingly, this sentiment concerning a narrative-based style versus a more analytic approach, or non-narrative structure to media content, is apparent across The Greatest Sanctuary. For example, the explainer panels on the campaign website take on an analytical approach, whereas the *Leopard Seals* video suggests strong narrative form (SeaLegacy/Only One, 2020g).
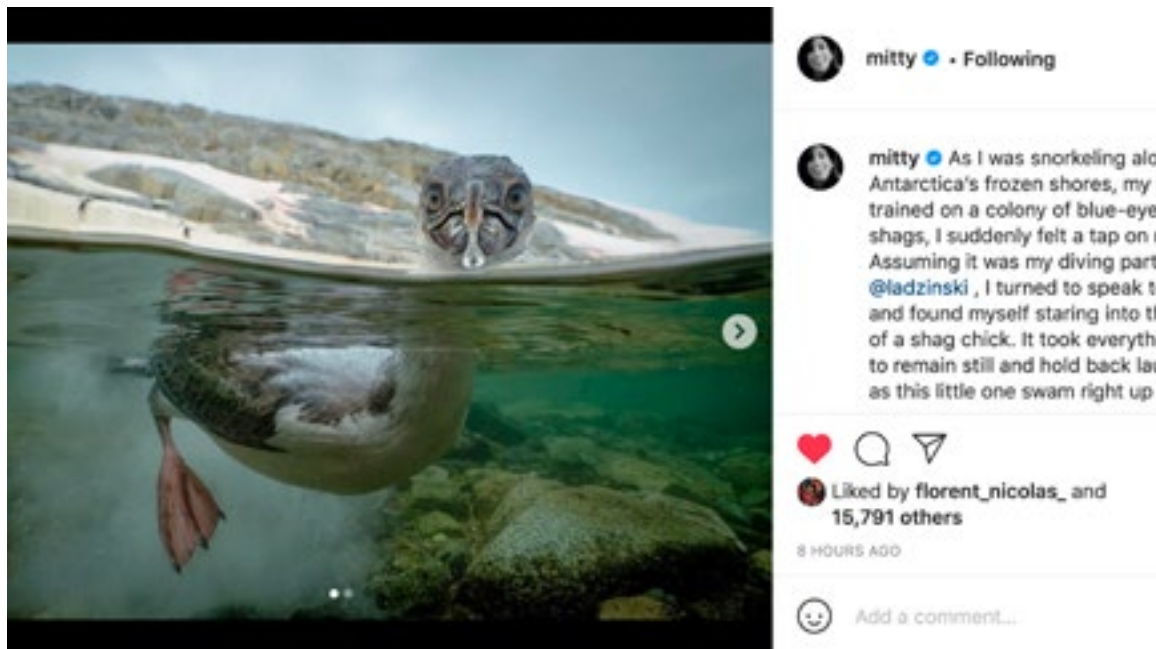
Figure 19:

Colour image of a blue-eyed shag chick in Antarctica posted on Instagram.

I join with millions around the world in calling for CCAMLR to protect
key Antarctic marine habitats while they are still intact and thriving.

~ Leonardo DiCaprio
American Actor and UN Messenger of Peace

Figure 20:

Black and white image of a blue-eyed shag chick printed in *Antarctica: The Greatest Act of Conservation in the History of Humanity* (SL-MC17).

4.3.1.3 - Image (Still) + Language (Written): Blue-eyed Shag

On many occasions, particularly with the photographic imagery that remain central to SeaLegacy's visual storytelling work, the organization repurposes individual photos derived in one media form across multiple media channels in order to target different audiences, but to also achieve a greater emotional salience with a character or place through varying presentation styles of the content. This media channel specificity and unique publication practice serves to benefit specific campaign goals. The leopard seal coverage, for example, has been used across media channels; Mittermeier saw this animal as "the iconic preacher that galvanizes attention around the creation of one MPA" (C. Mittermeier, personal communication, 2020). Consider also an image of a spontaneous encounter with a blue-eyed shag chick half-submerged at the water's edge. As the curious bird peers into Mittermeier's camera, disproportional eyes and a single water drop on its beak draw us into the photo. Mittermeier explains the context of the making-of-the-image in a social media post that tells us more about her photographic pursuit, but also provides details about this unusual avian character of the Southern Ocean (see Figure 19):

> As I was snorkelling along Antarctica's frozen shores, my lens trained on a colony of blue-eyed shags, I suddenly felt a tap on my arm. Assuming it was my diving partner @ladzinski , I turned to speak to him and found myself staring into the face of a shag chick. It took everything I had to remain still and hold back laughter as this little one swam right up to its reflection in the protective dome of my camera housing. After sizing up the bird in the mirror, it proceeded to pull on the cords of my camera's strobes and then pecked at me with its curved little beak. Blue-eyed shags (sometimes referred to as cormorants) are coastal birds that inhabit the colder regions of the Southern Hemisphere. They're so perfectly adapted to ocean life, some can even dive up to 150ft chasing small fish. This little one had apparently never met a person before and was determined to investigate me, fearlessly chasing after the strange, new intruder. (Mittermeier, 2019, 10, 23)

That 15,791 people liked the image on Instagram as of this writing is a sign of its popularity, and some comments directly appreciated the media synergy: "The story is as great as the photo. Thanks for sharing," (tuxedokittymom). Mittermeier's combination of prose and photo show up as 2,192 posts on her Instagram

account @mitty; the 1.5M followers, and the endless stream of emojis, suggest her storytelling in combinatory media form has connected enough with her audience to interrupt the ephemeral state of social media scrolling to provoke positive engagement.

Yet, while the photo and back story are designed to elicit strong reactionary responses on social media, a more contemplative sentiment is the desired outcome when SeaLegacy pair the image of the blue-eyed shag chick with alternative text in the coffee table book. Dr. Sylvia A. Earle, PhD, a National Geographic Explorer in Residence, Founder of Mission Blue, and Ambassador for Antarctica 2020, addresses this sentiment in the introductory text of this special publication:

It is commendable that in 2016, CCAMLR exercised its authority with remarkable consensus to establish protection of marine life in Antarctica's Ross Sea. But more must be done to secure recovery and achieve health of a system stressed by centuries of exploitation coupled with planetary warming, ocean acidification, pollution, and other global pressures. (Weller et al, 2020)

Published by Earth in Focus as a small print run of only 800 copies and not for commercial sale, *Antarctica: The Greatest Act of Conservation in the History of Humanity* was designed to be placed in the select hands of key political figures whose engagement with the campaign will be instrumental in deciding the fate of the MPA designation; according to SeaLegacy, the physical nature of these advocacy books serve as "evidence" (J. Weller, personal communication, 2020).

Next to the photograph of the blue-eyed shag (see Figure 20)—printed in black and white this time—is a caption written by Leonardo DiCaprio, the American actor and UN Messenger of Peace, which reads "I join with millions around the world in calling for CCAMLR to protect key Antarctic marine habitats while they are still intact and thriving" (Weller et al., 2020). When CCAMLR members turn the pages of this book there are another dozen or more testimonials from some of the most important voices in Antarctic and marine science and conservation, including celebrities with these same interests (i.e., alternative views advance Jenkins's subjectivity principle). In many ways, these written accounts serve as moral arguments— strategic empathizing in play—so key decision makers might spend more time with the production they hold in their hands. While the book contains core narrative messaging (i.e., continuity here too), it is short and poignant, so the images do the bulk of the storytelling.

The commitment SeaLegacy has made to populating social media feeds has proven successful as their audience continues to grow; but they understand also how to tailor social-media-worthy images to the more intimate and tactile medium of the art book, making the ephemeral more solid, and thus more politically poignant and profound.

4.3.1.4 - Image (Motion) + Language (Written) + Music: Starving Polar Bear

The filmmaking is harrowing and it has SeaLegacy's visual storytelling fingerprints all over it: The content from a remote corner of our world is shockingly original; the on-location and post-production work is of the highest quality; and the emotional tone is as gripping as it gets. Mittermeier and Nicklen were on an isolated cove on Somerset Island in the Canadian Arctic and had one mission in mind: "To capture images that communicate the urgency of climate change" (Mittermeier, 2018).

Before the starving polar bear video was published in 2017 SeaLegacy team members knew the potency of this moving image sequence. In her own words Mittermeier recalls the scene:

> When we arrived at the cove on a donated vessel, I scanned the shore with my binoculars. All I saw were a few dilapidated buildings, some empty fuel drums, and a very desolate landscape in what seemed like an abandoned fishing camp. We couldn't locate the bear. Only when it lifted its head were we able to spot it lying on the ground, like an abandoned rug, nearly lifeless. From the shape of its body, it seemed to be a large male. We needed to get closer; we boarded a Zodiac boat and motored to land. Strong winds covered our noise and smell. From the shelter of one of the empty buildings, we watched the bear. He didn't move for almost an hour. When he finally stood up, I had to catch my breath. Paul had warned me about the polar bear's condition, but nothing could have prepared me for what I saw. The bear's once white coat was molted and dirty. His once robust frame was skin and bones. Every step that he took was pained and slow. We could tell he was sick or injured and that he was starving. We could see that he was probably in his last days. (Mittermeier, 2018)

Nicklen said it was "the most heartbreaking thing" he had ever seen in his much lauded career as a wildlife

photographer (Bisharat, 2018), and while there are still images of the saddening scene published too, it is the video form that moved audiences most as Nicklen confirms:

We were in Nairobi for Christmas and people approached us in the airport to thank us for the polar bear video … we've met people who said they couldn't get out of bed for 24 hours after seeing the video because they were so depressed. Some people openly cried. Some got angry at politicians and industry. Some even got angry at us (Bisharat, 2018).

It is indeed "gut-wrenching" as the Washington Post noted (Rosenberg, 2017). The combination of slow-motion footage paired with tight framed edits also reveal the nuances of the situation in succession, as film can do: Foaming mouth; skeletal form; and patchy fur. Lifting the head seemed a struggle for the animal in one cut as well, and this video is harder to watch as subtle musical notes convey even more tension for listeners. This storytelling potential of the video was planned. The video went viral (see Figure 21).

There were emotional responses of note: @marynmck said, "If you have any conscience at all, this video of a starving polar bear will break your heart. We cannot look away" (McKenna, 2017).

Mittermeier reflects on what happened subsequently:

National Geographic picked up the video and added subtitles. It became the most viewed video on National Geographic's website—ever. News organizations around the world ran stories about it; social media exploded with opinions about it. We estimate that an astonishing 2.5 billion people were reached by our footage. The mission was a success, but there was a problem: We had lost control of the narrative. The first line of the National Geographic video said, "This is what climate change looks like"—with "climate change" highlighted in the brand's distinctive yellow. In retrospect, National Geographic went too far with the caption. (Mittermeier, 2018)

So there was also backlash. Writing for the Financial Post Susan Crockford said:

It was tragedy porn meant to provoke a visceral response … the video of an emaciated polar bear struggling to drag himself across a snowless Canadian landscape made billions

Figure 21:

Harrowing footage of a starved polar bear went viral and SeaLegacy estimate that an astonishing 2.5 billion people were reached by this footage. SeaLegacy believe this visual storytelling mission was a success, but there was a problem: They had lost control of the narrative.

of people groan in anguish. (Crockford, 2018)

She continued:

> Many other viewers were furious that an obviously sick animal had been deliberately exploited to advance a political agenda based on lies. Climate change was clearly not the cause of this bear's plight: Sea-ice loss had not been exceptionally high that year and no other bears in the area were starving. Viewers felt manipulated. (Crockford, 2018)

Losing control of the narrative (Jenkins's multiplicity) as Mittermeier put it would engage a global community in climate change discourse, one potential measure of success, but in many ways what was more important was the lesson learned:

> We probably shouldn't have been surprised that people didn't pick up on the nuances we tried to send with it. Yet we were shocked by the response. Many people expressed gratitude that we'd shined a light on climate change, but others angrily asked why we had not fed the bear or covered him with blankets or taken him to a vet—none of which would have saved him. Those responses revealed how disconnected people are from wildlife, ecology, and even geography. And then there were those who are still bent on maintaining the dangerous status quo by denying the existence of climate change. We became to them yet another example of environmentalist exaggeration. But they offered us a glimpse of the daunting number of people we still need to reach. (Mittermeier, 2018)

While the polar bear video drew greater attention to SeaLegacy's work in the Arctic, and still does, the viral success and backlash taught SeaLegacy, and the greater movement at large, two important things: That strategic empathizing with our non-human kin can garner global attention but with that audience comes the need to control the message; so using the varying ranges of the emotional spectrum in their videos in The Greatest Sanctuary, SeaLegacy use the Only One platform to keep their core narrative (i.e., continuity), while maintaining the ability to communicate across media channels designed with this specific purpose (i.e., seriality).

Mittermeier addresses the promise of this feature of the platform in this way:

> With our new media player, if I put a piece of content on that media player, it's embedded
> in the SeaLegacy website, looks like SeaLegacy. If any newspaper wants to publish it,
> all they have to do is take a piece of code and embed it in their publication. But any time
> a viewer clicks on it, it goes back to SeaLegacy. Not to YouTube, not to Vimeo, not to
> Instagram. That allows us to grow our distribution channel, to own it. (C. Mittermeier,
> personal communication, 2020).

SeaLegacy might still be learning the value of this independency and what role it might play in our culturally mediated world.

4.3.2 - The Greatest Sanctuary: Media Channels

Next, I provide an exemplary list of media channels to demonstrate that a transmedia storytelling design exists in The Greatest Sanctuary. Table 6 generally categorizes media forms, or the composition for each media channel, and then specifically details a sampling of 38 media channels that include Core and Peripheral campaign media, along with Partner and News content.

Emphasis was placed on an analysis of this exemplary list of media channels because these are individual publication spaces that audiences interact with and they provide the specific connection, or entry point, into SeaLegacy's Antarctica storyworld; that is, user-generated content is often inspired by the core content, the central body of work in this case study.

Here, media channel data strengthens the argument that The Greatest Sanctuary campaign used integrated media forms and an increasing number of media channels to advance a core narrative alongside diversified and controlled storylines. It should be noted that the analyzed media channels are not an exhaustive account of the ever expanding campaign; for example, it would take some resources and time to work through the extent of SeaLegacy's social media footprint.

Table 6:

SeaLegacy's transmedia storytelling structure in The Greatest Sanctuary campaign as defined by a sample of its media channels.

Media Channel Code	Media Channel Description	Media Channel Title	Media Channel Source	Source
SL-MC01	Campaign Portal Website	The Greatest Sanctuary	https://only.one/series/greatest-sanctuary	Core
SL-MC02	Campaign Petition Website	Call to World Leaders	https://only.one/act/antarctica	Core
SL-MC1	Video	*A Delicate Balance*	https://only.one/watch/delicate-balance	Core
SL-MC2	Video	Antarctic Lifetime	https://only.one/watch/antarctic-lifetime	Core
SL-MC3	Video	*Changing Continent*	https://only.one/watch/changing-continent	Core
SL-MC4	Video	*Antarctic Krill*	https://only.one/watch/the-antarctic-krill	Core
SL-MC5	Video	*Leopard Seals*	https://only.one/watch/leopard-seals	Core
SL-MC6	Video	Protecting Antarctica	https://only.one/watch/protecting-antarctica	Core
SL-MC7	Video	The Greatest Sanctuary - Trailer	Online	Core
SL-MC8	360º Video	*POLAR OBSESSION 360º* | National Geographic	https://www.youtube.com/watch?v=jz2CZZeJsDc	Partner
SL-MC9	Digital Article	Krill Fishing Restrictions	https://only.one/series/greatest-sanctuary(modal:post/new-hope-for-marine-life-in-the-southern-ocean)	Core
SL-MC10	Digital Article	Zaria Forman	https://only.one/series/greatest-sanctuary(modal:post/zaria-forman)	Core
SL-MC11	Digital Article	Dion Poncet	https://only.one/series/greatest-sanctuary(modal:post/dion-poncet)	Core
SL-MC12	Digital Article	Antarctica: A Blueprint for Protecting the Land of Ice	https://only.one/read/a-blueprint-for-protecting-the-land-of-ice	Core
SL-MC13	Digital Article	Honouring Life in the Ice: Why we must act to conserve the gifts of Antarctica	https://only.one/read/honoring-life-in-the-ice	Core
SL-MC14	Digital Article	The Secret Life of *Antarctic Krill*	https://only.one/read/the-secret-life-of-antarctic-krill	Core
SL-MC15	Digital Explainer	The Greatest Sanctuary	https://only.one/series/greatest-sanctuary(modal:slide/antarctic-mpas/0)	Core
SL-MC16	Digital Explainer	Antarctica and the Global Climate	https://only.one/series/greatest-sanctuary(modal:slide/importance-of-antarctica/0)	Core
SL-MC17	Book (Prologue)	Antarctica (Prologue)	Physical Object - Book	Core
SL-MC18	Book	A Gift to Future Generations (Russian translated)	Physical - Book	Core
SL-MC19	Exhibit	In the Ice Embrace of the Southern Continent	Physical Object - Exhibit	Core
SL-MC20	Digital Article - Partner	The Big Meltdown	https://www.nationalgeographic.com/magazine/2018/11/antarctica-climate-change-western-peninsula-ice-melt-krill-penguin-leopard-seal/	Partner

Media Channel Code	Media Channel Description	Media Channel Title	Media Channel Source	Source
SL-MC20b	In-print Article - Partner	The Big Meltdown	https://www.nationalgeographic.com/magazine/2018/11/antarctica-climate-change-western-peninsula-ice-melt-krill-penguin-leopard-seal/	Partner
SL-MC21	Digital Article - News - Time	World - Climate Change	https://time.com/5900744/marine-protected-area-antarctica/	News
SL-MC22	Digital Article - News - Forbes	*Antarctic Commission Pursues Largest Conservation Action Ever Taken*	http://www.forbes.com/sites	News
SL-MC23	Digital Article - News - Guardian	Antarctica: an ecosystem under threat - in pictures	https://www.theguardian.com/environment/gallery/2020/oct/22/antarctica-an-ecosystem-under-threat-in-pictures	News
SL-MC24	Digital Article - News - Mongabay	No other choice	https://news.mongabay.com/2020/10/no-other-choice-groups-push-to-protect-vast-swaths-of-antarctic-seas/	News
SL-MC25	Digital Article - News - Virgin	The largest ocean protection act in history	https://www.virgin.com/virgin-unite/latest/the-largest-ocean-protection-act-in-history	News
SL-MC26	Social Media Campaign Post - Instagram	Campaign Sample 1	Online	Peripheral
SL-MC27	Social Media Campaign Post - Instagram	Campaign Sample 2	Online	Peripheral
SL-MC28	Social Media Campaign Post - Instagram	Campaign Sample 3	Online	Peripheral
SL-MC29	Social Media Campaign Post - Instagram	Campaign Sample 4	Online	Peripheral
SL-MC30	Social Media Campaign Post - Instagram	Campaign Sample 5	Online	Peripheral
SL-MC31	Digital Article - News - RUSSIAN	Icy Embrace of the Southern Continent	http://duma.gov.ru/news/45259/	Peripheral
SL-MC32	Social Media User Post - John Kerry - Twitter	User Sample 1	Online	Peripheral
SL-MC33	Social Media User Post - Phillippe. Cousteau - Instagram	User Sample 2	Online	Peripheral
SL-MC34	Social Media User Post - Kelli_out_exploring - Instagram	User Sample 3	Online	Peripheral
SL-MC35	Social Media User Post - Wild Hare - Facebook	User Sample 4	Online	Peripheral
SL-MC36	Social Media User Post - Michelle Sgro - Instagram	User Sample 5	Online	Peripheral

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Section 4.4 - The Greatest Sanctuary - Degree of Engagement

The presence or absence of a set of conditions was evaluated to describe the Degree of Engagement in The Greatest Sanctuary, with Degree of Engagement as a measure of a campaign to fulfill a set of engagement conditions to elicit increasingly deeper emotional responses from audience members with the intent to incite participation and actionable events from those individuals who build connections within the storyworld. An examination of any relevance of these strategies and tactics to climate change communications in particular is emphasized.

Furthermore, as I am interested in the conception of a novel transmedia storytelling model, I have also made notes on the applicability of Jenkins's previously examined principles, if and when this is appropriate. This exercise aims to assess how Jenkins's principles might be repurposed and included in my new model to be discussed in Chapter 5.

I posed this research question:

RQ1c: What is the Degree of Engagement across The Greatest Sanctuary campaign?

4.4.1 - The Greatest Sanctuary: Emotional Responses & Actionable Events

The Greatest Sanctuary campaign by SeaLegacy advances a central a core narrative (see Section 4.2.1) that introduces audiences to the Antarctica storyworld made experiential by diversified and controlled storylines (see Section 4.2.3) that are derived from a suite of media forms and published across multiple media channels (see Section 4.3.2).

The elicitation of emotional responses and actionable events from audience members was evaluated to measure engagement more generally in The Greatest Sanctuary campaign. As with the previous analysis on the Degree of Narrativity and Transmediality, an examination of any relevance of engagement to climate change communications in particular is emphasized.

Moreover, as my interest in the conception of a novel transmedia storytelling model persists, I have increased the depth of my analysis of the applicability of Jenkins's previously examined principles in this section. The rationale for this was described in Section 2.4.3.1 but is summarized here for convenience: It

is helpful to appreciate that Jenkins's existing principles could be situated in two different camps during the production of real world transmedia storytelling in climate change campaigns. Recall, control is in the *Hand of the Creator* in pursuing continuity, multiplicity, worldbuilding, seriality, and subjectivity, since transmedia storytelling practitioners make choices about the inherent project design of these principles; and control is in the *Hand of the Audience* in the case of user engagement with content that permits the dimensions of spreadability, drillability, immersion, extractability, and performance. With this in mind, I note that the latter five principles of transmedia storytelling only manifest their full maturity through user engagement and audience participation, whereas the former five principles I have discussed throughout this paper can be implemented by practitioners without engagement necessarily activated (i.e., this is why they regularly appear to play a role in narrative building or Degree of Narrativity). For this reason, in this section, my focus will be on Jenkins's principles that realize spreadability, drillability, immersion, extractability, and performance.

4.4.2 - The Greatest Sanctuary: Mapping Jenkins's Transmedia Storytelling Principles

4.4.2.1 - The Greatest Sanctuary: Spreadability

The viral spread of story content via user and participant engagement online is an active characteristic of The Greatest Sanctuary campaign. It is through the increasingly spreadable nature of SeaLegacy's transmedia storytelling assets, which include a "robust" content library, that a global audience can sign the Only One petition and follow a journey towards the designation of three new MPAs in Antarctica.

For SeaLegacy, spreadability involves varying types of engagement since participants act as both receptive and interactive audience members; that is, they receive information and they are required to have mechanical input into the campaign respectively. Concurrently, spreadability behaviour may involve engagement with textual content since audiences watch, read, touch, and share core media channels, but interaction also occurs with peripheral content, or with material outside of the core content, such is the case with commenting on shareable social media posts or in discussion with friends.

With these types of engagement at hand, SeaLegacy activate Jenkins's spreadability principle and its effect using the newly built Only One activation platform, alongside their own wide reach on social media. In

fact, SeaLegacy's potential to spread content has gained world recognition as countless testimonials like this one from climber Mike Libecki notes: "They spend years working to get these stories, and they're absolutely crushing it, using all the channels to get people to wake up. They're getting people emotional, and we need them now more than ever" (as cited in Bisharat, 2018, para. 9). The Worldwide Speakers Group also state that SeaLegacy have decided to use "their vast social media reaches to educate and share their expert knowledge on the ocean" (WWSG Staff, 2020). A comment on SeaLegacy's Instagram post from @denisewbrossman suggests their core narrative is effectively reaching broad audiences:

> Beautiful and Stunning! What an amazing world we are a part of. Your pictures and videos are of places I will never get to travel to—you share this beauty and bring it to all of us. Thank you for your inspiration, education, and efforts of conservation. It's critical that people all over the world know that our actions have consequences, but we also have the power to make changes in our lifestyles and communities (big and small) to make a difference. Biodiversity will keep this planet healthy and thriving (Brossman, n.d.)

It is SeaLegacy's increasing social media numbers that make it possible to spread content broadly. For example, the Only One platform earned 1 billion media impressions in 2019, reaching 25% of share of voice, a measure of the percentage of the market that a brand owns in comparison to its competitors (SeaLegacy/ Only One, 2021b); this measurement factors in how much SeaLegacy dominate the conversation around ocean conservation.

As leaders in this discourse SeaLegacy share both narrative and analytic-based stories to appeal to broad audiences and in doing so they elicit engagement that might be emotionally and/or cognitively charged. As I have argued throughout SeaLegacy is particularly invested in creating emotional engagement with climate change stories, experiences that viewers might be more readily to share over fact-based content. For example, the intent of the campaign trailer (SeaLegacy/Only One, 2021a), which is likely one of the first media channels a campaign follower might encounter, is to evoke strong emotional connections to Antarctica, whereby the explainer panels—found deep into the campaign website—are there to incite cognitive processing around the science of climate change; while spreading content that has evoked the senses can be as easy as clicking a button with our mouse, perhaps the least demanding physical act required to engage with media, SeaLegacy also ask campaign supporters to take greater physical strides too. Picking up the coffee table book

and placing it in the hands of a key stakeholder is just one example. Taking a friend to a SeaLegacy film screening is another. Of course, as spreadability is concerned, the various forms of engagement—emotional, cognitive, and physical—can occur together so future transmedia storytelling campaigns should consider all three perspectives when thinking about their audiences' responses.

Other substantial statistics suggest the inherent capacity of the Only One platform to diffuse, and control, content particularly well. They have 10M social followers, with a broader reach estimated at 100M. Interestingly, Mittermeier was the first female photographer in the world to surpass 1M followers @mitty on Instagram (Mittermeier, n.d.), and as I understand it Nicklen is the most followed National Geographic wildlife photographer on Instagram with a personal following of 6.9M followers @paulnicklen (Nicklen, n.d.).

The Only One digital experience—"a new, global action platform for individuals to discover the story and plight of our ocean and to participate in making it healthy and abundant again" (SeaLegacy/ Only One, 2021b)—appears to be a novel play in ocean advocacy at least in appearance and scale looking across the sector; it was born out of the conceptualization of The Tide, "a member-based community of passionate people ... giving whatever they can, month after month," which was founded by SeaLegacy in 2017 (SeaLegacy, 2020b). Tide Members have exhibited their commitment to sharing SeaLegacy's content specifically, as this example demonstrates: "I have so much gratitude for these fierce warriors of our oceans and planet. Your love, joy, and dedication to this work is so powerful. Thank you for sharing it with us" (Nixon, n.d.). Lianna Nixon's 5,756 followers could interact and share this post.

What is more is that through the Only One initiative SeaLegacy have access to over 1,000 verified influencers in over 40 countries who also spread campaign content (Only One, 2020). The previously mentioned Forman provides one example:

> #ANTARCTICA2020 - We need your help to reach 1 million petition signatures to create
> THE LARGEST act of ocean protection in the history of the world!!!! With melting ice
> and warming waters, Antarctica and the creatures that live there need us more than ever.
> This vast icy continent is critical in making history: repost this image and sign the petition
> at ww.only.one/act/antarctica. (Forman, n.d.)

@adriangrenier and @prideofgypsies (see Figure 22), among many other celebrities, shared the same post on

Instagram (Grenier, n.d.; Momoa, n.d.).

On the usefulness of influencer contribution, particularly from models at Elite Model Management, Mittermeier said, "The key to the success of this campaign was that Elite was involved from the beginning. They have access to all the supermodels and celebrities that want to help" (C. Mittermeier, personal communication, 2020). Others have critiqued the procedures associated with "celebrity humanitarianism," since it could be "contaminated" and "ideological" (Kapoor, 2013), and while this is likely the case on many fronts, SeaLegacy's influencer connections appear to have advantageous imapct to make the spreadable features of The Greatest Sanctuary campaign even more effective so as I have demonstrated on a few occasions now; Mittermeier attributes this celebrity involvement to the "captivating power of creative content and the unifying power of digital technology" (Only One, 2020).

Mittermeier also believes the Only One platform is "going to empower everybody"; "our understanding is that most conservation organizations are not going to have the foresight or the will to make an investment into this kind of platform. In my mind, this is really going to move the needle" (C. Mittermeier, personal communication, 2020).

It should help others as well says Mittermeier: "Our conservation partners do amazing work ... but they often struggle to tell their stories, which makes it tough for them to attract support and funding, and scale their impact. That's where we come in" (SeaLegacy, 2020a).

This investment might be self-serving too. According to Mittermeier the platform is already generating considerable value: There are economic, or financial, gains to be made as their content is shared and consumed by individuals who become future donators, or Tide Members. But SeaLegacy also gain in artistic ways since the Only One platform is designed to take advantage of the feedback provided by peers and the public who acknowledge both success and failures, or what can be improved upon in subsequent iterations of the campaign. Mittermeier has commented on this value: "If you have a tool like the internet, like social media, where you get feedback on your stories, you start getting better at it" (C. Mittermeier, personal communication, 2020). And when you start to get good at it, Mittermeier says people notice (C. Mittermeier, personal communication, 2020). Thinking more about Jenkins's spreadability principle SeaLegacy has garnered international recognition and reputational value. Mittermeier is certain this endorsement has helped grow SeaLegacy's loyal following.

As a last note on spreadability, the cost obligation on the audience to disseminate stories relating to The Greatest Sanctuary campaign is mostly defined by the amount of time or attention individual campaign
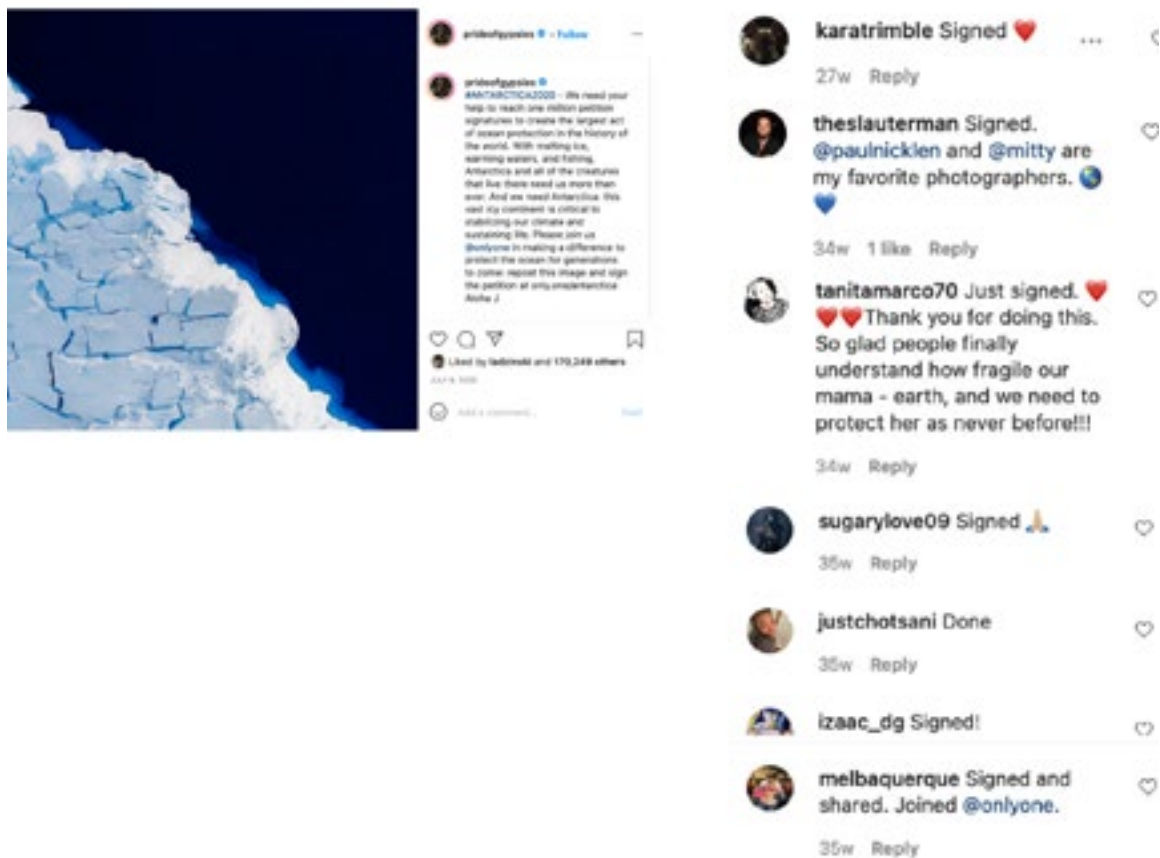
Figure 22:

Sample comments on @prideofgypsies shows people who have signed The Greatest Sanctuary petition.

Figure 23:

Followers demonstrate how SeaLegacy campaigns affect their own lives.

supporters will need to give up to distribute content. In this regard, SeaLegacy exercise shareable content with the Only One platform so the ask here is minimal; there is also no financial demand to elicit the capacity of the public to share content through their personal social media networks.

4.4.2.2 - The Greatest Sanctuary: Drillability

Whereas spreadability is concerned with the capacity to draw in more eyeballs, but not necessarily deeper engagement, drillability is interested in the process of discovery and "the complexity of a story,"—as in the experience "beneath the thin blue line," as SeaLegacy describe in strategic communication documents, where audiences can "see the possibilities: New corals vibrating with life. Schools of fish darting through once-empty seas. Seagrass meadows swaying with plankton-rich currents. Whales feeding sleepily, protected by former hunters" (SeaLegacy, 2020a, p. 58).

On the matter of digging for more details across media channels, SeaLegacy built The Greatest Sanctuary campaign around this concept of drillability; that is, as audiences descend into the depths of storyworld seeking out both Core and Peripheral content—almost investigating—their mental construct of Antarctica grows along with their emotional, cognitive, and physical engagement. That is, we feel with Captain Poncet in a National Geographic feature (Welch, 2018), who alongside his family has witnessed Antarctica change over the course of his lifetime; we learn more about swarming schools of krill in the fourth episode of the campaign video series (SeaLegacy/Only One, 2020b); and we act when an influential ocean advocate asks us to repost her important messaging to draw attention to the cause (Forman, n.d.).

What might help make The Greatest Sanctuary campaign so drillable is that audience members do not get lost at such depths; that is, the campaign adheres to a definitive core narrative that elaborates upon the idea of delivering "the largest act of ocean protection in history" (SeaLegacy/Only One. (2020f). As noted earlier, the campaign website addresses this central message: "Three new marine protected areas would offer much-needed resilience to climate change." (SeaLegacy/Only One. (2021b). And Mittermeier offers up her own interpretation of this main idea in a news article posted online: "There are places on our planet that, although rich in resources, should be off-limits just because they are ... so critically important for maintaining planetary balance and ecosystem health at a planetary level (as cited by Allen, 2020). In this vein, drillability is possible because of continuity, or the articulation of a campaign's overarching goal through the coordination of this messaging across media channels (Jenkins, 2009a). This coordination breeds coherency

leading to narrative congruency, and subsequent higher comprehension. But these narrative mechanisms that help establish drillability have to last, according to Mittermeier: "Sometimes a campaign happens in a very short period of time, and sometimes it's not a sprint, it's a marathon … climate change is a marathon" (C. Mittermeier, personal communication, 2020). So when politicians drill down into the issues surrounding Antarctica, SeaLegacy's core message has to remain present to guide these decision makers. Testimonials in the coffee table book provide those details and at the same time build trust because of who writes them. An account by ocean advocates Ashlan and Philippe Cousteau, on page 202, provides an example:

> Antarctica, a symbol of hope, a haven of science, and a place of peace. Despite its remoteness, the Great White Continent's influence can be felt by every human. Draped in its crisp white cloak of ice, Antarctica controls our planet's climate, its bountiful cold waters feed our ocean food web, and its very existence is a source of mystery and wonder to all. But our dependence on fossil fuels, our demand for unsustainable fish, and our war on science is putting this vast continent and, therefore, all of us at risk. Now more than ever, we must come together as one voice to treasure this magnificent place and fight for its protection. (Weller et al., 2020, p. 202)

In fact, SeaLegacy is highly effective at setting up drillable sojourns for key politicians and the public alike because individual storylines present diversified elements of the core narrative in an orderly and manageable way so even when diverse audiences search content out, this expanding material does not stray too far from a single unified storytelling experience established by the boundaries of the Antarctica storyworld. This minimizing of multiplicity begins early in the campaign conception as SeaLegacy think about authoring the core narrative experience first and throughout (see Section 4.2.1).

Relatedly, Weller, who has been working in Antarctica for more than two decades, puts the condition of drillability as it concerns user engagement into this context:

> We're so inundated with information ... people are absolutely overrun with information. To separate yourself from that fray, and the cacophony of competing voices, you need to reach deeper into somebody. You need to make them stand still for at least a minute. The average attention span is down to seven seconds or less. That's how long you get make

your point. You have to be able to extend that to tell a nuanced story like climate change or

marine protected areas or anything that's important. The visual storytelling is an in, a way

to connect on multiple levels, you can connect to people on an emotional level through

visual storytelling. (J. Weller, personal communication, 2020).

He adds more insight on this topic:

Even if it's a short film, five minutes, it gives you a ton more time than you usually have

to make your point. It increases people's attention span, it gives you a way to mix a

factual story with an emotional story, to reach deeper into somebody's psyche and make

them care about something in a different way. It gives a way to communicate complex

information in a way that people can absorb. You want to talk about ice melting, show

them a glacier collapsing. That's not something they're going to forget. (J. Weller, personal

communication, 2020)

SeaLegacy has more in mind when they think about drillability and climate change campaigning.

The organization is well aware of the increased cost to followers, who commit more time, attention, and

finances to the cause, so this greater investment is rewarded. To overcome the financial burden of a donation

in particular, donors are awarded special access, another novel play in the environmental sector whose

incentivizing with stamps or stuffed animals might be tired. Tide Members who donate as little as a $5 per

month to SeaLegacy get a first-glance at yet-to-be-published footage via a link sent to their personal inbox.

Instant gratification for these participants ensues because they are part of something unique and noteworthy.

For SeaLegacy, designing a campaign with drillable qualities is not inconsequential either, as they

stand to benefit from followers who enter into a "funnel" and engage with The Greatest Sanctuary campaign

beyond the entry level through the use of an inverted pyramid of engagement scheme. This "approach to

growth" first aims to "convert existing funnel" followers, or Level 1 members, to a deeper level in the

pyramid, and then looks to "expand the funnel" (Only One, 2021). More specifically, the conversion practice

involves "organic engagement" across "social, email, platform, and peer-to-peer" communications and

expansion grows with "paid acquisition and conversion campaigns," as well as through "distribution on

partner channels to reach new audiences" (Only One, 2021). A SeaLegacy strategic document provides even

finer details on this approach:

We are well positioned to refine funnels to improve acquisition and conversion, scale organic and paid growth activities, and drive engagement of existing members to maintain retention and stave off churn. We will tackle these efforts while working with teams to launch 1–2 new series/campaigns. Additionally, we will use Q1 to set the foundation for broader media, brand, and influencer partnerships to reach new audiences and fuel growth in Q2 and Q3. (Only One, 2021)

4.4.2.3 - The Greatest Sanctuary: Immersion

In some ways to become completely immersed into the Antarctica storyworld is to take on the responsibility of its protection through the process of bearing witness. This is SeaLegacy's goal with their transmedia storytelling. In a strategic document, the organization details this intent specifically: "The Only One platform reimagines ocean conservation as transformative, epic journeys that anyone, anywhere can embark on" (Only One, 2020). Mittermeier attests to the value of immersion: "That's the call-to-adventure. You're bringing people with you and you're making them invest" (C. Mittermeier, personal communication, 2020)

This immersion condition is best exemplified as users engage with the behind-the-scenes media that I have detailed already (e.g. see Section 4.2.2.2). While descriptive language of Antarctic can trigger mental thoughts, it is the sensory and affective experiences cued by spectacular visuals that permit greater transportation into storyworld; we have known for some time now, that showing can be more effective than telling, since media forms derived from language require cognitive processing to fill in the gaps whereas visual storytelling leaves less to the imagination and immediately evokes our senses.

Tapping into the senses is how SeaLegacy get people to enter into Antarctica.

A better understanding of the neurological processing of the audience provides one account for why the from-the-front-line perspective that SeaLegacy employ in their visual storytelling works so well to immerse audiences. The rationale is rooted in the idea that, "Experiencing agents" (James & Morel, 2020, p. 131), like Mittermeier and Nicklen, imprint their subjective accounts of Antarctica's features upon us so that their focalization on an iceberg or a leopard seal can be simulated by viewers, thereby creating affective meaning on important subject matter. In this way, the "brain-body" system functions to model the actions of

the photographers working in Antarctica onto the part of the brain that is also active when we do the same movements ourselves (James & Moral, 2020, p. 132). Relatedly, audiences can also sense how Mittermeier and Nicklen feel in certain situations; neuroscientists Giacomo Rizzolatti and Corrado Sinigaglia state the following: "The perception of pain or grief, or of disgust, experienced by others activates the same areas of the cerebral cortex that are involved when we experience" these emotions (Rizzolatti & Sinigaglia, 2008, p. xii). This is how SeaLegacy take us on their journeys. This feeling alongside Mittermeier and Nicklen ground the audience's ability to empathize—such an evocative and visceral experience might be present in *Polar Obsession 360°* (Lilies & Martin, 2018), as audiences use a real world conduit (i.e., cardboard goggles or sophisticated headset) to become totally immersed into Antarctica's Southern Ocean through a virtual reality transportation. To see as Nicklen does when a whale swims by or a leopard seal plays with him is also to feel what that encounter could be like.

As audiences engage in embodied simulation this immersion connects people with special characters, but it also heightens "our experience of the narrative environments that surround these characters and that stand in complex relationships to them" (James & Morel, 2020, p. 133). In other words, as we watch Mittermeier and Nicklen pick up their cameras, and form a relationship with their subject matter and surroundings, we do too (see Lilies & Martin, 2018 for example).

Creating immersive experiences that permit the audience to bear witness to the complexity of the storyworld and the issues that are present there is central to SeaLegacy's role in bringing the invisibility of climate change to the forefront. This is one of the reasons why Mittermeier and Nicklen's voiceovers are included in many of The Greatest Sanctuary media channels; "first-person narrators tend to give readers a good deal of insight into the qualitative, experiential, or felt properties of their own mental states—what they think and how they feel about the people, things, and events they encounter in the storyworld" (James & Morel, 2020, p. 14). It is also the reason why SeaLegacy get involved in exhibitions; to provide some form of evidence, the "aura" of original work, which might be obtainable for only committed visitors seeking it out (Benjamin, 2008).

Since many of us cannot feel the effects of climate change, SeaLegacy do it for us when they travel to the front lines on their campaign expeditions and bring imagery back. In doing so, audiences become vicarious witnesses because they have observed what was unseen. For Heinrichs, it is immersion and the act of seeing, that leads to believing:

The storytelling creates an emotional connection between the issue and the viewer. You can't just show the science, you need to take the emotional steps to protect it. If you don't care about something, you don't act. Our job is to present the information in a beautiful package that makes you feel. (S. Heinrichs, personal communication, 2020)

SeaLegacy has the challenge and the self-assigned responsibility to encourage more expert witnesses to participate in The Greatest Sanctuary campaign. Their ask is for people's time and attention on a grand scale; engagement on a visceral level is what will convince people. SeaLegacy are making headway online as they draw attention from various sectors interested in their innovative and collaborative campaign design; they are one of the fastest growing marine focused environmental organizations around. This successful growth is no doubt in part due to the high-quality visual storytelling that is providing entry into Antarctica with access like we have never had before: Targeted digital marketing leads viewers to evergreen platform experiences that contain multimedia content series, calls-to-action, and tools that make supporting the campaign a global event (Only One, 2020). So while the task of worldbuilding to immerse audiences rests with SeaLegacy, once inside the Antarctica storyworld, audiences may have a greater role to play because they have learned to care about this faraway land.

This deeper immersion sets the tone for Jenkins's other principles to play out.

4.4.2.4 - The Greatest Sanctuary: Extractability

Jenkins's extractability principle involves audiences taking resources from a campaign, or aspects of the story, into their personal lives and spaces; such elements could be physical but can also involve content that affects people philosophically or behaviourally as we shall see.

Extractability plays out in The Greatest Sanctuary campaign in varying ways, but a description of the organization's "ocean theatre" experience first provides an exemplary account of the potential of this principle. Ocean theatre is a campaign project in which SeaLegacy and its on-the-ground partners show videos on a 25 foot wide screen, using an all-weather projector that works in the rain. On-location in remote areas around the world community leaders can use SeaLegacy's campaign material to host events where visual storytelling assets showing local issues are front and centre. The "ocean theatre" concept provides a strong example of extractability since SeaLegacy's involvement, the provision of "expert consultation" to set

up the cinematic experience, is at a minimum (J. Weller, personal communication, 2020).

Weller puts the community organized "outdoor film screening" into context:

We'd have 1000 people show up ... canoeing in from the surrounding communities to see this movie and hear this singer who's a local hero. In the aftermath, we were having Muslim leaders stand up and quote the Christian priest who shows up in the film, and vice versa. Christian leaders quoting the Imam who shows up in our film. So the messaging was crossing religions. We were having women stand up, which is rare there. So it was crossing gender. We were having young people stand up, which was also very rare there. So it was crossing generations. With visual storytelling we were able to cross religion, gender, and generations all in one hour, a one-hour film, and create these community conversations where people were recommitting to conservation, where standing up and pledging their allegiance to this cause. (J. Weller, personal communication, 2020)

Dialogue brought about by local mobilization efforts are a result of ocean theatre since this engagement elicited through extractable campaign resources, influence people's thoughts and actions in the places where they live, work, and play. This dialogue is effective because SeaLegacy's critical and timely stories become the stories of a community; extractable tools like ocean theatre are valuable because they elicit everyday conversations that might otherwise go unsaid.

Other noteworthy transmedia storytelling teams have used the promising synergy of visual storytelling and local conservation initiatives as a means to abate climate change before. For Yarnall and National Geographic, perhaps the world's most pre-eminent storytelling platform, extractable expedition assets are fundamental to their recent success in what she calls "the best case study" (K. Yarnall, personal communication, 2020). Yarnall further explains:

Pristine Seas is probably the best case study because the metric of success is very clear. It is acres of ocean protected. And the formula is that expeditions are mounted and people go out with equal weight put on the science and the storytelling. So the goal is to create a dossier of information that will make whoever has the power to decide to protect an area. So that means you need this scientific evidence that says this is why this place matters. That

gets the brain there, and gives you why from an intellectual level. But I would argue just as important, if not more important, you need the emotional reason. And that comes through imagery, film, stills. And that is all pulled together and a case is made to a government official to protect the area. Sometimes it trades on pride, shame almost—you wouldn't want to lose this, would you?—but if they just went in with scientific information, people wouldn't be moved to act in the same way. (K. Yarnall, personal communication, 2020)

The synergy between visual storytelling and mobilization efforts on the ground appears from the inception of the Pristine Seas work as described in the words of the project founder, Enric Sala, who highlights the need to make ocean protection someone else's responsibility, a process enabled by extractability:

We have a very clear goal, which is to convince country leaders to protect very wonderful places in large marine reserves—areas without fishing, drilling, mining—places we set aside for nature. Convincing that person takes a rational side, science and economics, and it also takes an emotional side, which is we have to make that person fall in love with a place. What we have developed over the years—and I have to admit that we did not start with this sophisticated process, we had to learn along the way, which took us years—we are not telling stories, we are selling a story. You know, you have three acts in a classic story, and that's the way we approach it. We have this wonderful place we go to, we do our research, we do our film. And then I want to persuade that country's President to protect the place. We show her that this place is wonderful, so unique, and nobody in the world has something like this, but…the place is endangered. And the threat is imminent. And we need to do something about it urgently. What we sell to the leader is, we want the leader to be the third act, the leader to decide, "I just discovered this place, it's wonderful, we're going to lose it, I want to save it." This is how we have changed storytelling to story-selling. And so far it's worked well. We leave the story unfinished, for that person to want to be the hero that brings the story to a conclusion. (National Geographic Society, 2020)

According to Sala, he was "writing the obituary of the ocean" as a professor studying the woes of marine conservation, before quitting the academy to become a full-time conservationist and storyteller (Sala, 2015,

p. 16). The move has been fortuitous for Sala and the conservation community: The Pristine Seas website reports that the project has carried out 31 expeditions and has helped create over 6 million square kilometres of protected areas, including 23 marine reserves (National Geographic Society, 2020).

Similar to "the best case study," SeaLegacy are making strides to deliver elements of their stories to diverse audiences who might be impacted in their lives in ways described above: Youth who participate in online education experiences and live streaming events, for example, or entrepreneurs, who are focused on creating ocean conservation solutions in-the-field of engineering, could benefit from exposure to SeaLegacy's media content (SeaLegacy, 2020a). On the latter, SeaLegacy note:

> That's why we're launching a new collaboration program to explore emerging opportunities to work with partners in the tech sector. By bringing together two seemingly different industries—conservation and technology—we hope to spark new ideas that benefit both. This might involve creating new products or services together, or supporting our partners' corporate social responsibility work by engaging their employees in our journey. (SeaLegacy, 2020a, p. 44).

Extractability works effectively to influence ocean protection at scale, as well as to incite pioneering collaborations between disparate fields. Yet, the benefit of extractability does not always have to be so substantial. Throughout the course of The Greatest Sanctuary campaign, audiences can search online for book templates that can be printed and coloured as part of an "artivism" exercise (SeaLegacy, 2020b). This use of Jenkins's principle to affect the daily lives of people was particularly timely during the 2020–2021 COVID-19 pandemic when many parents were at home with their children; despite the lock down, this colouring was a "great way to combine art with exploration" (SeaLegacy, 2020b). An ambitious Mittermeier thinks this tactic has even greater potential:

> We're working with the Paradise Foundation in China to try to get this type of ocean literacy content to 20 million Chinese kids. Because how can you care about the environment when it's not part of the school curriculum? We're trying to close that knowledge gap through our content and do it in a fun storytelling way. (C. Mittermeier, personal communication, 2020)

Still, SeaLegacy know that their media content is only one part of the equation. Beyond their own strategy and tactics, and in addition to a "global movement" that shares and participates in this work (see Figure 23), SeaLegacy have echoed the critical role of "local mobilization" (Only One, 2020), and the implementation of "culturally-resonant" media that supports partners and provides resources for local audiences and leaders who in turn mobilize communities and influence key decision-making on the ground as part of the work they do. Simply put, SeaLegacy's broader ocean conservation initiatives, including The Greatest Sanctuary campaign, takes into account extractability so campaign assets can be used at strategic leverage points along a timeline or in key call-to-action scenarios—consideration for what media forms and channels to make available for such exercises is important too.

This was the certainly the case on June 10, 2019, in the building of the State Duma of the Federal Assembly of the Russian Federation, when local stakeholders used the works of SeaLegacy members to showcase imagery of Antarctica. Speaking at the event that day was the Chairman of the Committee on Ecology and Environmental Protection, Vladimir Burmatov, who noted the exhibition was a "continuation" of their own work. Burmatov's translated oration stated:

> The fact that today these truly outstanding works are located within the walls of parliament
> is not accidental, because for a long time the Antarctic theme was outside the field of view
> of legislative regulation. Our convocation began to deal with this issue, and just recently
> we adopted a law on national inspection in Antarctica, which makes it more obvious and
> simple to comply with the international agreements in which the Russian Federation is
> located, and more a transparent procedure for national inspection and assessment of the
> state of those stations and works that are carried out there. ("The exhibition Icy Embrace
> of the Southern Continent," 2019)

Related to the exhibition, SeaLegacy team member Weller led the production of a Russian language coffee table book—a physical resource to be used as an advocacy tool by partnering NGOs involved in the effort to protect Antarctica—that further demonstrates the extractable nature of media content in the Greatest Sanctuary campaign; according to Weller the book will be used to start some very interesting conversations throughout the course of their campaign:

The entire goal of media, of storytelling, is to start a conversation. That's it. That is the

entire goal. And if you can get the right people, the right two people talking, you can

change the world ... and sometimes the pathway to getting those two right people talking

is that you have to get everybody talking about something. But a lot of times there are

shortcuts, there are strategic shortcuts to getting the right people to come to the table with

the right understanding of the story and connect them in productive conversation. And I

believe that the role that media plays is it creates an emotional connection to an issue that

will create ownership. And true ownership of the outcome of the issue. (J. Weller, personal

communication, 2021)

On this notion of "real world social change," mobilized by local stewardship, Jenkins's makes

"logical" connections between his transmedia principles of immersion—which considers media's effect on

the "perceived" relationships of "everyday experiences," after the audience enters into a story; extractability—

which considers media's affect within the spaces of "everyday life," after the audience takes aspects of the

story away; and performance—which considers tangible actions, or "everyday" contributions audiences can

make (Jenkins, 2009a).

To conclude this section, let us consider Jenkins's performance principle next.

4.4.2.5 - The Greatest Sanctuary: Performance

To begin, it is worth pointing out an existing dichotomy surrounding the use of Jenkins's performance

principle. While some transmedia storytelling literature will recognize the performance of the creator, or

the actions of characters like Mittermeier and Nicklen who play the archetypal hero, or polar-explorer, in

many of their own campaign behind-the-scene storylines, there are other scholarly opinions that state that

performativity is beholden to fans, or audiences members that are asked to make their own contribution (i.e.,

answer the call-to-action).

In the context of The Greatest Sanctuary case study it is the latter application of performance we

should attend to as the current focalization is on specific user engagement, but also because I addressed the

effect of character development as performative roles in Section 4.2.2.1.

Interest in the latter conceptualization of performance is also necessary as an analysis of The Greatest

Sanctuary rests on two specific calls to action that deserve special attention; that is, the signing of a petition by public supporters at https://only.one/act/antarctica and the commitment to protect Antarctica by "world leaders" who vow to "deliver the largest act" of ocean conservation in history (SeaLegacy/Only One, 2020d).

In either case, it is to be understood that the performative acts of the audience are responsible for the success of the campaign.

The call-to-action concerning the petition also involves the innovative use of Jenkins's spreadability and drillability principles to both draw in audiences and convince people to participate through deeper engagement; but petition signing is nothing new (e.g. https://www.change.org). What might be is the greater transparency of the process as Mittermeier suggests:

> So we are building a dashboard, an individual dashboard for every user where you're going to be able to see your cumulative conservation impact. How many stories have you watched, how much money you've donated, how many petitions you've signed. You're going to be able to see who in your group of friends and in your larger community is also taking those actions, and how many people around the world. Because the key to the success of conservation is clear validation. If your peers are doing something, you're more likely to do it as well. So building that sense of community and forward motion together is key to success. (C. Mittermeier, personal communication, 2020)

In other words, SeaLegacy are all in on tribe mentality and the performance of this loyal group. That we have an evolutionary history that draws us towards each other for a sense of belonging is what activates Jenkins's performance transmedia storytelling principle. Wilson (1998) mentioned this in the past (see Section 2.2.1) and Junger (n.d.) has stated the same more recently: "We have a strong instinct to belong to small groups defined by clear purpose and understanding—tribes" (para. 2). As of this writing, 169,104 people have come together to sign The Greatest Sanctuary petition.

What is more is that SeaLegacy have identified a benchmark for this tribe-mentality success. Campaign stakeholders are aiming for one million signatures before the end of 2021 and the broader goal is loftier than that: "We will inspire a diverse network of individuals to fall in love with the ocean and mobilize 3.5% of our global population to take meaningful actions that revitalize and protect ocean health" (Only One, 2020). According to Erica Chenoweth, a political scientist and professor of public policy at the Harvard

Kennedy School and the Radcliffe Institute for Advanced Study, citing the "3.5% rule" has some merit: After collecting data on 323 nonviolent civil resistant global campaigns between 1900–2006, research determined that, "no single campaign has failed … after they had achieved the active and sustained participation of just 3.5% of the population. And lots of them succeeded with far fewer than that" (Chenoweth, 2013).

Tribe dynamics galvanize SeaLegacy's committed supporters who act—share and sign—on behalf of the broader goal as place-based storytelling evokes the senses while making more sense of the Antarctica storyworld, but Mittermeier thinks there is more to gain from these accumulative and performative acts beyond any single initiative as SeaLegacy's brand and recognition gain ground. She notes: Not placing a value on visual storytelling, the principal resource at the centre of The Greatest Sanctuary—has been a perpetual weakness of the environmental movement:

> The reason we found ourselves in a climate change extinction pickle, is because the conservation community has been working in a resource starvation mode for the last thirty years. So the United States—we use them as a study case because they're the most philanthropic—raise about $480 billion dollars every year for charity. But 32% goes to religion … and at the very bottom 1.8% goes to the environment, and a drop in the bucket of that money goes to communications. So we need to flip this pyramid (C. Mittermeier, personal communication, 2020).

She adds:

> I'm hoping with the thing that we're building, because it's so reliant on analytics and metrics, that we can actually demonstrate that without communications at this scale, you cannot win. We're just going to continue beating our heads down the same path. And what I'm experiencing now with the partners we're inviting to participate on the platform, people like the Blue Nature Alliance, they have something like $60 million to put toward marine protected areas, but communications is an afterthought. (C. Mittermeier, personal communication, 2020)

Despite this challenge, SeaLegacy argue they have a growing amount of evidence to suggest the

increasing value of storytelling—particularly transmedia in design—that continues to be central to their growth over time: "On average our donors give us $17 a month. That's amounting to about $1 million a year, which is additional money for causes in the ocean that didn't exist before" (C. Mittermeier, personal communication, 2020). Mittermeier further attests to the small acts individuals can make:

> To give you an example of how difficult it is, of the universe of 15 million people who follow SL's accounts, only 4000 are small dollar donors. The reason we wanted to invite people to become donors and investors in projects—some of those projects are ours, some it's money we pass through to others—is because if you have somebody take that small action and you show them that their small donation has a significant impact, it is almost a "holy shit moment" for those people, to realize that they did have an impact and they're having an impact together with this many other people (C. Mittermeier, personal communication, 2020)

In the end, there is just one act that The Greatest Sanctuary key stakeholders need to make. It is a performance designed to be at the epicentre of the next CCAMLR meeting where the governing body of 25 member states and the European Union will decide the next chapter in Antarctica's fate. Whether SeaLegacy team members are present or not, Mittermeier assures us that her campaign partners will stay the course: "We have a campaign white paper, to make sure we're speaking a common language" (C. Mittermeier, personal communication, 2020).

Mittermeier insists their story—their narrative—will be heard when the time counts.
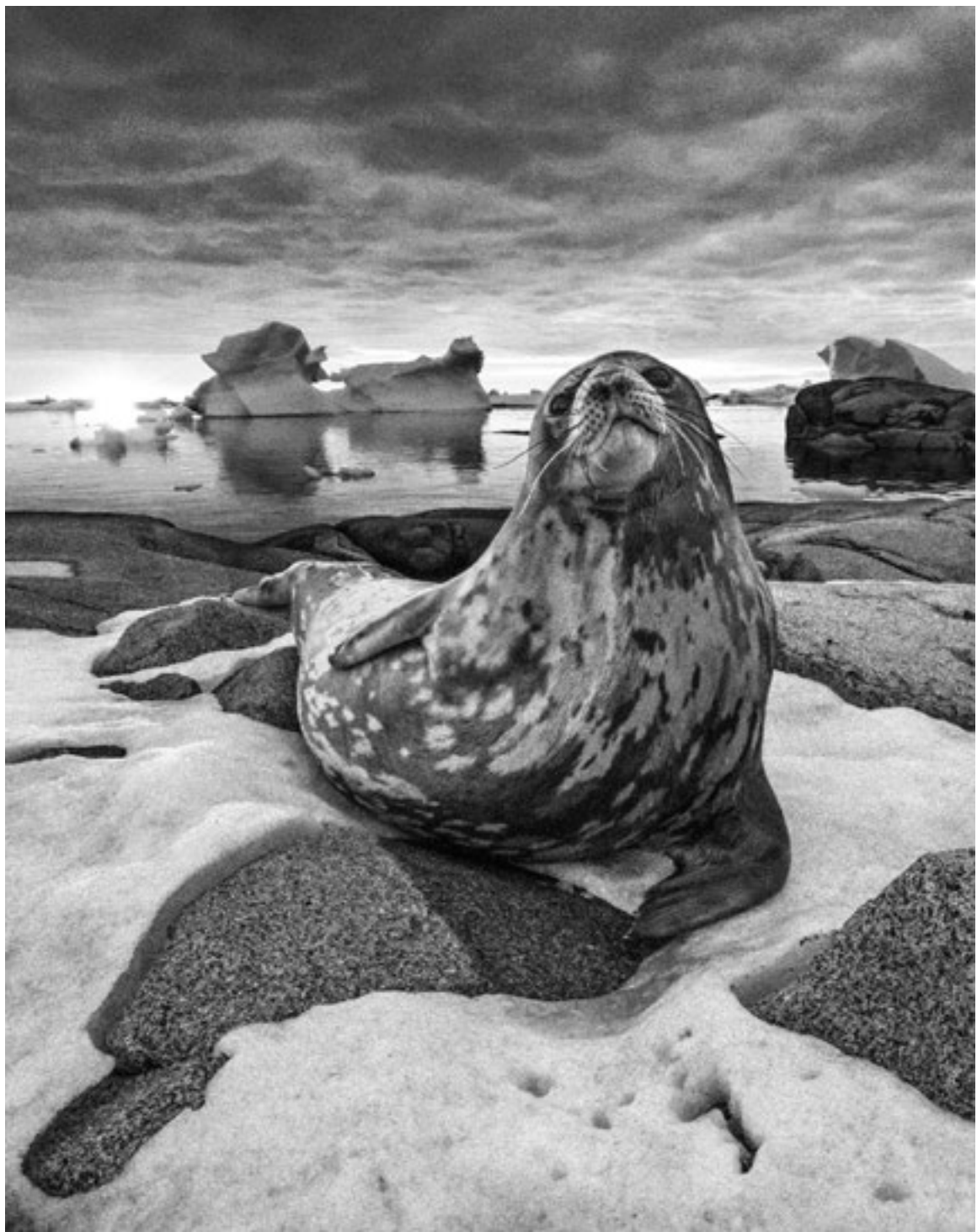
© Andy Mann / SeaLegacy

Summary of Part A

Part A of Chapter 4 demonstrated that SeaLegacy pre-mediated many of the structural elements of The Greatest Sanctuary and implemented transmedia storytelling best practices throughout the campaign, while adding key components at intervals along the way, as evidenced by the fulfillment of the following:

H1a: The SeaLegacy ocean advocacy organization effectively performed transmedia storytelling using organization and campaign specific core narrative statements that state, "Restoring ocean health is the most powerful way to save the planet and ourselves" and "Three new marine protected areas would offer much-needed resilience to climate change," respectively. The case study analysis of The Greatest Sanctuary also confirmed the presence of a minimum of 15 diversified and controlled storylines that provided increasing dimensionality of the Antarctica storyworld (see Table 5).

H1b: The SeaLegacy ocean advocacy organization effectively performed transmedia storytelling using integrated media forms and an increasing number of media channels. The case study analysis examined the presence of language, image, object, and music media forms across the campaign and examined a minimum of 20 core media channels (see Table 6).

H1c: The SeaLegacy ocean advocacy organization effectively performed communicative action that elicited emotional responses and actionable events in the form of audience engagement and participation with the Antarctica storyworld. SeaLegacy accomplished this using pioneering and innovative transmedia storytelling best practices that predominantly deployed world class and state-of-the-art visual storytelling prowess across social media platforms.

Part B
Charged Up

Part B - Charged Up

In Part B of Chapter 4 I will assert that the David Suzuki Foundation demonstrates exemplary transmedia storytelling through expert employment of narrativity and transmediality conditions, and this communication action has led to emotional engagement within the Charged Up campaign. To support this claim I tested the following hypothesis:

H1: The David Suzuki Foundation effectively performs transmedia storytelling to (a) advance a core narrative and multiple storylines that are diversified and controlled across (b) integrated media forms and an increasing number of media channels, and (c) this communicative action elicits emotional responses and actionable events in the form of audience engagement and participation with climate change discourse.

I next proceed with an analysis of the David Suzuki Foundation's Charged Up campaign.

Portfolio: Canada's community powered storyworld
Pages 274–378

Collection of images made across Canada by various photographers. Copyright David Suzuki Foundation unless otherwise noted.

Above © Green Energy Futures

Page 318 and 442 © Neil Ever Osborne

Section 4.5 - Charged Up: Strategy & Tactics Overview

Who are the primary stakeholders?

David Suzuki Foundation with communications across Canada

Who is the primary audience?

DSF supporters (and other Canadians who are enthusiastic about renewables)

Who is the secondary audience?

Established community clean energy leaders

Who is the secondary audience?

Emerging community clean energy leaders

What is the call-to-action for these audiences?

Support a 20% growth of renewable energy by 2020; for example, increase the number of Canadians engaged in community-led renewable energy projects; by 2020, build a clean energy community of 80,000 Canadians (and 200 community leaders), including those who are already involved in projects (energy leaders), the citizens who are supporting these projects (DSF members and audience) and those who are ready to start something in their own communities (emerging leaders)

When does the campaign to take place?

Multi-year timeline with no definitive conclusion

Where does the campaign take place? i.e. where is the storyworld?

Canada

Why is this campaign important?

Promoting community energy is an essential strategy for scaling up renewables in Canada and helping the country meet its climate commitments

How is the campaign communicated?

Using transmedia storytelling that includes:

- Standard photography and experimental videography captured using freelance contractors over the course of select field assignments
- Limited social media posting and public engagement
- Grass roots local events
- Political lobbying with Charged Up campaign assets

Using Core campaign media channels that include:

- 1 website: https://davidsuzuki.org/take-action/act-locally/charged-up
- 3 petition webpages: https://davidsuzuki.org/take-action/act-locally/sign-up-charged-up-network; https://davidsuzuki.org/action/your-renewable-future; and https://davidsuzuki.org/take-action
- An expanding volume of online videos presented by DSF and Charged Up
- An expanding volume of online articles
- An expanding volume of Charged Up emails (via subscribers@davidsuzuki.org
- 1 launch event

Using Peripheral campaign media channels that include:

- An expanding volume of Expert Views online articles
- An expanding volume of Tips from the Queen of Green online articles
- An expanding volume of David Suzuki's Science Matters online articles

Using Peripheral campaign social media channels that include:

- An expanding volume of David Suzuki Foundation social media posts
- An expanding volume of user-generated content (i.e., Members) and social media posts

- 1 CliMate chatbot video trailer

- 1 CliMate chatbot Messenger

Using Partner campaign media channels that include:

- 4 online videos

- Nature of Things Rebellion

Using News publications that include:

- An expanding volume of online news articles

© Rachel Lando

Section 4.6 - Charged Up: Degree of Narrativity

The presence or absence of a set of conditions was evaluated to describe the Degree of Narrativity in Charged Up, with Degree of Narrativity as a measure of a campaign to fulfill a set of narrative conditions within an individual storyline that is controlled and diversified in order to advance a central idea, or core narrative. I also examined the presence of individual diversified and controlled storylines that serve the dual purposes of advancing a core narrative and increasing the dimensionality of the community-powered renewable energy storyworld. An examination of any relevance of these strategies and tactics to climate change communications in particular is emphasized.

As was the circumstance with the SeaLegacy case study, I am interested in the conception of a novel climate change communications model, so I have also made notes on the applicability of Jenkins's previously examined transmedia storytelling principles, if and when this is appropriate. To recall, this subsequent task aims to assess how Jenkins's principles might be repurposed and included in my TREES Model to be discussed in Chapter 5.

I posed this research question:

RQ1a: What is the Degree of Narrativity across the Charged Up campaign?

4.6.1 - Charged Up: Core Narrative

Narrative building achieved via dialogue has been presented by scholars as a strategic next step to make sense of climate change. For Adam Kahane, "humanity is increasingly stuck in complex and polarized situations" because we cannot solve the "really tough problems" working on the little pieces "only with people we like." We need dialogue "to be scaled up tenfold" to move us through the "gridlock," but we "do not have to understand, agree, or trust each other in order to work constructively and openly in the creation of new stories" (as cited in Hoggan, 2016, p. 125–128).

Showing and telling new stories that introduce existing solutions and provide a mental construction for a sustainable future is how we can make better sense of the complexity of climate change while motivating people to act. Stories act as blueprints, or "frames," according to Lakoff (2010), because they comprise "images, metaphors, narratives, and emotions" (p. 71–72), that we all use to both cognitively respond

to scenarios in our mind and affectively engage with real world circumstances. That is, what happens in our local—and global—communities is partly defined by the stories we pass on to one another and these individual stories assist with the manifestation of a core narrative—Barthes's "next level" (Barthes, 1982, p. 259); Foucault's "instrument of power" (Foucault & Gordon, 1980); and Schaeffer's playfield for "thought experiments" (Schaeffer, 1999), as described in Section 2.2.2.

And because core narratives, understood as a mode of thinking, assist with worldbuilding, they are an effective means to create storyworlds which we enter into through transmedia storytelling best practices as we have seen evidenced in SeaLegacy's The Greatest Sanctuary campaign.

The David Suzuki Foundation, an evidence-based research, education, and policy focused non-profit organization, co-founded in 1990 by David Suzuki, believes in dialogue as an effective narrative building tool as well: "One of the most important things you can do about climate change is to talk about it" (David Suzuki Foundation, 2020c). Because climate change threatens the planet's life-support systems the David Suzuki Foundation aims to shift the climate narrative from despair to possibility by immersing Canadians into Canada's renewable energy (RE) storyworld where they can experience stories, alongside other citizens, cities, Indigenous communities, and businesses, to better understand the impending impacts of climate change and what can be done to mitigate the crisis. In particular, Canada's most well-known environmental organization successfully uses dialogue at the local level to advance a core narrative about the promise of RE; according to the Global Warming of 1.5ºC report, the Intergovernmental Panel on Climate Change (IPCC) suggests that, "renewables are projected to supply 70–85% of electricity in 2050" and The International Renewable Energy Agency (IRENA) notes "renewable energy features prominently" in the Paris Agreement and "the transition to a renewable energy future" is "central to addressing climate change" (IPCC, 2018, p. 17; IRENA, 2017, p. 7). For Stephen Cornish, the CEO of the David Suzuki Foundation between 2017 and 2020, and the introductory speaker at the Charged Up campaign launch event, "More than ever, we would all benefit from inclusive dialogue and solutions—strategies to help make sure the [energy] transition is just, equitable, and includes everyone (S. Cornish, 2018, personal communication).

It is a core narrative that focuses on "promoting community energy" to foster "a chorus of passionate advocates," according to language in a Charged Up internal strategic document, co-authored by Social Capital Strategies, an external consulting organization; the document further notes, "While prevailing discourse about renewables focuses on economics and technology, stories about community energy show relatable individuals working towards a goal that audiences connect to and can imagine pursuing themselves

(Social Capital Strategies, 2017, p. 1). The Charged Up campaign recognizes core narrative, perpetuated incrementally by individual stories, has the capacity to engage the public in "systems change" (p. 1).

Core narratives are a main attribute in the worldbuilding process of transmedia storytelling—advancing the creation of a storyworld—because core narratives serve as a roadmap, particularly necessary to navigate forthcoming non-urgent and psychologically distant risks, such as climate change, that in the present day appear spatially, temporally, and socially apart from most of us.

Indeed, the David Suzuki Foundation employ the use of core narrative throughout the Charged Up campaign with this rationale in mind; to be sure, core narrative thinking has been part of the Foundation's DNA as a result of Suzuki's career-long interest and leadership in transmedia storytelling, even if the communication strategy and tactics he has employed in the past were not called such before the present time.

On the landing page of the Charged Up campaign website (see Figure 24), one of the first media channels a new audience member will use to enter into the community-powered renewable energy storyworld, the David Suzuki Foundation states: "Renewable energy is empowering communities across the country. This is the story of you—of all of us—on a mission for a cleaner, healthier, charged-up Canada" (David Suzuki Foundation, 2021b); noticeably, the extensive list of media content found on the website, consisting of more than two dozen stories (Jenkins's subjectivity and seriality), does not prioritize works by Suzuki, or the Foundation for that matter, but instead, in place of such material, is a body of stories featuring everyday Canadians who overcome obstacles in the face of the renewable energy transition. Here, the core narrative is explicitly made real and continuous (Jenkins's continuity) by profiles of Canada's "first net-zero church" (Delaney, 2020b) and a Canadian solar inventor who envisions "a future where energy is almost zero cost" (Forman, G, 2020a). There are also multiple stories featuring Indigenous leaders (see Section 4.6.2.1). At first glance, the monotonous and orderly flow of these stories lacks some modern presentation style—the visual language prowess of SeaLegacy—but the stories are strategically curated and have the necessary ingredients to be impactful because they are unique, especially at the local level, where the stories are made; each one has a part to play in the larger, and deliberate, goal of the campaign.

Similarly to SeaLegacy, who devised a core narrative approach from the inception of The Greatest Sanctuary campaign, Charged Up implemented a strategic framework early on as well. The David Suzuki Foundation emphasizes this course of action and the importance of core narrative framing in climate change communications when they state, "Effective framing helps shape the context of what an issue is about by identifying key values and themes that resonate with stakeholders and amplifying them through compelling
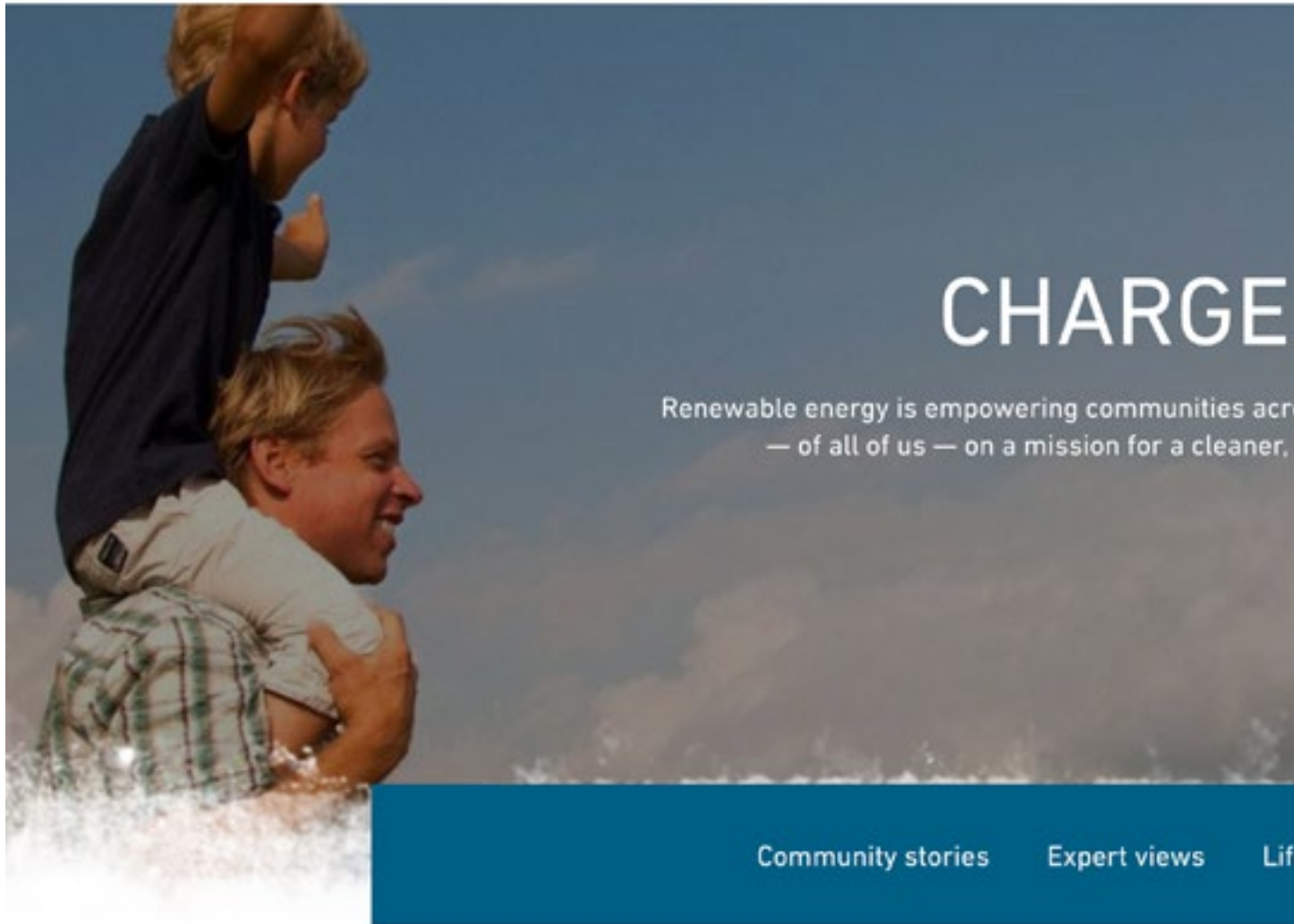
DAVID SUZUKI FOUNDATION
One nature.

CHARGE

Renewable energy is empowering communities acr
— of all of us — on a mission for a cleaner,

Community stories   Expert views   Lif
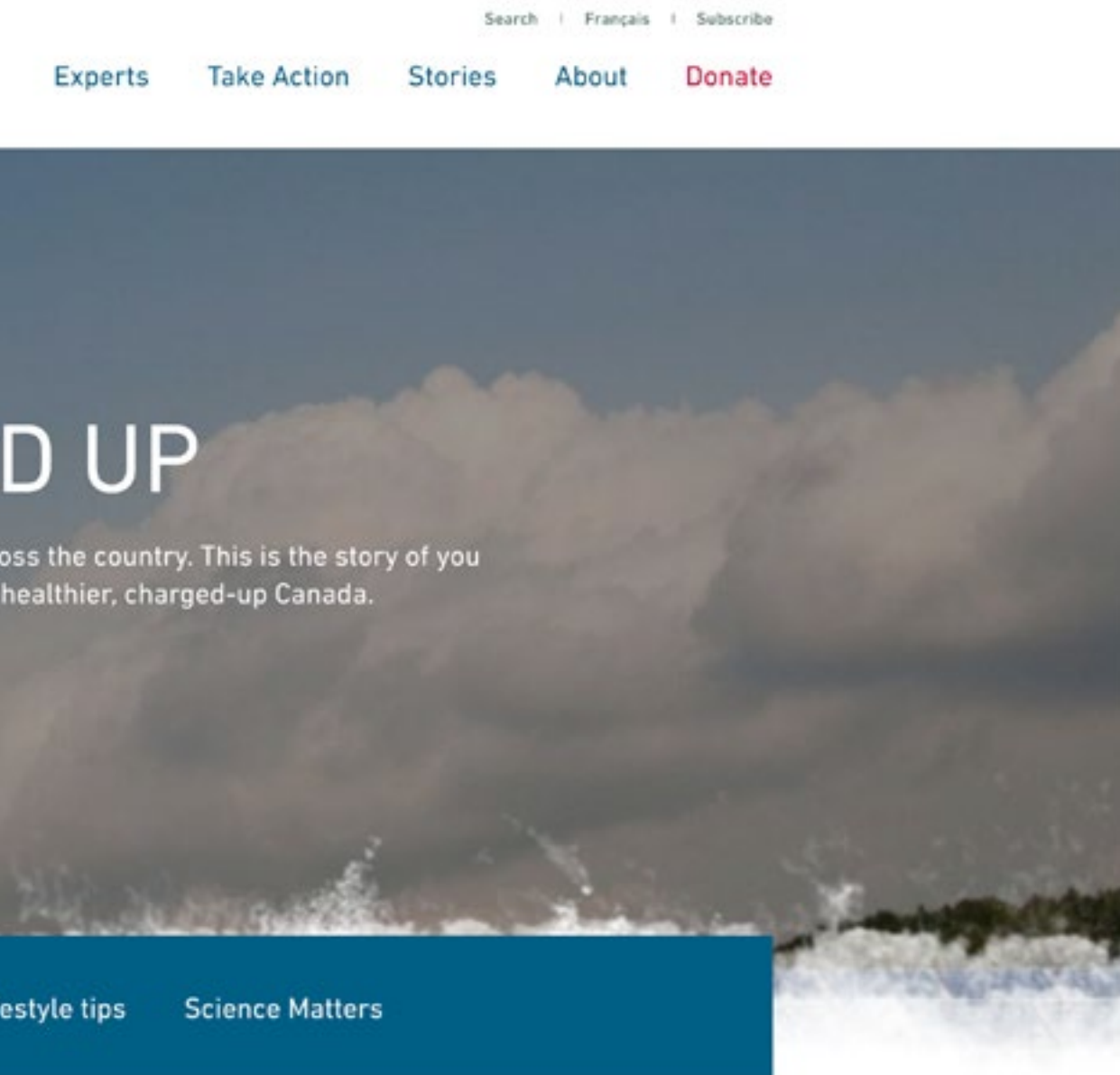
Figure 24:

The Charged Up campaign landing page (DSF-MC01).

stories" (Social Capital Strategies, 2017, p. 9). Sherry Yano, Associate Director of Sustainable Communities for the foundation from 2017–2021, describes the origin of the Charged Up campaign overarching narrative this way:

> A lot of people are doing work on, very important work on, anti-campaigns, so anti-pipeline, anti-tanker, anti-new development in oil sands or LNG or whatever it is, and there are many people also doing important work in policy advocacy … but almost no one was doing work to change the public's opinion, to shift culture and narrative within the public, to make climate action a priority and to mobilize public support for audacious climate action … there was a big gap in the climate movement and DSF decided to invest in this program to develop it and get it off the ground. (S. Yano, personal communication, 2020)

In the context of core narrative, Yano continues, "People still don't feel comfortable talking about climate change" and "if you can't talk about it, you can't act on it" (S. Yano, personal communication, 2020). As it was with The Greatest Sanctuary campaign the Charged Up narrative that can be discerned as climate action empowerment was designed to help people act.

Brendan Glauser, acting Director of Communications at the Foundation, relates:

> The dominant narrative … something along the lines of the solutions are here, they're ripe, and they're ready, and all we need to do is implement them, and there's something really cool in how we implement them … it is this shift in power … the way we produce and consume energy has been top-down big corporations feeding it … the next era is that it can be bottom-up, like throw the panels on your house, like get involved … so I think the overarching narrative is like yeah things are bad, things are super scary … but you know, guess what, the solutions are here, there is totally hope, we just need to generate the political will and guess what, the power is in our hands, like the people have the power, how cool is that? The narrative is like yes things are scary, but we have the solutions, and we literally have the power to implement the solutions. (B. Glauser, personal communication, 2020)

More precisely, Glauser says that Charged Up is "a hopeful storytelling and matchmaking program." He

specifies the intent of story:

> I don't see a lot of moments where a statistic gives somebody a life changing aha moment, but the right story can give someone a life-changing aha moment, so I think it's crazy for us to not think about how this fits in to our overarching narrative. (B. Glauser, personal communication, 2020)

Other David Suzuki Foundation staff members are particularly keen on their core narrative strategy and the explicit language—and images—they use because the stories that make up this narrative represent a novel chapter to the national dialogue concerning renewable energy. Communications and Policy Specialist, Climate Solutions, Theresa Beer, states:

> It shows communities and the people in those communities, they're often smaller, they may be Indigenous communities. It shows leadership and the community coming together in ways that no number based story would even show. I don't think that most Canadians know just how important renewable energy and self-sufficiency are to Indigenous communities. It also tells a powerful narrative of independence, energy independence, leadership, and resiliency, which many other stories that focus on Indigenous communities don't tell. They are leaders in the country in some of these initiatives, bringing solar, wind, other types of renewables into their communities, and we don't know that. So it does a good job highlighting the work and leadership of Indigenous communities. (T. Beer, personal communication, 2020)

That Indigenous storytelling has such a central role in texturing the Charged Up core narrative is to applaud the Foundation for this forward thinking commitment to a much needed and critically important voice; Charged Up was conceived with such vibrant stewards well before the 2020 pandemic which has drawn even more recent attention to these missing perspectives; Suzuki himself has certainly addressed this need before now too.

A core narrative is a construct, but it is also a "lived experience" according to Gerrig (2018) in Experiencing Narrative Worlds. Mittermeier and Nicklen understood core narrative on both planes—it was

a metaphysical idea to protect "our planet's largest ecosystem" as well as a tangible journey in The Greatest Sanctuary campaign (SeaLegacy, 2020b). The David Suzuki Foundation think in parallel and further recognize the need to materialize the conceptual storyworld—built by narrative—through affective experiences for successful comprehension of complex subject matter. For the Foundation the solutions narrative needs to be witnessed: "Polling shows that 70 per cent of people in Canada support a quick shift to renewable energy" and "within the David Suzuki Foundation community, that level of support rises to 98 per cent," but "when asked to name a single renewable energy project, 90 per cent of our community were unable to do so" (David Suzuki Foundation, 2020a). In other words, as promising as the existing solutions might seem, the David Suzuki Foundation report that renewable energy projects remain "largely distant" and "irrelevant to people's daily lives" (David Suzuki Foundation, 2020a). What is more is if these statistics are indicative of a global trend, whereby even those aware of the potential solutions fail to appreciate the relevance of renewables in their own lives, then we must acknowledge a lack of efficacy in our efforts thus far to communicate not only the seriousness of the climate crisis but also the promise of future innovation and solutions that exist already today—solutions that individuals can benefit from and take part in. Stories that invite people into this core narrative understanding—the renewable energy storyworld—have a role to play because they help us make sense of the real world and how to navigate its challenges. The obstacles are surmountable as Charged Up stories inform us, but are still very present, as the Alberta Narratives Project, a Charged Up campaign collaborator, contends:

> Over the past year, the Alberta Narratives Project gathered input from a broad range of Albertans (teachers, faith groups, health professionals, farmers, artists, industry, environmentalists, etc.) to better understand how they feel about public discourse on global warming. Participants said they want less blame and a more open, balanced, and respectful conversation. Many don't see themselves in the conversation at all. No one is speaking to them, using language that reflects their values and identity. (David Suzuki Foundation, personal communication, 2018)

Canadians want to be heard. Transmedia storytelling throughout the Charged Up campaign is addressing their needs. Beer notes:

People related much more to what communities were doing than some of the technical, climate change based policy we were trying to convey around renewable energy. So when they can see themselves in the picture, when they can see their communities highlighted and the positive benefits, they related. (T. Beer, personal communication, 2020)

Making the renewable energy transition relatable is certainly about proximity and observation, but the Foundation know this is only part of the equation. The Charged Up campaign emphasizes:

Getting people engaged is not about selling them a 'what' (in this case, technology); it's about whether they agree with 'why' … the idea that people are attracted to value propositions, not products, and are looking for a pitch that resonates with their values, needs, and aspirations. A campaign promoting renewable energy needs to centre around the different reasons why people are motivated to support these initiatives, laying out a compelling vision for what they stand to gain from getting involved. What problem or opportunity does a community renewable energy project help solve that everyone can agree on? (Social Capital Strategies, 2017, p. 4)

Homing in on why people might get involved in the renewable energy transition has been advantageous for Charged Up, as a long list of successful case studies suggest, as this strategy has permitted campaign participants to unite around core values made participatory via a storyworld built by a core narrative.

4.6.1.1 - Charged Up: Interactive Word Tree

The presence of a core narrative in the Charged Up campaign was analyzed using an Interactive Word Tree query performed in MAXQDA. To conduct this analysis I searched for the keywords such as 'renewable' and 'energy' and 'community' and 'power' across transcripts derived from campaign media texts and examined the sentences that both preceded and followed these terms in each occurrence (i.e., branch of the interactive tree). Evidence of consistent organizational core narrative messaging—Jenkins's continuity— was revealed in sample sentences found across multiple media channels. Key core narrative messaging is noted below with individual ID codes to designate the source of the content:

• Renewable energy is empowering communities across the country. Charged Up is the story of you—of all of us—on a mission for a cleaner, healthier, charged-up Canada. (Dodge, 2018);

• One of the things we love about renewable energy is how communities can take control over their power, protect the climate, assert their independence and be the change they want to see in the world (Laboucan-Massimo, 2020);

• I'm here today to demonstrate that we can utilize renewable energy, solar technology, empower communities and use the power of the Sun to transition away from fossil fuels (DavidSuzukiFDN, 2018c);

• When I installed my first solar project, I wanted to do it in my own community so I could learn what it's like for an Indigenous community to put up a solar project within the energy matrix of Alberta (Delaney, 2020a); and

• Large-scale, rapid improvements to energy access can have positive influences on economic, social, educational, and health outcomes. They are an investment in the future that becomes the backbone to support a community's needs and growth (David Suzuki Foundation, personal communication, 2018)

Furthermore, echoes of Charged Up's core narrative are present in external media. News publications such as Still On shared stories that included core narrative articulation that presumably reached even broader audiences.

• Charged Up is a nationwide project about people power—people coming together in their communities to move toward a healthier, sustainable and resilient future (Still On, n.d.); and

• Storytelling—to put a face to the renewable energy transition, demonstrates what's possible and normalizes climate action (Still On, n.d.);

4.6.2 - Charged Up: Narrative Conditions

Transmedia storytelling, or the worldbuilding process previously described by Jenkins, works to

transport audiences into the community-powered renewable energy storyworld in David Suzuki Foundation's Charged Up campaign because it is designed by narrative.

To create the community powered renewable energy storyworld, the David Suzuki Foundation, and a nationwide group of stakeholders, use a full suite of narrative conditions—and transmedia principles to be examined more thoroughly in Section 4.7; that is, to implement narrative conditions is to effectively build a storyworld and to evaluate engagement with this storyworld is to think more specifically about Jenkins's transmedia storytelling framework.

As I did with SeaLegacy's The Greatest Sanctuary campaign, I next examine narrative conditions employed across the Charged Up campaign. To carry out this exercise I choose specific focal media channels identified by their ID code to provide examples of this narrativity prowess, or Degree of Narrativity. Like the examples from The Greatest Sanctuary campaign, these examples are representative not exhaustive; they have been chosen as exemplars. While the narrative conditions provide the dominant lens for my analysis in this section, I also comment occasionally on aspects of transmediality and engagement as a step leading us towards the presentation of a novel conceptual model. As with Case Study #1, special notes are also made throughout the forthcoming section when the application of a narrative condition is conducive to climate change communication.

4.6.2.1 - Charged Up: Condition #1 / Individual Characters
A narrative must be about a storyworld populated by individuated existents

Our experience with the characters in a story stimulates an affective response that permits us to better comprehend narrative because people relate to other people. We respond and relate to characters' "perceptions, emotions, and actions" and as we engage in this way we enter into the storyworld as Weik von Mosser (2017, p. 3) put it. However, for too long now, the messaging that comprises climate change communication has been solely focused on carbon emissions and fossil fuels or solar panels and electric vehicles—while the human element of this movement have been mostly absent. We have also been provoked by the doom-and-gloom that draws our attention, as in Sontag's spectacle of pain and the incessant coverage of storms and droughts causing peril around the world—or more recently the burning of the Gulf of Mexico that went up in flames as an "eye of fire" on July 2 (Barrera and Parraga, 2021)—that make up and depict the climate crisis.

As such, Propp's spheres of actions (e.g. helper and villain), Greimas's six actants, or particularized narrative actors (i.e., the Subject, Object, Sender, Receiver, Helper, and Opponent), and Campbell's extended role of a main character (i.e Hero's journey), merit consideration as they did in Case Study #1.

In Charged Up, the David Suzuki Foundation incorporates a wide variety of character roles (Jenkins's subjectivity). Whereas SeaLegacy trained much of their focus on a few leading "heroes," the David Suzuki Foundation campaign is community-centric and particularly interested in the human element of various Canadians. More important than recurring statistics or the allure of technological infrastructure—blades and panels—is the depiction of real, ordinary people whose storylines show progress in renewable energy advancement in communities across the country.

While everyday Canadians (Jenkins's subjectivity), along with a celebrated Indigenous character, advance the Charged Up campaign in compelling ways, the Foundation does feature a leading hero of its own in the character of David Suzuki himself (Jenkins's performance), deriving trust and connection with the hero very much as SeaLegacy does with Nicklen and Mittermeier. Books like Letters to My Grandchildren (Suzuki, 2015) and David Suzuki: The Autobiography (Suzuki, la2006), along with the television series *The Nature of Things* (CBC, 2021), aptly demonstrate and exemplify Suzuki's gift as written, oral, and visual—transmedia—storyteller; so it makes sense for the Charged Up campaign to employ his luminary character profile, along with the overarching narrative—or scientific journey he has shared for so long. Evidence of Suzuki's reputation as profound storyteller, or expert witness in the context of my dissertation, was on display at the Charged Up launch event (DavidSuzukiFDN, 2018a), on February 28, 2018, when during his opening remarks Suzuki was the central character and once again provided a clear message, a 'foreshadowing from the prophets,' so to speak:

> I meet so many people who say, look, I understand what you're saying about climate change, but forget it, you know, there's no way we can get off fossil fuels, it's too embedded in our economy … How can we possibly change? And, so what Charged Up is saying is, it's happening, it's happening all over the world. (DavidSuzukiFDN, 2018a)

Suzuki's experienced and trusted voice acknowledged "we're in the middle of a fundamental change," and "the solutions are out there" (DavidSuzukiFDN, 2018a), and was enough to set the stage for Charged Up's promising narrative: "Renewable energy is empowering communities across the country"

(David Suzuki Foundation, 2021b).

Yet, while Suzuki will always be a focal kernel or nuclei in the Foundation's narrative, beyond the launch event, his role in the campaign fades to the background, and in the Charged Up campaign he and the Foundation take the roles of supportive characters, leaving community members in the lead roles.

Therefore, where Mittermeier and Nicklen successfully use their Instagram fame to inspire a global initiative as centre stage expert witnesses in The Greatest Sanctuary, the Charged Up campaign hands over this responsibility to people you would otherwise know nothing about. Again, Yano speaks to the necessity of this decision:

It is the storytellers and the heroes in that story. And that's what's better, not branding …
Not every story looks like a DSF story. It doesn't have our brand colours. It doesn't open
and close the same way. It doesn't drive to an action that's ours necessarily. And that's been
on purpose, because if you want people to join you, it has to look like a democracy. (S.
Yano, personal communication, 2020)

A democratic approach to the Charged Up campaign introduces a cosmopolitan suite of characters who share individual stories that make sense of the broader goal of the campaign. In this way, the Charged Up core narrative is not focalized around the consciousness of a single hero, or central protagonist, and instead an expanding array of personal experiences beget entry into the campaign's storyworld. That is, subjective accounts made perceptible by a larger cast of characters act to transport audiences into individual chapters threaded together by a common understanding, or set of reflected values (see Figures 25 and 26).

While it has been emphasized that people follow other people because stories about the general human condition are relatable, in the same way, it is also clear that people align themselves with others because of the explicit values that they share. In the *Canada's first net-zero church and social housing complex* video we see this notion unfold on screen as Les Young, a member of the Westmount Presbyterian Church in Edmonton, Alberta, explains the rationale behind a net-zero church project:

Our goals were first we wanted to enable the congregation to continue as a congregation,
but then we wanted to do it in a manner in keeping with our Christian beliefs, especially
service to others and services to the environment. So protect the environment, serve other

Figure 25:

Desmond Bull advances the Louis Bull Tribe storyline in the *Oil and gas workers go solar with Louis bull tribe* campaign video (DSF-MC5b).

Figure 26:

Noel Dhingra advances the Just Food Farm storyline in Charged Up in the *Renewable energy powers food production at Just Food Farm* campaign video (DSF-MC17b).

people. (Dodge, 2019)

On screen, Young is observed as an elderly man who braces himself against a tree during the interview, so the audience suspects he might be fragile, but at the same time the low angle of the camera adds a layer of distinction, so we admire him and think he is even heroic (see Figure 27). The perspective makes this character's challenging story more believable.

In a similar account, in the *This net-zero library in Quebec inspires us all* campaign video, the Mayor of Varennes in Quebec, Martin Damphousse, discusses a net-zero library construction, and notes:

> It possesses more than 500 solar panels on the roof. And we incorporated geothermal energy. What makes this building so special is it's intelligence. It knows when to change its game plan to be optimal. After a certain lapse of time during which there is no movement in a section, the lights will shut off automatically. There is no need to think about turning off the lights or turning on the heaters. The library makes our citizens think about their own homes: How many houses are over-lit and consume too much energy? Citizens become aware of these values. (DavidSuzukiFDN, 2018d)

And, in the Kanaka Bar campaign video, from the heart of British Columbia's Fraser Canyon region, otherwise known as the traditional territory of the Kanaka Bar Indian Band, or T'eqt'aqtn'mux, "the crossing place people," Kanaka Bar Chief Patrick Michell recognizes the values and ways of his ancestors:

> There were some basic principles: take what you need, no more. If you're going to do something, do it right. If you take it in, take it out. And when you're done, clean up after yourself … One of the ways Kanaka Bar can honour those principles is to return to greater self-sufficiency and sustainability, in energy as well as food … My mandate as chief of this community, of what we call Kanaka Bar today, is that there is the same—or if not more— opportunity for my future generations. (Yano, 2020)

It is admirable that the David Suzuki Foundation found the time to seek out these unique characters, and a growing list of others, to add dimension to the renewable energy storyworld. It is commonly understood

that many environmental organizations are unwilling to invest in this strategy as Mittermeier and others have attested to before.

Staff at the Foundation extend this story development planning as they pay attention to the youth movement galvanizing around the world. Canada has its own young heroes so the campaign strategically features these people to engage a different demographic. For example, in a campaign video aptly entitled *The Solar Generation*, Drew says, "Climate change is a serious thing and it's happening" and Jonah reminds us that, "It's like they're adding blankets to the atmosphere which is keeping all the heat in" (Hall, 2018). Nhu, a student in the film, is asked (see Figure 28): "So do we have a lot of solar in Regina?" Nhu's responds: "No, we barely have any solar parks or panels … I don't know why, we should, but we just don't, and we should obviously have more because we have the most potential kilowatt hours in Canada." (Hall, 2018). The film employs effective visual storytelling methods by following Mr. Jared Clarke's class to the Cowessess First Nation's Renewable Energy Storage Facility where "kids get hands on-experience" (Hall, 2018) and are immersed into a renewable energy transition (see Figure 29). For onlookers, the storyworld built through imagination becomes a reality as we observe the students respond and further discuss their values (see Section 4.6.2.4).

The prominence of value alignment is important in the Charged Up campaign because this exhibition of desirable character qualities permits others to follow. We know that the opposite can be true when values do not align. The idea behind the alignment of a character's values is specifically highlighted with the Suzuki foundation's CliMate experiment (David Suzuki Foundation, 2020e), an online chatbot featured on Facebook Messenger that serves as a "guided practice conversation" so participants can find "common ground on topics that can divide us" (David Suzuki Foundation, 2020e).

Indeed, deep alignment with our shared morals and values is central to the philosophy of the Charged Up campaign. It is paramount because new perspectives in divisive discourse serve to provide alternative ways of knowing. This is no more evident than in the storyline of Melina Laboucan-Massimo, a member of the Lubicon Cree First Nation (see Figure 30). At the Charged Up launch event Laboucan-Massimo's descriptive storytelling about her work on social, environmental, and climate justice issues over the past 15 years, 10 of which were with Greenpeace, was a serious call-to-action. She also reflected on climate change communications more broadly:

I could talk about it as much as I want, until blue in the face, and say no no no, but what

Figure 27:

Les Young outside the Westmount Presbyterian Church advances the net-zero church storyline in Charged Up in the *Canada's first net zero church and social housing complex* campaign video (DSF-MC25b).

Figure 28:

Nhu advances the youth and Grade 6/7 storylines in Charged Up in *The Solar Generation* campaign video (DSF-MC13b).

Figure 29:

Mr. Jared Clarke's Grade 6/7 students visit the Cowessess First Nation solar installation in *The Solar Generation* campaign video (DSF-MC13b).

Figure 30:

Melina Laboucan-Massimo, a member of the Lubicon Cree First Nation, appears across the Charged Up campaign. Laboucan-Massimo addresses the media in a campaign video entitled *Foundation fellow brings power to the people* (DSF-MC28b).

Figure 31:

Melina Laboucan-Massimo, a member of the Lubicon Cree First Nation, appears across the Charged Up campaign. Laboucan-Massimo addresses the David Suzuki at the Charged Up launch event (DSF-MC7).

does our yes look like, and for me that's how renewable energy came about … from

finalizing my Masters I was gonna actually put up a solar project … I'm gonna figure

out how to fundraise for a solar project, I'm gonna figure out how to put it up, from start

to finish, and that was essentially a way to give back to my community … to train their

young people, to see how we do this and how do we connect to the grid, and how do we

learn about renewable energy as a solution. At that point there wasn't many projects up

in Alberta … I mean people were like oh that's interesting, but people wanted to see it.

(DavidSuzukiFDN, 2018a)

On stage, after the renewable transition was discussed with Suzuki, Laboucan-Massimo continued and spoke

about what the inaugural project has meant to her home community (see Figure 31), as she told a story about

the project's reception:

You know it will be three years this summer and there's not been a rock ever thrown at

this project because people see the project as something that is exciting … something that

that the community has been a part of since breaking ground. (DavidSuzukiFDN, 2018a)

Laboucan-Massimo conveys confidence grounded in self-worth and retrospection. What she has experienced

is noteworthy and on stage she is in a position to be vocal. Moreover, Laboucan-Massimo's character is

strategically inserted across multiple media channels so she becomes an expert witness in front of us. Her

presence becomes familiar and familiarity breeds more trust. Mittermeier and Nicklen have proven the

efficacy of these character attributes. We empathize with Laboucan-Massimo's impassioned articulation of

how a nation has been transformed and how it could be once again. She notes:

We have been living the brunt of environmental degradation and the brunt of resource

extraction and so we have seen what the devastation causes … so how can we utilize a

technology that's actually regenerative and something that empowers our communities?

(DavidSuzukiFDN, 2018a)

Listening to Laboucan-Massimo's firsthand accounts are chilling (see Section 4.6.2.4); the filmmakers use an

insider point of view from a victim to precisely define the climate change crisis as a present threat, not as a distant one in the future. Laboucan-Massimo's storyline adds texture to the storyworld.

Beyond the Charged Up campaign, others have singled out Laboucan-Massimo's poignant storytelling; she hosts a television documentary series entitled *Power to the People* that explores "the renewable energy revolution empowering Indigenous communities across Canada and around the world" (RealWorld Media, 2020). So, it is clear then, while everyday Canadians have a significant role to play in Charged Up, the Foundation will also take pain to find like-able characters like Laboucan-Massimo who can mentor the audience by way of what she has already seen and experienced.

It is also worth noting that direct email newsletters and Partner content address discrete oppositional character storylines, though these aspects of the storyworld remain underdeveloped because, as mentioned, Canadians are starving for a new narrative. For example, while the Harper government and Chase Bank are framed as Propp's actors of villainy in media affiliated with the campaign (e.g. CBC Docs, 2020), the theme of conflict throughout the Charged Up Core campaign is largely minimized (see Section 4.6.2.3). Instead, the characters playing roles in solution-focused storytelling become paramount to realize the transformation towards a renewable energy future. Conversely, Mittermeier and Nicklen focused some attention on the stakes of climate change more broadly, as well as industry; Suzuki is known to do this too but Charged Up campaign managers monitored this tone of voice.

4.6.2.2 - Charged Up: Condition #2 / Significant Transformations

The storyworld must be situated in time and undergo significant transformations; that is, the audience needs to experience some form of change

The polar bear worked as a symbol of climate change for so long—as SeaLegacy's The Greatest Sanctuary campaign demonstrated—because the arctic is transforming faster than anywhere else in the world. Yet, while this iconic representation has saturated the news the world over, it simultaneously distanced the issue from most of the public and reinforced the notion that the world was warming in far-off places, not here, not at home. That climate change remains a psychologically distant threat in prevalent communications is to acknowledge the need to create affective experiences such that we overcome the cognitive burden associated with this challenging topic. Because the climate change crisis is happening now and has already significantly transformed the state of affairs for too many, transmedia storytelling best practices—which bring climate

change closer to home and make the emergency tangible—have a greater role to play than what might have been first thought. Concurrently, centring human-centric specific solutions at the heart of climate change communications is a primary task (Jenkins's worldbuilding) for the Charged Up campaign as well.

It is through his remarks at the launch event that Cornish makes a case for the transformative nature of a human-centric campaign built by narratives that create experiential storyworlds where we interact with other people (Jenkins's worldbuilding and immersion). In front of a room full of strategic stakeholders who would play a role in establishing community partnerships, he notes:

> These stories of transformation make our clean energy future visible one project of time
> and in turn they help empower, they help educate community leaders, citizens, giving them
> inspiration, giving them mentoring, and giving them the know-how to take their own steps
> to start their own energy transitions. (DavidSuzukiFDN, 2018a)

At the podium, Cornish continues:

> What we're trying to do with this program is not only to show communities how they
> can take action themselves, but to gather 80,000 Canadians in over a hundred cities and
> community projects across the country, and we're going to turn them into a network to
> push for municipal provincial and federal change that will make sure that this transition to
> a greener future and to a renewable energy future can never be rolled back no matter what
> happens at the polls. (DavidSuzukiFDN, 2018a)

That is, for the transformation towards a renewable energy future to materialize the Charged Up campaign strategically advances on policy work behind-the-scenes in hundreds of cities across the country. The campaign also features success stories at the local level that permit new audiences to witness and simulate in their own minds what can be possible. The contrast with SeaLegacy's The Greatest Sanctuary Campaign is notable. Whereas SeaLegacy sought to inspire enthusiasm via the actions of their "heroes," the Foundation actively makes everyday Canadians into the heroes of the campaign by helping them to be part of the transformation.

In documentary short videos, produced by Green Energy Futures and Avatar Media for Charged

Up, the campaign profiles a series of case studies to transport people into a community in North Glenora, near Edmonton, whose Presbyterian Church could no longer afford to heat their old and uninsulated building (Dodge, 2019); a net-zero construction that also added a housing complex nearby reduced the church's utility costs to prevent it from closing down. In a second video (Dodge, 2018), by the same visual storytellers, the Louis Bull Tribe in Maskwacis, Alberta, demonstrate how a solar installation on a community daycare centre removed their dependency on coal-fired electricity and provided renewable energy power; at the same time, hands-on solar installation training was provided to community members as well as oilsand workers who were invited to participate in order to broaden their skill sets and job prospects. In a third video by the same team, Charged Up introduces campaign followers to Rae-Anne Wadey, who is one of the first people to enrol in the Northern Alberta Institute of Technology's Alternative Energy program to train as a solar installer; on screen, Wadey speaks candidly about the transformation of the energy sector and what it means to her: "Once that solar module is up, it's up for twenty, twenty-five years. It's producing clean energy from the sun, and it makes me feel really good to be a part of that."

Interestingly, where fossil fuel energy companies aim to be inconspicuous and hidden from view, or strategically positioned near underprivileged communities that often lack the resources to provide opposition, the transformation at the centre of the Charged Up campaign is seeking to be in plain sight as the transmedia storytelling mentioned demonstrates. Solar panels on rooftops and in backyards show that the solutions exist, that the transformation is happening. More to the point, the localization of the transition to a community-powered renewable energy future makes climate change—in this case, climate change solutions—a concrete, participatory story rather than an abstract and distant idea happening elsewhere. On this matter, the Foundation notes:

> These are stories about a new way of generating and using energy that makes communities
> more resilient, is driving the new economy and helping address emissions at the same time.
> As communities begin to explore local renewable projects, they will inherently begin to
> think more deeply about the connection between energy and climate change, and their role
> in addressing it. (Social Capital Strategies, 2017, p. 8)

As such, the Charged Up campaign functions as a map of where to go, and all Canadians are invited to navigate its novel and groundbreaking paths as citizens contributing to their communities where they live,

work, and play (Jenkins's extractability). Most notably, visual storytelling plays a critical role as renewable energy installations occur before our eyes and show us what is possible.

Relatedly, Charged Up was poised to showcase transformational change in Canada because the campaign hand-selected local community success stories from its inception. It also had help from Rebellion, the documentary from *The Nature of Things*, that presumptively drew attention to the Foundation's work on climate. As host of the documentary, Suzuki lends his seasoned voice and interviews a full cast of leaders who comment on the broader idea of transformation. For example, Sir David Attenborough laments:

> Right now, we are facing a manmade disaster of global scale. Our greatest threat in thousands of years. Climate change. If we don't take action, the collapse of our civilizations and the extinction of much of the natural world is on the horizon. (CBC Docs, 2020)

Other voices in *The Nature of Things* documentary follow. Bill McKibben, founder of the worldwide 350. org movement addressed divestment from the fossil fuel industries when he stated, "We're going to ask, or demand, that institutions like colleges or churches sell their stock in these companies"; Mark Carney at the Bank of England noted, "We're starting from where we are today, we need to get to a world of net zero"; and Reverend Yearwood expressed "This movement is now beginning to understand what it means to take care of humanity. Yes, we all need polar bears and we love polar bears. Nothing wrong with polar bears, but it's a time for us to care about our brothers and sisters on this planet … And it was different because we saw black people and white people and brown people and red people, straight or gay, fierce atheists. We saw humans, at this time, all coming together, which made it different. It made it somehow so very different" (CBC Docs, 2020).

In even more specific terms, Gail Bradbrook of Extinction Rebellion said, "We're in a transformational moment" (CBC Docs, 2020).

However, as instrumental as these senior voices can be, it is a young girl from Sweden who might ultimately symbolize the present day transformation finding roots across the globe—and, comparably, in the Charged Up campaign. In the first lines of Rebellion, Greta Thunberg is on stage and declares: "We are the change, and change is coming" (CBC, 2020). Relatedly, around the eighteen minute mark in the documentary, on the occasion of Suzuki and Thunberg conversing on screen together, Suzuki addresses transformation quite explicitly: "My generation should never have left the problem for you" (CBC Docs, 2020).

Moreover, the Charged Up campaign acknowledges that the transformation towards a renewable energy future requires the introduction of narrative strategy and tactics that consider new characters and symbols to draw attention to the path forward (Jenkins's subjectivity), or resistance to the status quo. Some of these human and non-human figures might originate from thoughtfully constructed climate change communications—for example, the everyday hero at the heart of each community profiles in Charged Up (see Section 4.6.2.1), or the leopard seal in The Greatest Sanctuary (see Section 4.2.2.1); recall that SeaLegacy planned a return trip to Antarctica specifically to collect additional footage of this pinniped.

Novel figures that symbolize transformative ideas and carry a unique message—like Thunberg— who can spread their ideas effectively (Jenkins's spreadability) are a key part of Charged Up, which continues to feature emblematic youth who are taking action in their local communities. This is evident in New kids on the block, a campaign article and video, where a group of middle school students in Mississauga, Ontario deliver a deputation in the local council chamber that began:

> The human-induced climate crisis we are now all facing is of serious concern to us. We are here today not only as representatives of our school, but on behalf of your own children and one day grandchildren, of an entire generation, and the generations to come on this beautiful planet. (Sandhu, 2020).

Aliza Baig, Kiran Suresh, Ksenia Chmurzynski, Luxmeena Arulanantham, Omnea Fakhri, Siyona Rathore, and Sophia DeGraaf—who are ages twelve to fourteen and represent Mississauga's diverse ethnicities—can be seen as present day messengers that follow in Suzuki's footsteps to declare their interests in change. As viewers witness the children's testimonies, the implicit idea is that the world they inherit will inevitably be a transformed one (DavidSuzukiFDN, 2019b).

The transformation at play involves a built storyworld full of diversified and controlled storylines that come to life in the transmedia storytelling of the Foundation's campaign. Charged Up is simply one chapter, but an important one, according to Creimer, who summarizes it this way: "It's a story of transformation, from a worm into a butterfly" (D. Creimer, personal communication, 2020).

4.6.2.3 - Charged Up: Condition #3 / Non-habitual Events & Conflict

Transformation in the storyworld must be caused by non-habitual physical events; that is, events need to be unpredictable and out of the ordinary to incite a conflict

As is the case with SeaLegacy, the David Suzuki Foundation face the parallel challenge of communicating impending climate change and the unpredictable state of our warming world; that is, while science has made clear the reality and severity of the climate change crisis, our global leaders are still failing to act swift enough to reduce future carbon emissions, and as a consequence of the previously emitted carbon, nations around the world continue to confront and suffer from serious climate change impacts, many of which were unforeseeable. For example, in British Columbia, Canada, not more than a four hour drive from downtown Vancouver, where the Foundation's head office rests, the village of Lytton recently sustained a "freakishly prolonged and intense temperature spike that turned the idyll into an inferno," an event that shocked climate scientists who wondered "how even worst-case scenarios failed to predict such furnace-like conditions so far north" (Watts, 2021).

That climate change is the unrelenting problem in the background of the Foundation's created renewable energy storyworld is simply a matter of fact (see Section 4.6.2.7). This documented reality—this "eventfulness"—permits audiences to experience storyworld features of "relevance, unexpectedness, and unusualness" (Hühn, 2011), circumstances that present both challenges and opportunities for a transition to a renewable energy future. In this way, despite a strategic focus on transmedia storytelling that primarily features solutions to abate global warming, the Charged Up campaign was obligated to include Ryan's (2007) Narrative Condition #3 that involves non-habitual events that often lead to conflict. The use of this condition sets in motion cause-and-effect scenarios because individual Charged Up stories use narrative tension to create experiences that engage us affectively (Jenkins's Immersion).

An email from the David Suzuki Foundation subscriber's list serve addresses the factual nature of the climate change crisis firsthand and simultaneously presents a heightened emotional state of mind in the following account:

> We know climate change is caused primarily by human use of fossil fuels. It's influencing the
>
> frequency and intensity of such events as monstrous wildfires (Kelowna, Fort McMurray),
>
> floods (Calgary, Toronto), hurricanes (Katrina, Sandy), drought (California, Alberta), and

loss of glaciers and ice sheets. There's no longer anything natural about them. We must

acknowledge the human imprint. If we're the cause of the problems, then we must stop

blaming nature or God. We have to take responsibility and tackle them with the urgency

they require. (David Suzuki Foundation, personal communication, 2017)

In SeaLegacy's The Greatest Sanctuary campaign, Mittermeier and Nicklen transport audiences to

Antarctica, documenting the regional impacts of climate change. Conversely, the David Suzuki Foundation's

Charged Up campaign highlights the fact of solutions that exist closer to home, while attending to the

conflicting rhetoric about climate change.

For example, efforts to obscure the advantages of renewable energy—not to mention those that instil

skepticism about the threat of climate change—hinder the transition toward a clean and renewable future.

In a Charged Up strategic document this concern is made clear: e. In a Charged Up strategic document this

concern is made clear:

Well-intentioned policies have triggered intense public debate over [renewable energy's]

cost, purpose, and reliability. This discussion has distracted the public from deeper

conversations about how clean energy can help Canadian communities meet their

sustainability goals and set them up for a more prosperous future. (Social Capital Strategies,

2017, p. 1)

Across Canada this is apparent: In Ontario, renewable energy "has been tarred by high-profile controversy

over the implementation of the Green Energy Act" because "even renewable energy advocates have criticized

the government and industrial renewable players, creating both a public relations challenge and opportunity

around community scale projects" (Social Capital Strategies, 2017, p. 12); in Quebec, where sustainability

is a core value, "community-led renewable projects may be a harder sell" because "Hydro One already

produces an abundant supply of clean, cheap energy, so there isn't a strong need to shift away from dirty

energy sources; in Saskatchewan, renewable energy is "a tough sell because of generally dismissive attitudes

around climate change and the political context"; in Alberta, renewables stand against the province's fossil

fuel economy and many "worry that a shift away from oil is part of a broader movement that threatens their

way of life"; and in British Columbia, the transition to a cleaner future seems to be in a "lull" because of

the conflict between private and government sources of energy, as well as ongoing debates surrounding Vancouver's 100% Renewable goal which has people worried about "short-term costs" that might hurt households and businesses (Social Capital Strategies, 2017, p. 12–17).

These challenges are put into even greater context by a Saskatchewan solar installer who spoke with a David Suzuki Foundation staff member and addressed the influence of discourse around renewable energy:

We know from experience that most people go solar because of a story they've heard or connection they've made with someone else. Most people don't come to it on their own; they need to hear from someone doing it and see it up close to really see the value. (Social Capital Strategies, 2017, p. 19)

Staff at the Foundation researched the potential divisive nature of renewable energy well before the launch of the campaign but transmedia storytelling in Charged Up still wrestles with the polarization between the core and counter narratives. Glauser explains:

I try to really make sure somebody actually wants to talk about it before getting into it … I'd be on the phone with my dad or something, I'd find I'm just yelling at him for the need for carbon pricing and I'd just catch myself, like okay, calm down, like this is not how you rally the troops … if you want to get people actually understanding and caring about this stuff, meet them where they're at, find out what they're thinking about, like how's climate change impacting them, like from what direction do they enter this conversation and then go there. (B. Glauser, personal communication, 2020)

Relatedly, the campaign also uses the earlier mentioned CliMate chatbot to address conflict, with our parents or otherwise. According to the developers of CliMate, conversation about climate change "isn't about winning an argument; it's about learning to have productive conversations based on common ground and shared values" (David Suzuki Foundation, 2020f).

More broadly, many of the Charged Up storylines exhibit some form of challenge or conflict before a renewable energy solution is presented (see Sections 4.6.2.3). In *Turning Toronto Zoo poo into power*, a campaign article describes "the problem of energy production" and "food waste," which causes "over

four billion tons of GHG emissions a year globally," antecedent to a "grassroots biogas" solution that cuts carbon emissions considerably (Forman, 2020b). In another campaign article points out the need for a "just transition," so "the thousands of people employed in our coal, oil, and gas industries" are not left behind. Local program manager Jamie Kirkpatrick discusses this conflict:

> It's not fair that people who have provided the fuel and energy to run our economy for the last hundred or so years are just run over by a green wave. They need to be transitioned and there needs to be plans to support the communities that depend on those industries. (Asher, 2020)

The previously mentioned Westmount Presbyterian Church, which is facing "a precarious future," is yet another example of how the Charged Up campaign introduces non-habitual physical events leading to conflict (Delaney, 2020b). Recall, the congregation "couldn't afford to heat their aging, uninsulated building," with unexpected heating bills increasing, before a renewable energy project was conceived to retrofit the building's source of energy.

And while the David Suzuki Foundation narrows its storyworld boundaries for comprehensive purposes by controlling the number of storylines (Jenkins's continuity), the campaign does a selective job of recognizing even broader narratives of conflict emerging across climate change discourse (Jenkins's multiplicity), just as SeaLegacy found ways to marry the fate of Antarctica to the larger thematic backdrop of the crisis. For example, linkages between racial justice and climate justice are explored in a campaign video entitled Udokam Iroegbu, where we are introduced to Udokam Iroegbu, a young black women who identifies as pansexual and demisexual and uses the pronouns she, her, and hers. For Iroegbu:

> How is anything not racial justice? So when you talk about how is climate justice racial justice, I almost want to pose the question back to the audience and say … Give me an example of anything that doesn't tie back to racial justice? (DavidSuzukiFDN, 2020b)

Similarly, in an article accompanying this video, the campaign explores Iroegbu's climate justice storyline (Jenkins's seriality), the Foundation states:

This year, amid a global pandemic that has spotlighted deep-seated inequities, amid protests against racial injustice and police violence, amid wildfires and record high temperatures, it seems the world might be coming to understand a fact that millions of people have long known: That climate justice and racial justice are inextricably linked. We can't have one without the other. (Delaney, 2021)

Charged Up enters into this dialogue particularly interested in Indigenous ways of knowing, and they do so keeping their core narrative intact. That is, while Peripheral and Partner content associated with the campaign introduce even more diversified storylines, Charged Up's Core content limits any breadth that would take away from the renewable energy transformation solution-focused stories.

Finally, because Indigenous storylines are indeed a significant part of the Core content, we can once again return to Laboucan-Massimo's storyline to appreciate the efficacy of Narrative Condition #3 at work. On screen, Laboucan-Massimo sits during an interview and recounts a tragic event in her own words:

April 29th, 2011. There was a massive oil spill in our traditional territory. Twenty-eight thousand barrels. 4.5 million litres from a pipeline which also consumed beaver dams and went into a muskeg which is a lot of where traditional medicines grow as well and the muskegs are connected to the aquifers and the water systems. (DavidSuzukiFDN, 2020a)

The oration in the video describing the unexpected disaster is accompanied by arresting visuals we have become too accustomed to seeing; one particular image depicts vegetation covered in oil as members of Laboucan-Massimo's community appear to be involved in an impromptu but needed clean-up (see Figure 32). There is also visual evidence that Laboucan-Massimo took to sky in a helicopter to make aerial images that conveyed both the pristine nature of her homeland before the spill, as well as, the extent of the damage). The video further accomplishes the objective of revealing the truth of climate change to bear for watchful audiences (DavidSuzukiFDN, 2020a).

As hard as it is to listen to Laboucan-Massimo describe her personal response to the oil spill, and that of a loved one as well (see Section 4.6.2.4), the event was effectively featured in the Charged Up campaign as a storytelling moment that garnered national attention (Jenkins's spreadability). No doubt, its role in the David Suzuki Foundation's campaign should continue as this storytelling provides narrative perspective that

might implicate audiences who affectively relate with the victims (DavidSuzukiFDN, 2020a).

On the notion of addressing conflict caused by unpredictable and non-habitual events the Foundation understands: "These challenges are compounded by the fact that most people are unclear on the mechanisms by which power is generated and distributed, the different authorities involved, and as such, how they could play a part in the system" (Social Capital Strategies, 2017, p. 4). Yet, optimism prevails since the Foundation is also aware of the following:

> Research and experience show that community participation can help overcome much of this opposition. Given the chance to see, discuss, and play a part in local renewable projects, people discover new connections between energy—a typically distant and impersonal issue—and their own lives (Social Capital Strategies, 2017, p. 1)

4.6.2.4 - Charged Up: Condition #4 / Mental Lives with Emotional Reactions

The participants in the events must be intelligent agents who have a mental life and react emotionally to the states of the storyworld

Emotional reactions by "intelligent agents" are an integral part of Charged Up as the campaign emphasizes how the transition to renewable energy has a positive impact on people and communities. To draw out emotion, the David Suzuki Foundation replaced commonplace media content, which employed overused imagery, with new strategies that elicit meaningful and affective responses (Jenkins's immersion). For example, we have seen enough of these staged images: Older predominantly white men, wearing orange helmets, while they hold iPads in front of solar panels during a setting sun. We have also seen enough protest images and the widespread and shocking disaster footage can only achieve so much to our knowledge (Corner, 2017). In place of this banal subject matter, the Foundation sought to document "real people," involved in purposeful actions on the front lines of "new" solution-driven stories (Yano, 2020), as seen in the closing sequence of a campaign video featuring the Kanaka Bar Indian Band who are celebrating the opening of a renewable energy project on film (see Figure 33).

In these positively expressed emotions, ordinary Canadians share a desire for a sustainable future, one brought about by real and tangible renewable energy projects on the ground.

As the grade six and seven students from Regina's Lakeview School stare directly at the camera

Figure 32:

Oil spill in Melina Laboucan-Massimo's community depicted in the video entitled *Foundation fellow brings power to the people* (DSF-MC28b).

Figure 33:

The Kanaka Bar Indian Band celebrate the opening of a renewable energy project in the *Kanaka bar: harnessing the power of community* campaign video (DSF-MC14b).

in *The Solar Generation* film (Hall, 2018), audiences are compelled to listen to their unadulterated and individual stories about why they care for a renewable energy future—it is the novelty of the information they share from an insider's perspective because the students have been studying the finer details and promise of solar and wind in Saskatchewan. One of the students, Ella, is endearing and sincere, and yet sets a serious tone for the piece, stating, "You have to convince people and have people on your side" (Hall, 2018). A few scenes later, another student, Nadia, responds to the interviewer's question with a printed map in hand:

> Obviously, a lot people haven't seen this. We live down in the Southern part of Saskatchewan and as you can see on the map, there's a lot of red. And where there's a lot of red, we can produce a lot of solar energy, and we get a lot of sunlight, whereas where it's blue, it's not. (Hall, 2018)

Whether Nadia is right about the lack of awareness is not the point; there is a level of authority in her voice, even a degree of moral judgement, as her character tells the audience a researched fact we likely do not know and asserts how the implementation of renewable energy could benefit her province. Viewers may be moved by the shared concern of these students and recognize how much the energy transformation will benefit this younger generation.

In another scene in which the students visit the Cowessess First Nation's Renewable Energy Storage Facility and see a windmill for the first time, cameraman Stephen Hall captures the children's enthusiasm and curiosity. Even the point of a hand by one student observer seems candid and authentic, unlike the clichéd image of a posed executive in a planned scene.

The video is an exemplary piece of visual storytelling conforming to Narrative Condition #4. From scene to scene we witness emotional responses by real characters whose interest in renewable energy becomes relatable. We affectively engage with a storyworld as the characters do—at minute 3:55 in *The Solar Generation* the students are touching solar panels—and in this way it becomes apparent to viewers that these solutions to climate change already exist. Clarke, the classroom teacher, sits down at the desk for his own interview near the closing scenes of the film and encompasses this lived experience: "Getting out to Cowessess and seeing the install up close was incredible." The students also share what it was like to see and feel renewable energy infrastructure in responses during a sequence of quick editing cuts accompanied by a soft piano music track added in post-production: Nhu says, "The wind turbine was way bigger than I

thought it would be"; Jake answers, "When I saw them, I was like, holy, that's a lot of solar panels"; and Jonah says, "Well, I've never seen anything like that before" (Hall, 2018). The emotionally rich filmmaking accomplishes the goal of transporting people into narrative as the characters in the story themselves engage in a new experience that teaches them about the promise of renewable energy; as they learn, so do we.

Engagement with the topic of renewable energy is strengthened by emotional reactions exhibited in storylines across an expanding array of media channels. Let us consider a few more examples to demonstrate; where SeaLegacy employ majesty and awe to create embodied experiences within The Greatest Sanctuary storyworld, the David Suzuki Foundation focuses on empathy and relatability. In both cases, positive and negative affective states enhance narrative transportation (Jenkins's worldbuilding, which permits audiences to enter into the storyworld because of an interest in the feelings of a character) and narrative congruency (Jenkins's continuity, which serves to fill in gaps to advance the overarching goal of the campaign).

In *Renewable energy powers food production at Just Food Farm*, a video produced by Chris Snow and Remi Theriault, Just Food, a 150-acre demonstration farm that models sustainable food production and practices in the Ottawa Greenbelt, is featured. In the film we are first introduced to Noel Dhingra's character, through a series of soft-focused and tightly framed details, that clearly illustrate his tender relationship with food, by the way he handles a radish (see Figure 34). As a local farmer who is noticeably responsive on camera, he uses his first-person voice to establish the burgeoning role of renewable energy and what it means to him:

> Most of us farmers have helped out to put the rafters up or to move those shipping containers in place and so it was really like everything here was a community-based project … when we had our event and unveiling and market space …. seeing the community of Blackburn hamlet and Ottawa pour into the site was really great to see … I think it's a pretty rare thing to have a full functioning farm that's using alternative energy in an urban area. (Snow & Theriault, 2019)

This video was included in the Charged Up campaign because the affective responses by Dhingra and others in the film serve to elicit a moral allegiance with farmers across the country, who provide essential food, in this case, to buyers in Canada's capital city who value the promise of sustainability; at minute 2:46 Dhingra walks casually through the farm and an editing choice to slow down his movement adds an emphasis

Figure 34:

In the campaign video *Renewable energy powers food production at Just Food Farm* we are introduced to Noel Dhingra's character, through a series of soft-focused and tightly framed details, that clearly illustrate his tender relationship with food (DSF-MC17b).

Figure 35:

In campaign video sequences the David Suzuki Foundation work with content creators to capture footage at high frames rates to be able to slow movement in post-production as seen in *Renewable energy powers food production at Just Food Farm* (DSF-MC17b).

to the unfolding moments that elevate this characters importance so audiences might pay more attention to his heartfelt message (see Figure 35).

From despair to hope, spectrums of emotion are manifested by characters across Charged Up's other storylines. There is evidence of this in email newsletters that advance the campaign using prose about the renewable energy storyworld and the conflicts that arise within. On May 8, 2018, a few months after the launch of the campaign, Cornish delivered an emotionally charged message to campaign subscribers that first addressed the polarizing nature of the energy transition:

> This is a difficult time for our country. On the international stage, we have made commitments to cut our greenhouse gas emissions significantly, helping usher in a modernized clean energy economy. Yet, we all still rely on fossil fuel products daily, and many Canadians depend on the sector for the jobs and economic activity it generates. As the world transitions from fossil fuels to clean, renewable energy, oil and gas proponents are taking aim at the environmental sector and you, its supporters. This past weekend, you may have seen media coverage of negative comments made by Alberta's United Conservative Party leader about people working to protect the environment. This name-calling is just the latest in a several-week-long spree of attacks on environmental organizations throughout Canada, largely because of opposition to the continued expansion of Canada's oilsands. This divisive, polarizing approach is not what Canada needs now. (S. Cornish, personal communication, 2018)

The email concluded with Cornish's more optimistic stance: "Please give today. Stand with us as a unified, credible and trusted voice, representing science, reason and the well-being of people for generations to come" (S. Cornish, personal communication, 2018). In doing so, the Foundation leans in on the affective qualities that emerge with imaginations of both a dystopian and utopian future, which in their own ways propagate affective responses to climate change.

Relatedly, Suzuki, a longstanding voice of authority on environmental concerns in Canada, and arguably one of our finest science communicators, knows all too well the nature of emotive rhetoric. From the beginning he has sounded the alarm, with cries of despair like this:

This, then, is where we are at the beginning of the third millennium. With explosive speed, we have been transmogrified from a species like most others that live in balance with their surroundings into an unprecedented force. Like a species introduced into a new environment free of constraints, we have expanded beyond the capacity of our surroundings to support us. It is clear from the history of the past two centuries that the path we embarked on after the Industrial Revolution is leading us increasingly into conflict with life support systems of the natural world. Despite forty years of experience in the environmental movement we have not yet turned onto a different path. (Suzuki, McConnell, & Mason, 2007, p. 13)

Yet, his voice has always sought hope, particularly as it affects his family:

My beautiful, previous grandchildren,

In these letters, I have tried to tell you something about my history, my experiences, and my thinking that may help you understand your grandpa a little better—what has motivated me and what I have tried to do in my life. I hope you know I've never tried to interfere with you lives or dictate anything to you. I have such great faith in your parents, whom I love and respect as your role models. In the end, I think we all provide guidance by the way we live, not by words or lectures. (Suzuki, 2015, p. 217)

Similarly, Mittermeier's passionate rhetoric in particular comes to mind here as well.

Because intelligent agents have mental lives and react emotionally to the states of the world, we can conclude this analysis of Narrative Condition #4 as it is fulfilled in the Charged Up campaign by examining one particular video that further exemplifies affective storytelling in climate change communications (David Suzuki Foundation, 2020d). It is storytelling that specifically centres on the human condition and importantly our moral dimension of what is right and wrong as audiences surely both empathize and sympathize with the victims. To do so, is to return to Laboucan-Massimo's storyline which permits us to experience an insider's view of an oil spill that destroys her home and community. On this matter, the leading protagonist says:

I would say I probably developed PTSD. It's very traumatic you know … you work like 16-hour days and you're like shaking because you're just trying to field calls from the media

and trying to get access to the spill and trying to make sure your family is okay … just felt

like you couldn't do enough. (DavidSuzukiFDN, 2020a)

That Laboucan-Massimo could not do enough to alleviate the suffering introduces affect—the emotional

salient nature of the unfolding scenes align a moral allegiance to those that have suffered or could suffer if

the event was to occur again. In so many ways, we also feel along with Laboucan-Massimo's aunt Lilian, who

was the person to first notify Laboucan-Massimo of the spill:

We need you home. You need to come help us. (DavidSuzukiFDN, 2020a

As the film advances, the retelling of the event by Laboucan-Massimo and Aunt Lilian triggers our cognitive

empathy and we are obligated to infer more about their challenging situation. Concurrently, in combination

with the immersive visual storytelling of the event, we engage with our affective empathy because we

experience the spill and its effects on a visceral level. In other words, we first think about Aunt Lilian and

then we feel with her when she says: "It's forever. People are crying. It hurts" (DavidSuzukiFDN, 2020a).

Laboucan-Massimo's first-person narration in the film transports audiences to the scene where

we are cued to sense and feel alongside her as she bear's witness to the tragic event and its effect on her

community. The film is powerful as a storytelling tool because we follow along with as an experiencing

human—who has a purpose—with our own consciousness.

4.6.2.5 - Charged Up: Condition #5 / Events are Purposeful Actions
Some of the events in the storyworld must be purposeful actions by agents

As is the case with SeaLegacy, the David Suzuki Foundation define a mission with clear conviction:

"Our mission is to protect nature's diversity and the well-being of all life, now and for the future." In a

similar way, the organization articulates a concise vision statement to tell audiences what they hope to see in

a future storyworld: "We all act every day on the understanding that we are one with nature." (David Suzuki

Foundation, 2021d). As their bold mission is concerned, inspirational copy on the Foundation's website

begins to convince others this commitment is manifested in reality:

We are interconnected with nature, and with each other. What we do to the planet and its living creatures, we do to ourselves. This is the fundamental truth guiding our work at the David Suzuki Foundation. Founded in 1990, the David Suzuki Foundation is a national, bilingual non-profit organization headquartered in Vancouver, with offices in Toronto and Montreal. Through evidence-based research, education and policy analysis, we work to conserve and protect the natural environment, and help create a sustainable Canada. We regularly collaborate with non-profit and community organizations, all levels of government, businesses, and individuals. We are humbled that Canadians consistently name the David Suzuki Foundation the country's most credible and reliable source of evidence-based environmental information, and consider us the lead organization working with government and business to resolve critical environmental issues. Always grounded in sound evidence, we empower people to take action in their communities on the environmental challenges we collectively face. (David Suzuki Foundation, 2021d)

That there is parallel language and intention found in the transmedia storytelling in Charged Up suggests that the campaign in question is fulfilling purposeful actions by agents working on and for the transformation of our energy infrastructure, one key area of focus for the David Suzuki Foundation. Charged Up strategic documents provide further evidence of these premeditated purposeful actions. For example, the Foundation seeks to "increase the number of Canadians engaged in community-led renewable energy" and "build a clean energy community of 80,000 Canadians" (Social Capital Strategies, 2017, p. 2). Driven by this defined purpose, Charged Up is also aiming to "Shift discourse and public opinion about renewable energy to focus on the tangible benefits it offers to people across the country and the emerging local and national renewable energy economies" (Social Capital Strategies, 2017, p. 2); on both a national and provincial level the campaign also aims to influence key policies.

With this context in mind, it is advantageous to once again recall that strategic narratives are made from stories with purpose because they aim to persuade and coordinate (see Section 2.3.1); that is, Charged Up has intent to persuade Canadians to support renewable energy projects; and the campaign needs to coordinate efforts in local communities to do so. Ultimately, the purpose of creating their renewable energy storyworld is to convince Canadians what is possible. Where SeaLegacy elicit a response with a convincing warning about the fate of Antarctica, the David Suzuki Foundation convince audiences with hope and pragmatism.

Storyworlds built by narratives, in this case a core narrative advancing the idea of a shared renewable energy future, become sense-making schema or blueprints that provide a map to navigate the unfamiliar. Stories with purpose fill in mental gaps that surround renewable energy policy—the science and statistics are harder to comprehend and connect to—and elicit tangible action because they explain a current situation, define a problem in that situation that disrupts the order, and introduce a solution to resolve the conflict and establish order again. Whereas climate policy inconsistencies undermine what is possible, each new Charged Up project uses evidence to realize the campaign's broader purpose of instituting climate change mitigation strategies.

What is more, stories with purpose—or strategic narratives that work to persuade and coordinate—were defined as key components of the campaign from the beginning. Through a consultation process with Social Capital Strategies, purposeful stories were to include: "Clear benefits" to "local people" to inform a community what is to be gained; an emphasis on the "collective, not just individual, action" to acknowledge the need to work together; demonstration or the showing of a value proposition to make more sense of esoteric policy; and exhibition of "how a project took place." With these purposeful storytelling ingredients in mind, the David Suzuki Foundation singled out stories for which they could "include both the challenges and opportunities involved in moving an initiative forward," because "the first question most interested people will ask is how they can do this themselves" (Social Capital Strategies, 2017, p. 19). Once again, Yano explains how the purpose of Charged Up evolved as the Foundation learned more about the campaign at the local level:

> We did pay attention in the development of things to equity and inclusion. So really trying
> to broaden the tent because understanding that what we've been doing on climate change
> and the mobilization to date hasn't been enough. We've largely mobilized the choir to be a
> little louder. (S. Yano, personal communication, 2020)

Yano continued:

> One thing that became clear is that renewable energy isn't even possible everywhere …
> so very quickly we kind of went to community climate action, which is anything that
> reduces emissions, anything that helps us … and we've always approached it from more of

a solutions place because that is where people can start to feel hopeful. Like there's a space and it's not the end of the world, that there's still an opportunity for us to work together and get things done, although it increasingly is a shorter window and requires more and more ambition the longer we leave it. And then tell the stories of all these different everyday people doing extraordinary things, and you can too. You can join us. (S. Yano, personal communication, 2020)

Looking through this equity and inclusion lens the organization's broader goal to advance climate solutions is integral, yet Charged Up is doing so in a way that includes each individual. With a purpose to "empower communities across the country," and specifically feature "purposeful actions" by "you—of all of us," the campaign begets a "cleaner, healthier, charged-up Canada" (David Suzuki Foundation, 2021b).

These purposeful actions are manifested across Charged Up as part of the core narrative (Jenkins's continuity), in multiple, yet controlled, individual storylines (Jenkins's seriality), as well as by characters who present their individuated accounts in the renewable energy storyworld (Jenkins's subjectivity). While the occurrence of these emergent stories will continue to grow, as the campaign exists in one form or another in perpetuity, three specific examples provide evidence of enduring purpose; we saw how emergent storylines deepen the core message in The Greatest Sanctuary as well.

In *Why we vote*, Pippa, a mother, environmentalist, and avid cross-country skier, writes into the Foundation with the following intent in mind (see Figure 36): "This fall, my vote will be based on whichever party offers the most hope on climate change action"; Joanna, a new mom from Windsor, Ontario speaks about her sense of resolve and actions she has recently taken:

In the next election, progressive, aggressive, clear environmental goals and objectives are what I am looking for when casting my ballot. I have undergone a personal audit of my own carbon footprint and have made many positive changes for myself and in my household. But without adequate government legislation in place, those who are not prioritizing their own consumption (and in particular, large corporations whose bottom line is making a profit) will continue to pollute the environment to everyone's detriment. (David Suzuki Foundation, 2020f)

Figure 36:

A letter from Pippa to the David Suzuki Foundation expressing her support for the campaign.

In a third testimonial, in *Why we vote*, Brieanna, a fashion designer from New Westminster, British Columbia states her purpose plainly:

> My partner and I have decided not to have any children as we are unsure of the challenges they would face … I'm very concerned about the state of the planet and I want to do everything in my power to help the global temperature from rising. (David Suzuki Foundation, 2020g)

4.6.2.6 - Charged Up: Condition #6 / Outcomes & Closure

The sequence of events in the storyworld must form a unified casual chain (i.e., story arc or structure) and lead to outcomes and closure

Ryan's (2007) Narrative Condition #6 reflects upon the need for some form of narrative structure that moves audiences along a path of transformation, such that Propp's disruptive events and Todorov's state of disequilibrium manifests the need for a solution (see Section 4.6.2.5). In the case of the David Suzuki Foundation's Charged Up campaign, Canadians have been challenged to overcome the forces at play as our world warms and extreme weather events become more extreme, more likely, and more frequent, disrupting life in our communities. Despite the broader intangible nature of climate change, the problem is becoming such that each of us is living through a felt experience that makes the burden of climate change more real, although the crisis is impacting people unevenly.

Narrative form, as discussed throughout this dissertation, is used to successfully identify climate change as the serious problem it is—the doom-and-gloom is indeed salient—but story structure can also be used to pave a way forward like it did in The Greatest Sanctuary campaign, since SeaLegacy touch on doom, yet they leaven with hope to realize an alternative future.

The David Suzuki Foundation believes narrative forms are successful because they incorporate mental shortcuts that are based on common audiences' aspirations and a specific challenge that juxtaposes the threat of inaction and the opportunity to be gained by a choice to take an action that leads to an alternative outcome (Social Capital Strategies, 2017, p. 9). As Mittermeier has done before, Jodi Stark, a Pubic Engagement Specialist at the David Suzuki Foundation, and lead proponent in the Charged Up campaign, places narrative form in the context of our ability to sense which conditions might be most advantageous

to connect people with climate change through story: "I think some of it is intuition … asking the right questions … asking what does [a story] convey and what emotions might [an image] elicit? (J. Stark, personal communication, 2020). Commenting on intuition in this vein, Suzuki calls upon existing criticism around the scientific method:

> [The intuitive way of knowing is] not something that's vaguely subjective and artistic, it's a definitive way of knowing the world. In fact, it's absolutely essential to creative science. All the great scientists, Einstein, Feynman, you name them, would say intuition is the way they arrived at their basic insights, their new ways of putting parts together into coherent wholes. The famous guys are allowed to say this. The rest of us have to pretend we're really basing everything on hard fact, proceeding to generalize by induction … not seeing a new whole intuitively. (Goodwin, 1997, as cited in Suzuki, McConnell, & Mason, 2007, p. 36)

Suzuki (2007) makes the role of intuition in climate change communication even more clear: "When scientific endeavour is severed from its historical and local context, it becomes an activity carried out in a void—a story that has lost its meaning, its purpose, and its ability to touch and inform (p. 37). Suzuki (2007) continues: "Science would benefit from acknowledging a way of knowing about the world that includes intuition" (p. 36).

In this context, the David Suzuki Foundation's Charged Up campaign draws from their narrative sense alongside tried and tested structural methods including the previously mentioned public narrative formula introduced by Ganz (2011); recall, Ganz's narrative procedure encompasses a story of now, or the challenge; a story of us, or the sharing of values and experiences; and the story of self, or the reason why each of us alone is called to act (Ganz, 2011). Ganz (2009/2013) presents the following questions plainly to demonstrate how the answers emerging in our own stories and those in our communities collectively work to author and structure public narrative:

> Story of now or challenge: What urgent challenge do you hope to inspire others to take action on? What is your vision of successful action? What choice will you call on members of your community to make if they are to meet this challenge successfully? How can they act together to achieve this outcome? And how can they begin now, at this moment?

Story of Us or the sharing of values and experiences: To what values, experiences, or aspirations of your community will you appeal when you call on them to join you in action? What stories do you share that can express these values?

Story of self or call-to-action or lead: Why were you called to motivate others to join you in this action? What stories can you share that will enable others to get you. How can you enable others to experience sources the values that move you not only to act, but to lead? (p. 1)

How this narrative structuring can set up an exercise of dialogue for "telling, listening, reflecting, and telling again—over, over, and over" is the point of interest (Ganz, 2009/2013, p. 1). Where SeaLegacy entice members of The Tide to follow a narrative journey and make choices for the betterment of Antarctica—and all of us since protecting this region is one global mitigation strategy—the David Suzuki Foundation calls upon all Canadians to make choices about their own individual and local community renewable energy future (Jenkins's extractability). Commenting on the original structure of the Charged Up campaign Cremier noted:

We were trying to find our own DNA with a campaign that would not be against fossil fuel infrastructure but for renewables and that came from studies that we did with our own audiences that were middle class, mostly women, in urban and big cities west of Toronto, all the way to BC [and were] maybe more reluctant to get involved in classic campaigns where you have a scapegoat that you have to bring down to its knees … So, we were trying to find our own way to campaign against fossil fuels without campaigning against fossil fuels. We thought that creating eagerness and enthusiasm for the acceleration of the deployment of RE would be our chance to engage in dialogue, what we use to call adjacent audiences, so audiences that were not at the core of the fighting off infrastructure but that were interested in getting off because they perceived a better quality of life in other models. (D. Creimer, personal communication, 2020)

More explicitly, where SeaLegacy's The Greatest Sanctuary campaign messaging takes only inspiration from elements of Ganz's (2011) public narrative (see Section 4.2.2.5), the David Suzuki Foundation lean even

further into Ganz's mode of thinking to provide wider structure to the Charged Up campaign. In an internal strategic document, they state:

> Building on Marshall Ganz's Public Narrative approach to storytelling, the recommended framing strategy includes three key components: Opportunity, Choice, and Challenge. Research shows that combining these three elements can help move audiences beyond awareness to action, whether it's behavioural or political (Social Capital Strategies, 2017, p.9)

In this way, Ganz's (2011) public narrative process is echoed in Charged Up's campaign structure which focuses on a community "opportunity" in this way: "Renewable energy isn't a technology or an industry: It's a pathway to powering up our communities, creating jobs, strengthening local economies, improving quality of life, and providing clean, reliable energy (Social Capital Strategies, 2017, p. 10). That is, the Charged Up campaign is highlighting what individuals and communities "stand to gain from local renewable energy projects" that share values and experiences such as "better schools" and "new jobs" (Social Capital Strategies, 2017, p. 10). In a number of ways Ganz's opportunity framing in Charged Up is analogous to the dichotomous pairing of stories I analyzed in SeaLegacy's Case Study #1 strategic documents. Where fossil fuels is "what is," renewable energy is "what could be" (Duarte, 2010, p. 6). Put another way, the opportunities featured in Charged Up transmedia storytelling suggest a new destination for Canadians to go to. As the campaign presents, others can follow if they are made aware of the opportunity and subsequently align their own values with these stories of success (Jenkins's drillability).

From Ganz's (2011) narrative framing model, choice is reflected in the decisions that individuals can make as part of a community interested in the mobilization of the "skills, capital, and enthusiasm needed to bring renewable energy and all of the benefits it offers" (Social Capital Strategies, 2017, p. 9). In setting up an opportunity to prosper the Charged Up campaign uses narrative form and empowerment to create communities of citizens who can make choices about "independence, self-sufficiency, freedom, and local ownership" (Social Capital Strategies, 2017, p. 10).

Where communities face a growing number of risks related to the impacts of climate change, the need for reliable access to renewables is only growing. Ganz's (2011) challenge sets in motion the sequencing of events, propelled by conflict in the storyworld, that brings about the need for new conclusions. Narrative

Condition #6 is particularly interested in closure; while all good story structure might have a beginning, middle, and end, Cremier notes:

> Storytelling doesn't end when the story it is told, that's only half of the way, you have to walk and travel with the story, discuss it, show it to many people, tell it over and over and over again, scout for opportunities to tell the story again. (D. Creimer, personal communication, 2020)

The Charged Up campaign uses a story architecture that advances us towards a common end goal as they tell more success stories, imprinting the idea of a storyworld transformed—progress is in this way measured with each subsequent event, with each new project that breaks ground, making a more hopeful conclusion plausible.

4.6.2.7 - Charged Up: Condition #7 / Factual Events

The occurrence of at least some of the events must be asserted as fact for the storyworld

As events in Charged Up mentally and physically alter the state of both the constructed storyworld and that of the real world, the David Suzuki Foundation take on the responsibility of shaping our experiences. Not enough is it to simply think about a sustainable future powered by renewable energy; this future needs to be presented through events that occur and can be felt. That audiences can either observe or participate in these lived experiences fulfills Ryan's (2007) condition because "things happen" and people will emotionally react as a result (M. Ryan, personal communication, 2020). This process of bearing witness to a factual event, as Mittermeier and Nicklen did in Antarctica's harsh environment, is a component of the worldbuilding process used in the Charged Up campaign.

Recall, more generally, that transmedia storytellers interested in climate change communication also take on the responsibility of delimitation, such that, events that can occur in a given storyworld are set inside defined boundaries like Antarctica; narrative comprehension is possible this way because disorderly and randoms events that sway audiences away from the primary interest of the core narrative are minimized; extreme weather events provide a good example because while they are part of the complexity of the Charged Up storyworld, they are not the main focus, as is the case in the prevailing doom-and-gloom narratives to

date. As the David Suzuki Foundation considers Narrative Condition #7 in Charged Up, they make their constructed storyworld navigable, and principally steer people towards solution-focused events (Jenkins's drillability). Still, they also recognize the accumulative effects of warming events on a global scale and how these events affect Canadians.

We can return to Ryan (2015) for insight on how the Foundation achieves this boundary-setting exercise that makes factual events not only possible, but experiential. The process of worldbuilding begins by defining whether a storyworld is "world-dominated" or "plot-dominated" (Ryan, 2015). In a world-dominated storyworld the plot functions as a journey that uncovers rich elements of that world as audiences encounter diversified and controlled storylines within it. In this manner, the world itself attracts a lot of attention, as Antarctica did in The Greatest Sanctuary campaign; Antarctica already existed as a world, despite the need to uncover its mysteries via stories. For the David Suzuki Foundation, there is still work to do to realize what a renewable energy storyworld might involve so a priority is placed on characters and their actions—key characteristics of a plot-dominated experience.

In a plot-dominated world, the storyworld is secondary and is analogous to a container, or a repository for storylines that feature and highlight individual characters leading out their lives as they face challenges and embark on opportunities to transform themselves and society. In Charged Up, ordinary Canadians are central to the plot, since the Foundation is particularly interested in the human condition and how everyday Canadians can take control of their energy needs by participating in events that realize this vision.

To define and enhance the unfolding events in the community-powered renewable energy world the David Suzuki Foundation also considers other worldbuilding strategies.

To begin, both intradiegetic and extradiegetic features of media are used in transmedia storytelling that makes a renewable energy storyworld experiential. Charged Up uses intradiegetic elements, which exist within the storyworld, during the filming of first person narration throughout many of their videos since real people comment on their renewable energy projects in front of the camera and become individuated members with mental lives existing inside the storyworld. In the same context, the equipment used to conduct the interviews are also intradiegetic elements because the audiences is to understand that these people have been documented for the sake of capturing their expressed value of renewable energy and the presence of the camera and audio crew give the audience the documentary feel. In contrast, extradiegetic elements, which exist outside of the storyworld, are also used strategically to enhance the narrative qualities of Charged Up's videos, particularly when the campaign selects music tracks which "controls the expectations and emotions

of the spectator but does not exist in the storyworld" (Ryan, 2014, p. 39). Moreover, in another case that might marry our understanding of both intradiegetic and extradiegetic elements, the CliMate chatbot can be discussed as an element on the edge of the storyworld because it functions as an entry point into this space, as a consumer responds to questions about climate change discourse using Facebook as an interface, but the chatbot is not a mental life, and instead a programmed language with predetermined answers that originate from sources external to the storyworld.

Inasmuch as intradiegetic and extradiegetic media elements help to define the occurrence of events in the Charged Up storyworld, Ryan (2014) also suggests transmedia storytelling campaigns are required to distinguish "world-internal" from "world-external" (p. 40), whereby a factual object involved in an event either rightfully belongs or does not in the storyworld. In the case of the depicted wind turbines and solar panels in the previously discussed video entitled *The Solar Generation* filmed on-location in Saskatchewan (see Figure 37), these elements are world-internal because this infrastructure is part of the storyworld architecture. Science fiction solutions to climate change provide an exemplary case of world-external features because these solutions might remain fictional if not brought into reality; that said, they can exist as world-internal ideas on blueprints in a given storyworld (Hall, 2018).

To discuss yet another of Ryan's (2014) worldbuilding strategies is to acknowledge that fictional storyworlds are often created such that fans can alter a single world. For example, in the multiple Star Wars movies audiences can appreciate one distinct world, yet as alternative versions of the series are conceived across other media, this single world can be manipulated. Such is not the case in Charged Up, where the storyworld and the real world become one as the campaign aims to invite people to experience what a renewable energy future could look like. As was the case in The Greatest Sanctuary campaign the David Suzuki Foundation are restricted to the types of stories they can tell because viewers live in a single-storyworld and not many-storyworlds that would have us lose track of the narrative of our own existence.

In this context, one of the tasks of transmedia storytelling is to connect audiences with real world happenings and the relationships between events where emergent storylines might not otherwise be found together.

Here, also, Ryan (2014) shares an important caution as transmedia storytellers like the David Suzuki Foundation embark on worldbuilding to elicit emotional reactions from audiences; that is, there is a prominent and omnipresent role for semiotics, because our mental acuity is influenced by the signification of varying media forms found across the media channels present in the Charged Up campaign. In a number

of ways this is one area where viewers see a clear difference between the two case studies examined in this dissertation. Where SeaLegacy lean heavily of their prowess in the visual storytelling space to take advantage of the heightened sensory and affective experiences cued by spectacular visuals that evoke our senses, as previously mentioned, the David Suzuki Foundation still depend heavily on scientific language—both oral and written—that requires greater cognitive processing to make sense of stories derived in this media form (see Section 4.7.1).

Notwithstanding this last point, the David Suzuki Foundation follow suit with SeaLegacy to assert the factual nature of climate change events. As Suzuki has been doing for some time now, through his transmedia storytelling efficacy, Charged Up makes a very clear case that our warming world is creating unprecedented events that require attention and mitigation swiftly.

4.6.2.8 - Charged Up: Condition #8 / Meaningful Story or Lesson

Storylines in the storyworld must communicate something meaningful to the audience

It will serve a purpose to recollect that Ryan (2007) considers Narrative Condition #8 the most difficult to discern and implement in transmedia storytelling, or Jenkins's worldbuilding, because it requires a distinction between "definition" and "poetics" (p. 30), as well as an interpretation by which a narrative can reach significance. In other words, how many conditions need to be fulfilled to consider a story—a narrative—meaningful? On the matter of the difference between definition and poetics Ryan (2007) is reflecting on what makes for a bad story and what makes for a good story, though presumably both carry meaning. On the matter of interpretation there is need for greater clarity because while it is definitive that each of us uses stories to make sense of the world, it is not necessarily affirmed that current climate change stories being used to bring about urgent action are working—or are meaningful (see Section 2.4.1).

In the context of this dissertation then, we can revisit the idea that significance can be achieved through the advancement of a core narrative (Jenkins's continuity), or a strategic narrative, that gains meaningfulness as it persuades and coordinates. For SeaLegacy that significance was "the largest act of ocean protection in history" (SeaLegacy/Only One, 2021b). A strategic document used by the David Suzuki Foundation in the early days of the Charged Up campaign puts this notion of a significant narrative into pragmatic terms this way:

Figure 37:

Intradiegetic media elements help to define the occurrence of events in the Charged Up storyworld. In *The Solar Generation* campaign video wind turbines and solar panels are used as world-internal factual objects that belong in the created storyworld (DSF-MC8b).

By playing a role in deciding how clean energy projects are designed and developed, individuals can ensure that community values and aspirations are upheld. Through this engagement, a model emerges in which everyday Canadians take control over how power is used, generated, and provides tangible benefits. (Social Capital Strategies, 2017, p. 1)

That everyday Canadians can become involved in the equitable and inclusive renewable energy storyworld is how Charged Up might meet Narrative Condition #8. Inasmuch as SeaLegacy aim to persuade and coordinate members of The Tide, the Foundation's campaign is meaningful because it does the same for all Canadians. In this effort to transform how power in Canada is used and generated Yano notes the larger picture:

If we can give more people things to do that are meaningful …meet them where they're at, and get them active on meaningful solutions … that's Charged Up, that's what we do, we try to help people to connect with the ability to take action, not just individually, though that's part of it, but also as a collective, as a society to push for the enabling policy that actually makes change. (S. Yano, personal communication, 2020)

On this significance, Yano also notes:

We have tried to do our due diligence in the first year to really situate this program in a way that is meaningful to the climate movement and in a way that is helpful to politicians who want to take bold action. (S. Yano, personal communication, 2020)

To appreciate that a meaningful core narrative in Charged Up could extend its reach and impact beyond the boundaries of the Foundation's individual campaign and influence climate change political discourse more generally is to recognize the ability of transmedia storytelling to take on an emergent life of its own, such that diversified and controlled storylines, particularly from underrepresented and missing voices (Jenkins's subjectivity), inspire greater audience engagement. In an article in The Georgia Strait, a Partner media channel (Suzuki, 2019), Suzuki himself places this idea in context:

If we continue to elevate only voices of those who have traditionally held power, we won't

likely discover meaningful solutions to the problems we collectively face. Listening to

people with different world views is essential to finding new ways forward. (Suzuki, 2019)

The very act of listening to Indigenous peoples, not only in Canada, but across the world, is increasingly referenced as a viable solution to help mitigate climate change and this course of action is taken in Charged Up. Laboucan-Massimo's storyline has already been addressed at some length and the call for Indigenous voices can be found in other campaign videos including one published on the Charged Up website on February 5th, 2019. In the Kanaka Bar video, Colleen Giroux-Schmidt, Vice President of Corporation Relations at Innergex Renewable Energy Inc., states: "We're heading into an era where we're going to have a new relationship with our energy and Indigenous communities are at the forefront" (DavidSuzukiFDN, 2019a). In the same video Chief Michell addresses the significance of the renewable energy transformation:

Indigenous people across Canada have to realize they walk in two worlds now. One is

the old ways and the other one is these new ways, and there is a way to walk in both

successfully. My mandate is to ensure, as Chief of this community … that there is the same

as, or if not more, opportunity for my future generations (DavidSuzukiFDN, 2019a).

It is with these evolving perspectives found in distinct and emergent storylines that the Charged Up campaign is able to successfully advance the ideals of the core narrative and simultaneously manifest a multitude of voices that harmoniously answer Saul's earlier question with a collective and succinct response. What we are all fighting for is "a cleaner, healthier, charged-up Canada" (David Suzuki Foundation, 2021b). That the campaign makes this about "empowering communities across the country" simply means there are more of us to answer the call.

4.6.3 - Charged Up: Diversified & Controlled Storylines

Alongside the manifestation of a meaningful core narrative in the Charged Up campaign I discovered a minimum of 26 individual storylines—across more than 52 Core media channels—that diversify and control the dimension of the storyworld (see Table 7).

Present storylines were identified through the detection of recurring narrative threads, or story elements that could be grouped together because they moved an individual story involving characters (both human and non-human alike) and actionable events forward in time—this rationale remains our basic understanding of what is a story.

The exercise further demonstrates a central characteristic of a transmedia storytelling project: Content expansion through diversified and controlled storylines.

Table 7:

David Suzuki Foundation's transmedia storytelling structure in the Charged Up campaign as defined by a sample of its diversified and controlled storylines.

Transmedia Principle	Keyword(s)	Storyline Summary
DSF-SL1	David Suzuki	Character: David Suzuki Action/Events: Intrepid environmentalist carries out multiple campaigns to bear witness to the affects of climate change; Suzuki's storyline is divided into chunks throughout the campaign.
DSF-SL2	Richard Christie	Character: Richard Christie Action/Events: In spring 2014, the Toronto District School Board — Canada's largest — embarked on a program of putting photovoltaic panels on more than 300 of its school buildings. When complete, it will create enough power to meet the annual needs of about 4,250 homes. But Richard Christie, senior manager of the board's sustainability office, says the program generates far more than electricity.
DSF-SL3	Carmen Proctor	Character: Carmen Proctor Action/Events: "There's more sunshine in southeastern British Columbia than in Germany or Ontario," energy-efficiency expert Carmen Proctor says, referring to European and Canadian solar power leaders.
DSF-SL4	Melissa Abercrombie	Character: Melissa Abercrombie Action/Events: "We're definitely pushing the envelope with this new facility," says Melissa Abercrombie, manager of engineering services for southern Ontario's Oxford County. "If it works out, and we meet our target, it will be the first building in Canada to receive 'net-zero' certification from the New Buildings Institute."
DSF-SL5	Dana Westermark	Character: Dana Westermark Action/Events: Patience and foresight have propelled Dana Westermark to become Richmond's top green property developer and geo-exchange leader.
DSF-SL6	Louis Bull Tribe	Character(s): Louis Bull Tribe Action/Events: Louis Bull Tribe in Maskwacis, Alberta, installed solar panels on their daycare as part of a longer-term vision to move from dependency on coal-fired electricity to producing their own renewable power.
DSF-SL7	Miranda Fuller	Character: Miranda Fuller Action/Events: Miranda Fuller looks over the 10 turbines on Gunn's Hill Wind Farm in southwestern Ontario's Oxford County, a lush region of farmland and small cities between London and Kitchener. "They're magical!" she says.

Transmedia Principle	Keyword(s)	Storyline Summary
DSF-SL8	Melina Laboucan-Massimo; Lubicon Solar	Character: Melina Laboucan-Massimo Action/Events: Melina Laboucan-Massimo is a renowned scholar and activist and the first inaugural Indigenous David Suzuki Foundation fellow; Laboucan-Massimo's storyline is divided into chunks throughout the campaign
DSF-SL9	Chief Patrick Michell; Chief; Kanaka Bar; Indian Band	Character: Chief Patrick Michell Action/Events: In the heart of British Columbia's Fraser Canyon region, between the towns of Boston Bar and Lytton, lies the traditional territory of the Kanaka Bar Indian Band — also known as T'eqt'aqtn'mux or "the crossing place people"; Chief Patrick Michell's storyline is divided into chunks throughout the campaign
DSF-SL10	Sadhu Johnston; City Manager; City of Vancouver	Character: Sadhu Johnston Action/Events: Sadhu addressess the challenges faced by the City of Vancouver as they assess urban climate change solutions; Johnston participates in the Charged Up - *A celebration of renewable communities* launch event
DSF-SL11	Lac-megantic	Subject: Lac-megantic Explosion + Renewable Energy Action/Events: Unexpected explosion disrupts a small town; community efforts in response to the explosionsymbolize a shift away from fossil fuels toward renewable energy.
DSF-SL12	Secwepemc; solar powered; tiny house	Subject: Secwepemc Tiny Houses Action/Events: One of the things we love about renewable energy is how communities can take control over their power, protect the climate, assert their independence and be the change they want to see in the world; small town charts a path forward with renewable energy.
DSF-SL13	net-zero library	Subject: net-zero library Action/Events: When you enter Varennes Public Library, you might think you're on board a spaceship. "It could be considered a library of the future," says student and library patron Jasmine Leclerc.
DSF-SL14	Daniel Bida; Toronto Zoo	Subject: Toronto Zoo energy Action/Events: "What we're doing is different and new," says Daniel Bida, executive director of Toronto's ZooShare. "There aren't other co-op owned and financed biogas facilities in Canada."
DSF-SL15	Rae-Anne Wadey	Character: Rae-Anne Wadey Action/Events: At 19, Rae-Anne Wadey had a decision to make. Should she buy that diesel truck she wanted or use her savings to go back to school?
DSF-SL16	Jared Clarke; Grade 6/7 class	Character(s): Jared Clarke; Grade 6/7 class Action/Events: Jared Clarke's Grade 6/7 class knows Saskatchewan's potential for solar energy; youth learn about renewable energy
DSF-SL17	John Paul Morgan	Character: John Paul Morgan Action/Events: IJohn Paul Morgan is showing me around his solar panel factory in Toronto's Stockyards District, once famous for its slaughterhouses. Meat-packers still operate here, but the area is witnessing the growth of craft brewers and high-tech firms. In this neighbourhood of transition, we're discussing the nature of invention.
DSF-SL18	Youth	Character(s): Youth activists Action/Events: As Canadians, we know we need to do our fair share to reduce carbon pollution and lower the risk of catastrophic climate change. But what will that mean for the thousands of people employed in our coal, oil and gas industries?

Transmedia Principle	Keyword(s)	Storyline Summary
DSF-SL19	Ottawa Greenbelt; Just Food Farm	Subject: Just Food Farm Action/Events: Located in the Ottawa Greenbelt, Just Food Farm is a 150-acre demonstration farm that models sustainable food production and practices. It's also a community gathering place and an important training ground for local people interested in growing their own food.
DSF-SL20*	coal; oil; gas; industry	Subject: Removed from study; no story development Action/Events: n/a
DSF-SL21	Cale Heit	Character: Cale Heit Action/Events: "In our industry, sustainability has been late coming," says Cale Heit, president of Forrec, a Canadian architectural firm that designs amusement parks.
DSF-SL22	Energy Futures Lab	Subject: Energy Futures Lab Action/Events: What do oil executives and climate activists have in common? Not much, if you listen to popular media narratives pitting environmental protection against economic growth. But at the Energy Futures Lab, diverse innovators and stakeholders in Alberta's energy sector are finding plenty of room for collaboration.
DSF-SL23	net-zero; church	Subject: net-zero church Action/Events: When it comes to the renewable energy transition, Edmonton has a lot to be proud of; Canada's first net zero church and social housing complex.
DSF-SL24	Brian Iler	Character: Brian Iler Action/Events: An activist and environmentalist, Toronto lawyer Brian Iler has been the creative legal mind behind a host of cutting-edge renewable energy projects, social ventures and co-ops that have challenged received wisdom.
DSF-SL25	Emily Eaton	Character: Emily Eaton Action/Events: When you think of Regina, you might imagine a city that depends heavily on cars. But when University of Regina professor Emily Eaton gathered a focus group representing community-based organizations throughout the city to discuss how a transition to net-zero carbon emissions might affect communities that have experienced marginalization, she heard another story.
DSF-SL26	Adriana Larurent; Udokam Iroegbu; Rita Steele; racism; injustice	Subject: racial injustice Action/Events: This year, amid a global pandemic that has spotlighted deep-seated inequities, amid protests against racial injustice and police violence, amid wildfires and record high temperatures, it seems the world might be coming to understand a fact that millions of people have long known: that climate justice and racial justice are inextricably linked. We can't have one without the other.
DSF-SL27	HalifACT 2025; Halifax Regional Muncipality	Character: Cristina Mittermeier Action/Events: HalifACT 2050, Halifax Regional Municipality's climate action plan, is currently one of the most ambitious climate plans in Canada. That's due in no small part to the interest and passion of the municipality's residents, and in particular, a group of determined young climate advocates.

*Note: This storyline was first identified in early coding exercises but never fully developed as an individual thread that would add what I considered to be a greater dimension to the community-powered renewable energy storyworld, so it was eliminated from the analysis; that is, while mention of "gas," "oil," and "industry" were suggested topics, this subject matter did not mature into a story, consisting of "composed of action" and/or "characters" that advance upon a plot.
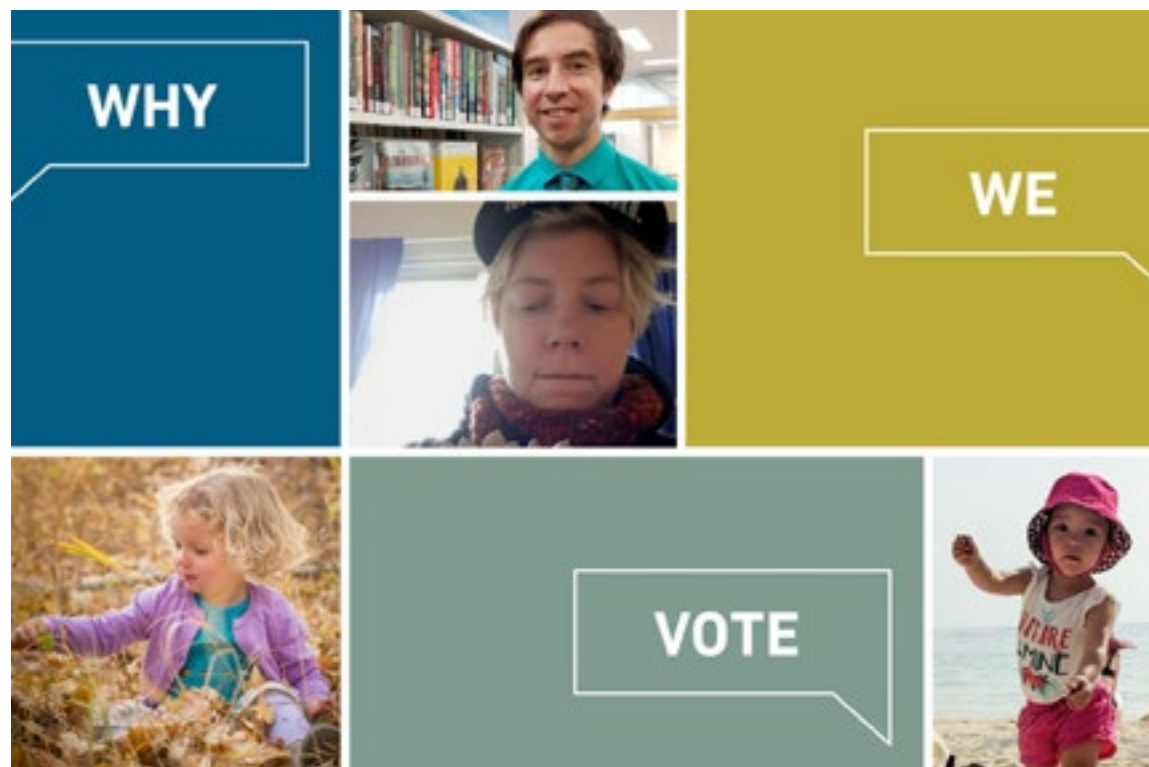
Section 4.7 - Charged Up: Degree of Transmediality

The presence or absence of a set of conditions was evaluated to describe the Degree of Transmediality in Charged Up, with Degree of Transmediality as a measure of a campaign to fulfill a set of transmedia conditions to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced. An examination of any relevance of these strategies and tactics to climate change communications in particular is emphasized.

Furthermore, as I am interested in the conception of a novel transmedia storytelling model, I have also made notes on the applicability of Jenkins's previously examined principles, if and when this is appropriate. This exercise aims to assess how Jenkins's principles might be repurposed and included in my new model to be discussed in Chapter 5.

I posed this research question:

RQ1b: What is the Degree of Transmediality across the Charged Up campaign?

4.7.1 - Charged Up: Media Forms

Ryan's (2014) media-conscious narratology lenses—the semiotic, technical, and cultural dimensions—can be used again to begin a discussion on efficacy as it relates to how well the David Suzuki Foundation employ the varying representational strengths of specific media forms—in both singular and combinatory ways across diversified media channels in the Charged Up campaign (see Table 8).

For the David Suzuki Foundation transmedia acuity involves an understanding of how the audience can get involved in the campaign and the ability to tailor media towards the audience's needs as they are defined in real-time. For Creimer, a strategist at the Foundation, the use sound judgement and strategic decision making around media was inherent from the start; he states, Charged Up was always going to be a "storytelling campaign" with "deliverables such as stories published in newspapers and videos shared on social media" (Creimer, personal communication, 2020). Creimer continued: "It was structured, it was in the deliverables that we had to produce, we all internalized that we had to produce storytelling tools" to bring audiences into the community-powered renewable energy storyworld (Creimer, personal communication,

2020). Yano elaborates:

> I think it's something that's evolved organically over time … when we're trying to engage so many different groups, it really it has been more effective for us to be able to tell stories in different formats … and that's what we're looking at, not just stories, and not just the consumption of stories, but the actual reciprocity of coming back and saying, okay, what can we do together? (S. Yano, personal communication, 2020)

As this dissertation is particularly interested in how transmedia storytelling elicits emotional engagement with climate change, a sample list of specific media forms are examined in this section with Ryan's (2014) narratological foci in mind. In this exercise, I specifically turn my attention to a survey on how audiences respond to the examined media forms.

In Charged Up, Ryan's (2014) "semiotic substance" principally involves meaning-making derived from varying media forms (p. 29), including but not limited to: Face-to-face interaction; images, still or motion; language, written or oral; music; and/or physical objects. As such, each respective media form makes a distinctive and valuable contribution to the whole campaign (Jenkins, 2006). To recall, because transmedia storytelling uses singular media forms—and their independent significations—with other sign-making forms, I revisit the notion that transmediality practice can be understood to function as a system (see Section 2.3.2); that is, in a supersystem of signs the sum is greater than the individual parts and as a consequence the David Suzuki Foundation's community-powered renewable energy storyworld is evoked by the qualities unique to each form and media configuration, but also the synergy created as media forms work in tandem with one another. Put another way, our experiences of media differ so that language generally involves interpretation in abstract and intellectual ways; and images use space and emotion to make their meaning. The David Suzuki Foundation, as a language-centric and science-minded organization, might prefer the former use of scientific thought, but the group still acknowledge the role and expanding potential of visual storytelling as they invest more in the potential of the latter meaning-making strategy.

To touch on Ryan's (2014) technical lens is to appreciate that the David Suzuki Foundation consider how "technologies configure the relationship between sender and receiver" (p. 30); that is, "not all media involve technologies, but all of them have a technical dimension since they cannot exist without a mode of production or material support" (p. 29). Such is the case with the in-person Charged Up events that feature

presentations by key Foundation stakeholders, celebrated speakers, and citizens, all of whom are paramount to the success of the campaign (Jenkins's subjectivity), but also require extensive resources and coordination (S. Yano, personal communication). And while the local events remain central—these events have migrated to intimate online forums during COVID—there is also growing evidence across Charged Up's media channels that other media forms have played a significant role concurrently and therefore campaign proponents have required knowledge of expanding technological dimensions (Jenkins's seriality). Drone pilots who are used in both The Greatest Sanctuary and Charged Up to create imagery of sweeping vistas that immerse people into the setting of a story provide just one example since these content creators require special skills and permits to operate. On another note of production, the custom coded CliMate chatbot involves technological specificity and interactivity that requires capacity beyond the usual climate change campaign. Moreover, Charged Up employs Ryan's (2014) technical extent to assess communication channels that serve "one to one, few to many, many to many," audiences since the focus of the campaign centres of smaller gatherings at local events but also involves social media strategy that appeals to the masses (Ryan, 2014, p. 30).

Finally, Ryan's (2014) cultural approach to media is concerned with the "kinds of stories" that the David Suzuki Foundation uses to create cultural resonance or wide acceptance of the campaign's mission (Jenkins's subjectivity, seriality, and multiplicity). In the context of this dissertation the kinds of stories are selected to influence the general behaviour of users who enter the community-powered renewable energy storyworld, but more specifically the organization strategizes around Ryan's (2014) cultural dimension—or fan culture—in order to move followers through an engagement pyramid to be discussed later (see Section 4.8.2.2).

Next, I examine a sampling of media forms in the Charged Up campaign to expand the commentary above while keeping in play Ryan's (2014) media-conscious lenses and the effect that each has on the audience.

4.7.1.1 - Image (Still): Campaign Hero Image

It is an image that has been described like this:

Young family, being somewhere in the West because we don't have sunflowers in the East.
Very happy to be walking through a solar installation … there is a sense of victory in the

Figure 38:

The image used as the hero banner in Charged Up.

kid raised up, very white, very masculine. (D. Creimer, personal communication, 2020)

Even more, it is the single image that was selected as the hero banner for Charged Up (see Figure 38). Describing this image that appears at the top of the campaign website (David Suzuki Foundation, 2021b), as well as at local events as the slide backdrop, another Foundation staff member detailed it this way:

> It looks like a father-son duo, they're walking through a field of sunflowers, and there's a bunch of solar panels in the background, and they both look like they're happy, they look like they're celebrating, looks like they were involved in this build and they're proud of it. (B. Glauser, personal communication, 2020)

And still another from the organization commented on representation within this media form and specifically on its affect:

> It's visually appealing, bright, colourful, has connection. People, nature, renewables all together … I don't know how you choose representation in one image, but I imagine it's because it has nature, renewables, and family connection all in one place, and it's cheerful and makes you feel good. (T. Beer, personal communication, 2020)

The hero image was intended to make the audience feel good. The image of the man and the boy in a field of sunflowers was chosen to trigger our automatic emotional response—the affect heuristic, or orienting mechanism, that helps the human mind make quick decisions associated with our positive and negative feelings. On some occasions the affect heuristic invites people into a narrative. Other times it prevents narrative transportation because we might respond with aversion and look away.

Yano addresses this affective quality found in the hero image:

> For us it was just about happiness, creating that happy future for all of us, where we protect the people and the places that we love, and we do so under our steam, with our own actions, and so it's celebrating that for us (S. Yano, personal communication, 2020).

Yet, for our purposes here, particularly as Ryan's (2014) media-conscious narratological lenses are concerned, Yano also shares a reflection upon the image selection process and what "kind of story" might be depicted in the scene. Yano states:

> This is a white male figure and that is exactly what we want to flip within Charged Up … we are really interested in hiring people with other cultural experiences and language abilities to reach communities that aren't always at the forefront … we also have a lot Indigenous partners and so there was a lot of discussion … shouldn't we have a different picture of different people when we're talking about this? But we couldn't find it, we needed an image for this slide, for the week after, and it was kind of like this looks like the best we've got, and we're happy to go with it, so that's kind of how we ended up with it (S. Yano, personal communication, 2020).

Far too often this is not an isolated occurrence as it is generally understood that visual storytelling assets are indeed "second to content" for many environmental organizations, including the David Suzuki Foundation, which still lead with scientific facts in language form (J. Jameson, personal communication, 2020)—the dearth of photo essays or moving images in the email newsletters is one example of this standard practice. It is promising, however, that the Foundation is increasingly emphasizing visual storytelling, particularly with the Charged Up campaign (see Section 4.7.1.2).

There is more to the story behind the images we use for climate change communications, such that the authenticity of Charged Up's hero image was put into question by a staff member at the Foundation, who said: "I don't know. I would have chosen something different. Part of me thinks it's a bit cliché. It comes down to a matter of taste. It's missing something. This one seems like stock photography" (A. B. Diallo, personal communication, 2020). On this matter, the use of seemingly unoriginal stock photography begs the question addressed previously by Barthes (2010) who pondered, how is the "studium," or the general interest field, punctured? What about this hero image really moves us, really pricks us? National Geographic photographers like Mittermeier and Nicklen layer their images with visual cues of information to create that prick, but Cremier adds commentary: "We're still stuck with people pushing out solar panels or wind mills, you have that by millions in three hundred NGOs around the world. There is nothing original in a photograph pushing a windmill again with the sunset" (D. Cremier, personal communication, 2020).

Considering the other two dozen still images that populate the Charged Up campaign website—as placards for the individual stories that appear there—is to point out the need for the David Suzuki Foundation to manage its potentially lacklustre photography portfolio; almost all of the images are of staged portraits that seem to miss the mark because these images fail to really prick us. It might be a lack of the quality of light or weak composition, but it likely comes down to this: While the presence of people is a significant step forward for a climate change campaign, the posed images make it hard to empathize with these people who simply seem caught in an unplanned manufactured moment—the faces still feel distant because of their lack of proximity to the camera too; it is unlike what we see in Nicklen's intimate and close approach because SeaLegacy prioritize visual storytelling from the start.

In this vein, Barthes (2010) provides greater context for the creation of the community-powered renewable energy storyworld: "The photograph does not necessarily say what is no longer, but only and for certain what has been" (p. 85). In such scenarios we can successfully document the doom-and-gloom that has already occurred in front of us—the fires and the floods—but to truly envision the shared future many of us want is to exist on the frontier of image-making such that we are not just simply taking snap shots of "this field" (Barthes, Miller, & Howard, 1975), or the "point shot" as described by National Geographic editors (K. Moran, personal communication, 2018), that exists already in thousands of photographs, but rather, we are seeking to capture an essence of the transformation that will inform us, surprise us, and provoke us, and better still, affect us.

4.7.1.2 - Image (Motion) + Language (Written) + Language (Oral): *Wind of Change*

The David Suzuki Foundation uses best practices in the film *Wind of Change* (DavidSuzukiFDN, 2018b), a story about resilience and exponential growth of renewable energies in Quebec, presented by the organization as part of Charged Up. The affective experience of viewing *Wind of Change*, begins upon reading its description on the YouTube page, one place where the public might first encounter the video. In written language form the summary is as follows: "At the centre of a contemporary Canadian fossil fuel disaster, a wind farm replaces the devastating legacy with a vision of hope and change." That this prose uses words like "disaster" and "hope" suggests to readers that the film draws on deep feelings expressed through the Foundation's visual storytelling experimentation (see a critical analysis in Section 4.7.1.1). While the film's textual summary is not enough to engage with on its own, it provides the essential ingredients to

catalyze affective engagement: There appears to be conflict, a resolution, and therefore the beginnings of a story, which our curious and suddenly alert minds are attracted to. Furthermore, the words "devastating" and "legacy" strategically have an emotional valence, and produce affect, as well as encouraging clicks.

Word choice and syntax also carries weight in the opening scene of the film. On screen, text states: "On July 6, 2013, shortly after midnight, a 72-tank wagon freight train carrying crude oil derailed and exploded in downtown Lac-Mégantic, killing 47 and destroying many buildings" (DavidSuzukiFDN, 2018b). The direct language sets the film's dark and serious tone. Accompanying soft musical notes deepen the contemplative mood of the unfolding sequence as the first talking-head states: "Environmentally speaking, turning ourselves towards clean energies, like wind power, only makes sense." As this happens, the music shifts abruptly to a much more optimistic piano score while a succession of panning views of wind turbines replace the train track scenes as the title of the film appears. At this moment, the audio falls silent, setting up anticipation.

In many ways, the first 0:40 seconds of *Wind of Change* showcase media forms working in tandem to create the affect required to engage audiences with climate change communications. The rest of the film follows suit, pairing sophisticated visual storytelling with strong character testimonials. The coordination of visuals, language, and sound—and their signifying dimensionality—advance the affective experience that might not otherwise develop if one of the media forms was missing. As the early dark tone lifts to one of light, Ryan's (2014) "mode of production" becomes the anchor of the 4:00 minute film as aerial vistas—captured by a trained drone operator—transport audiences into snow-blanketed forests and fields where wind turbines stand tall. The misty backdrop adds an ephemeral quality to the film and the filmmakers appear to use an anthropomorphic lens to introduce us to this promising technology, for few of us have been this close to a wind turbine, let alone seen them from the perspectives shown in this film. The aerial videography sways us through the air left, then right. It moves us slowly up the length of the tower and back down again; the viewing experience at this proximity almost feels intimate, as audiences sense they are standing beside the steel structures (see Figures 39). All the while the colour palette is central too because it is muted and calm and creates a sense of openness and contemplation. It can also be presumed the post-production edit even considered how the element of speed can affect the visual treatment, since the turbine's blades are not shown cutting through the air, but rather gently rotating through the evenly lit almost atmospheric environment. All of these choices produce audience emotional engagement, as shown by a comment on Facebook by Lisa Bostlund: "I LOVE the look of those turbines … they are graceful, powerful, majestic, and so inspiring for

Figure 39:

Aerial videography was used in Charged Up to bring audiences closer to the subject matter as seen in the campaign video *Wind of Change* (DSF-MC8b).

our future … it always makes me happy to see them … I wouldn't even mind if I had to see them out my windows" (Winds of change blow in Lac-Mégantic, 2018).

When the visual tapestry of this film is not transporting audiences into the Lac-Mégantic chapter of the community-powered renewable energy world, it is the cast of laypeople that do the performing to much affect. The series of on-location expert testimonials convey a sense of enduring spirit and bring us into the story because the audience is cued to feel a sense of pride along with these characters who exhibit sincerity on-screen. Sonia Cloutier, a Director involved in the project states, "At first, the population was hesitant. But as soon as we explained what it could bring to the community, people embarked" (DavidSuzukiFDN, 2018b). David Sala, an Asset Manager for EDF Renewables, notes, "The Granit Municipal regional country (MRC) owns 30% of the shares of the park. This year, they paid back more than $900,000 to the 16 participating municipalities. It is a project that works very well" (DavidSuzukiFDN, 2018b). And from an elderly gentleman, we hear, "Renewable energies are really the future. I think that's what we'll have to favour in the long term" (DavidSuzukiFDN, 2018b). Yet, it is not so much these expressed ideas that establish our relationship with these characters; instead, it is the sound of their voices and the genuine look in their eyes. We can trust these characters as we have come to trust others across the campaign. Their traits are likeable. And as each subsequent interviewee is revealed, we as viewers begin to better understand not only the benefits of renewable energy, but also what this technology means to a small community previously impacted by the fossil fuel industry. Interestingly, one of the characters in the film stresses the July 6, 2013 crude oil freight train derailment and subsequent explosion in Lac-Mégantic to frame the need for sustainably sourced energy. These moments on camera are anchored by an emotive plea to focus our attention on the available solutions that which might prevent future disasters associated with fossil fuels. As the character notes the following we are drawn to feel with him, and also feel for those families lost in the tragedy:

> The wind power project and the tragedy are not tied. But we understand what it means to use energies, which I would describe as more risky, especially when we use them poorly, as it has been the case here when the tragedy happened. In our case, we had an unresponsible company that transported a bomb: 72 petroleum cars, six million litres, poorly maintained train tracks, aged equipment … It is evidence we were going to have a tragedy somewhere. Does this allow people to favour renewable energies? One thing is certain, it raises awareness in the general population, and this impact spreads beyond Mégantic. Petroleum

is not an energy on which we should build our future. (DavidSuzukiFDN, 2018b)

Like SeaLegacy's exemplary video pieces, this worldbuilding exercise took full advantage of combinatory media forms that best express the narrative conditions in play—intelligent agents with mental lives who react emotionally to their purposeful actions—and the four-minute film remains an exemplary campaign asset with affective qualities.

4.7.1.3 - Language (Written): Facebook

My primary focus on the efficacy of the image—still or moving—in transmedia storytelling stems from both the ubiquitous nature of this form in today's contemporary media landscape, as well as the inherent "ecstasy," as Barthes would put it (2010, p. 119), that surrounds its existence. That the image is "loaded evidence" as a "resource," but can still be raw and untampered with, and thereby "pricks me" (see Section 4.3.1.2), suggests its promising role in the production of storyworlds that function to transport audiences into near and faraway places (p. 96). That the image "has-been" is a key characteristic which might assist the goal of bringing the invisibility of the climate change crisis home. No more is the emergency distant. The image form makes the case clear: Expert witnesses like Mittermeier, Nicklen, Suzuki, and Laboucan-Massimo have seen the signs and documented their impacts.

Emotionally charged opinions, on the other hand, adjust the delineated boundaries sketched during the worldbuilding process such that the core narrative becomes unclear and as a consequence our experiences are blurred. No more is this apparent than in the written language found on the social media platform Facebook. On a Charged Up post, dated June 14, 2018, the following commentary appeared. Brock MacKenzie Reid says: "Hard to understand the naysayers … what harm to them if we make it a better more liveable world? Do their oil stocks lose money so they wish everything else to fail?" (Charged Up, 2018). Chris Steele responds:

> The Jetson's [were] a cartoon, not reality, if ever the tech exists to move me via the sun across the country, in the same time as now, I will consider it. For now, like the major majority, I will continue my current mode of transport.

Because words travel, their significations do too. On Facebook, the proliferation of shared ideas can be problematic for the Charged Up campaign. Further down the post, others spread these comments:

Reginald Williams: According to the most recent statistics, nearly all of the developed countries have more people employed in renewable energy sources than in … non-renewable ones.

Chris Steele: Ok and, how is that going to get me to work? You have a solar powered car that gets me 268km in 2hrs 15minutes?

Colleen MacLeod: An electric car charged by solar power would do it.

Chris Steele: And when it's cloudy and pouring rain? Btw I leave for work at 3am, there is no sun. Keep dreaming though.

Cindy Vercouteren Nee Mcarthur: Solar energy is produced on cloudy days BC those rays hit the panels too … you can get a sunburn on cloudy days but let's just ignore facts.

Cindy Vercouteren Nee Mcarthur: Um the University of Waterloo had a solar race car … ongoing yrly contest … but gee that doesn't work right. #facepalm, Google midnight sun … traveled 2,400 kms. Google often so you can speak w out sounding stupid.

Crystal Reed: Yeah ... so electric cars charged by solar power doesn't mean that it has solar panels on the roof and can't go without sun, Chris Steele—generally, it means that when you charged your car before you left home, the energy you're getting from the grid was produced by solar energy. From a solar farm. Not attached to your car. Nice try, though.

Chris Steele: Crystal Reed, I understand all that, what your neglecting to acknowledge is the fact that electric cars in general (regardless of charging method) currently do not have the range required nor the infrastructure to accommodate the bulk of Canadians that live

outside of major metropolis.

Brenda Coutts: That's the point, Chris. It isn't about a complete change overnight. It's about changing everything eventually. Changing minds and changing lifestyles. Changing where the energy comes from to a sustainable source. When there is no gas and you have kept your head in the tar sands and have none of the "new energy" powering anything you own, will you walk the 285km to work?

Chris Steele: Unfortunately, you have somehow come to the conclusion that I am against a change, that would be incorrect. That aside, I do not expect a shift anytime soon, reality is, it won't happen in our lifetime. Fact is the infrastructure for electric cars is very limited. Do you own electric? How big is your house?How many flights do you go on per year? How do you heat your home, your hot water? (Charged Up, 2018)

The idea that the transformation "won't happen in our lifetime" is cause for strategic interjection (Charged Up, 2018). While Charged Up needs to encourage audience participation and engagement the Foundation are obligated to set the facts of the storyworld as Suzuki and his colleagues always have done (see Section 4.6.2.7). It makes sense to redirect conversations swiftly as in the case of this Tweet: "Regina city councillors are taking steps to get Regina #chargedup with #solar. This would be a big win in a city with so much solar potential. It's entrepreneurial, forward-thinking, and job-creating while protecting the climate" (DavidSuzuki FDN, 2018).

The facts are omnipresent as the David Suzuki Foundation author an ongoing series entitled Science Matters that can be accessed through the main site or on the Charged Up campaign portal. That science has always mattered is affirmed by Suzuki's *The Nature of Things*, "One of the most successful series in the history of Canadian television" (CBC, 2021).

Other times it is best to step back as the effects of Ryan's (2014) media-conscious lenses affect the pubic sphere. Beer shares an insightful experience from the past with this in mind:

We were part of an issue called carbon pricing or carbon tax. A few years ago it was one of the most divisive issues among the political parties. We were in support of the federal

government's approach to increase the price of pollution across the country. Everybody

that polluted, whether it's at the individual level, but more importantly, at the industry

level, would be required to pay a carbon tax. That would go up, and help us meet our

climate change targets. It was a very divisive issue, certain parties were fighting this

approach in the courts, in the public sphere with words. "It's a tax grab." (T. Beer, personal

communication, 2020)

Beer continues:

On the scientific side, the evidence side, there was no doubt that this would lower carbon

emissions. In the public sphere, it became a hated extra tax for some people. I was straddling

communications and policy. We were on the court side of it, we did media with different

messages. We hired someone to take the pulse of the communications on this and where it

was going, and if it would swing one way or the other. And because it was such a polarized

issue, the advice was to limit communications. (T. Beer, personal communication, 2020)

In this case, limiting communications was ultimately about controlling the core narrative—a transmedia

storytelling best practice—such that the Foundation could expend their efforts on resources for other matters

in play.

Other matters concern the best strategy and tactics to employ across social media platforms such as

Twitter and Instagram, as well as Facebook, which has "historically been our biggest network," according to

Glauser (B. Glauser, personal communication, 2020). Glauser continues:

[With] everything that Facebook is going through right now … we need to get a little bit

more crafty through Twitter and Instagram … even with news media … it's a changing

media landscape … a report and then having a news conference like that doesn't happen

anymore, so you need to find new ways of slicing and dicing. (B. Glauser, personal

communication, 2020)

On this matter, staff like Foundation strategist Jameson needs to understand and test a growing list

of initiatives that could include: "Conversions-focused ad campaigns" because "organic reach on Facebook declines year on year"; "in-house campaigns" because "if you always hire agencies to create your Facebook Ad campaigns, it adds greatly to the cost of each campaign"; and "broader targeting" because "you will get much better results" (O'Brien, 2020). On this dynamism Jameson comments:

> For our social media channels and the website … the brand design is locked down. But the understanding piece is a bottleneck because it's so hard to take scientific information and make it relatable and accessible to people. I see this done well in other organizations through infographics, that type of thing, but for us it's challenging because we have 15–20 people who write content and one part time person who's actually a designer … Our social media team has to deal with this all the time, make it visual, make it catchy, make it easily digestible on Instagram or Facebook. (J. Jameson, personal communication, 2020)

In other arenas, as Ryan's (2014) technical lens is of note, Jameson and the Foundation are making head way so campaigns like Charged Up can be better served:

> We do quite a bit of testing for the website, we have a couple of different tools like Google Optimize, where we can run A/B tests on different chunks of content. We also use [Hot] Jar, where we can see heat maps of what people are clicking on. We have a lot of web content so we're not able to do that for every page, but in the areas of the site where it seems most strategic for us we've able to use the tools to see what's performing. (J. Jameson, personal communication, 2020)

4.7.1.4 - Language (Oral): Launch Event

Ryan's (2014) media-conscious lenses are generally interested in: (1) "narrative power" derived from "basic types of signs"; (2) how qualities of media affect the relationship between "sender and receiver," as well as how technology might affect the dissemination of stories, the storage of this stories, and the cognitive impact of stories; and (3) the types of stories that users and producers communicate along with the behaviour that results because of this participation. With these lenses in mind we can examine the Charged

davidsuzuki.org/ChargedU
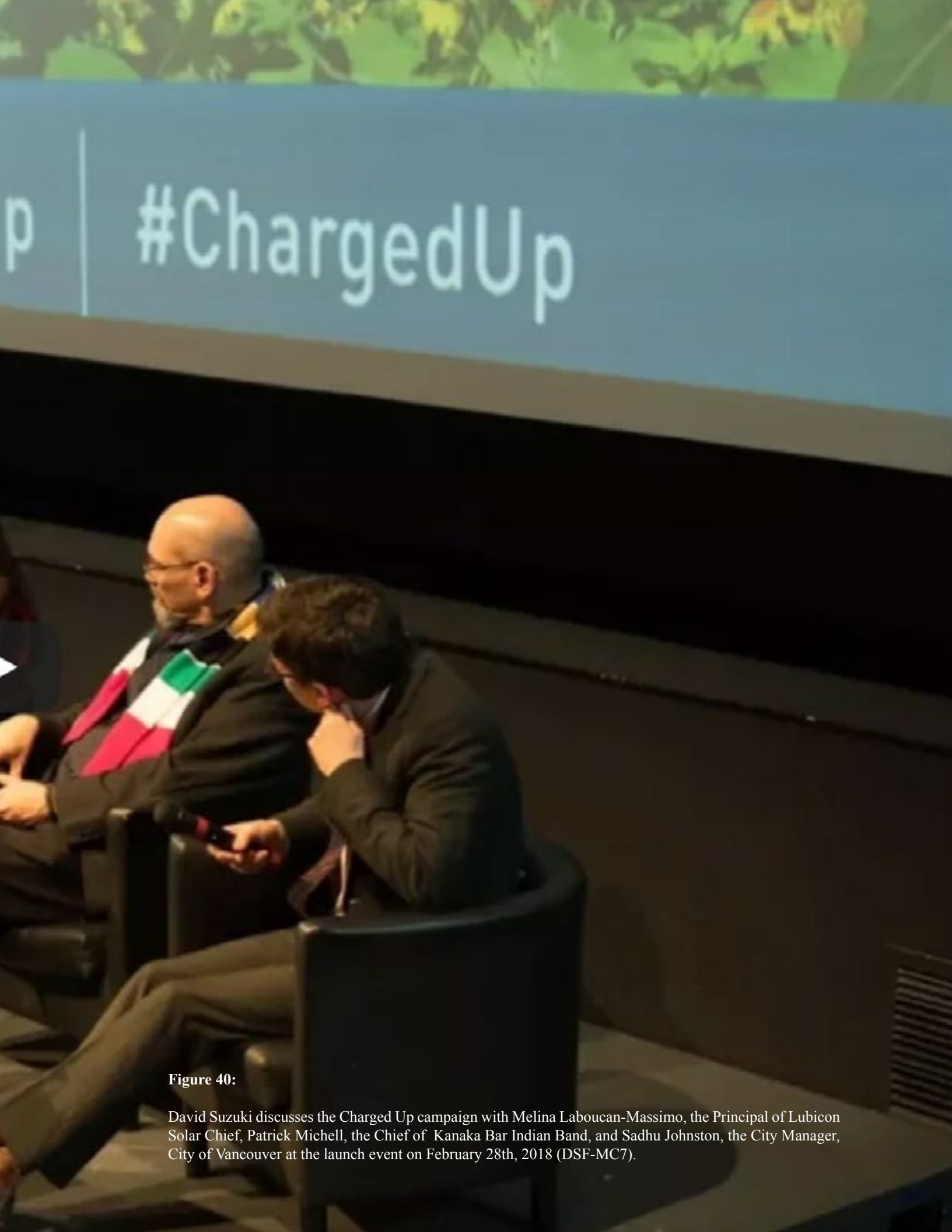
Figure 40:

David Suzuki discusses the Charged Up campaign with Melina Laboucan-Massimo, the Principal of Lubicon Solar Chief, Patrick Michell, the Chief of Kanaka Bar Indian Band, and Sadhu Johnston, the City Manager, City of Vancouver at the launch event on February 28th, 2018 (DSF-MC7).

Up launch event (see Figure 40).

Next to the podium was a bouquet that included at least six sunflowers (i.e., semiotic substance). The man raising the young boy in front of a solar installation could be seen as a projected image on display behind an arrangement of "fireside" armchairs on stage (i.e., technical dimension). On this day, February 28, 2018, on the unceded territory of the Squamish, Tsleil-Waututh, and Musqueam people, the Charged Up launch event took place (i.e., cultural dimension) (DavidSuzukiFDN, 2018a).

On this day it was fitting that the launch corralled a group of people to meet in person—mostly funders and allied stakeholders who came to hear Yano, Cornish, and Suzuki, but also the voices of special guests who appeared after the introductory remarks. It was fitting because of the importance of face-to-face dialogue. It was important because our digitally centric culture favours "debate, advocacy, and conflict over dialogue and deliberation" in increasing ways and this is problematic for climate change discourse that remains a polarized issue as was just discussed (Yankelovich as cited in Hoggan, 2016, p. 7).

At the event Suzuki was his candid and impassioned self with an opening monologue that chronicled key years in the rise of global warming; hand gestures at the podium suggested he had notes, but Suzuki retained eye contact the majority of the time. First he described the Anthropocene, "Starting in the 1940s to now," as the "age of human beings"; then he addressed the 1973–1975 OPEC oil embargo. Next, Suzuki spoke of the "very hot summer" in 1988 that prompted American climatologist James Hansen to testify in front of congress: "This summer is an indication." Suzuki then recounted the 1992 "largest gathering of heads of state ever in human history up to that point" at the Rio Earth Summit prior to referencing the 1997 Kyoto Protocol, which he said was ratified by Canada in 2001; he was also quick to point out that Canada withdrew. Closer to the end of his opening remarks Suzuki addressed a meeting with the French Ambassador to Canada in advance of the 2015 Conference of Parties in Paris; Suzuki informed the crowd that the Ambassador had said France has "no intention of just copying the steps taken in the past." He also spoke of an email response he got from "Justin" that said, "I am very serious," after Suzuki wrote about the unrealistic targets set at COP21 (DavidSuzukiFDN, 2018a)

The speech confirmed a few things we already knew. Suzuki is qualified and he is credible. His curation of facts mixed with personal anecdotes also served their storytelling purpose. In sharing this timeline with us Suzuki documented "shared experiences" that have an effect on us all and he reflected upon our "common goals"; the aforementioned Duarte calls these speech qualities critical. We also see Mittermeier and Nicklen exhibit these traits bound to their articulate and impassioned presentations styles. Before he

concluded, Suzuki had to inspire and he chose these statements to do so:

> The problem that I see we face is that politicians … they're good people, they mean well, but they're constrained by politics … and the problem with the business community … I've met so many good people in the business community, but they're constrained by the priorities set by economics. And so we haven't been able to really change the way that we see the world … we're being driven now by a very strong economic and political agenda that fails to understand that ultimately it's Mother Earth that allows us to live and flourish. (DavidSuzukiFDN, 2018a)

Suzuki continued(s):

> And that's why I find it's so exciting today to see that Indigenous people now are coming to the forefront … I'm very pleased that we have people here who are going to share their stories and show you there is absolutely no excuse for holding back on this now. This is an enormous opportunity for us. (DavidSuzukiFDN, 2018a)

That Suzuki points out that politicians and economists do it one way and the Indigenous way of knowing is another was to echo the dichotomous story arcs analyzed in The Greatest Sanctuary, as well as in King's and Jobs's speeches. In other words, Suzuki setup "what could be" and we trust his guidance and confidence because of who he is (Duarte, 2010). Even if Suzuki seems "angrier" of late, his trustworthiness remains because he is "speaking now as a grandfather and an elder" with a life of experience behind him (MacKinnon, 2019).

As previously discussed, we also trust Foundation Fellow Laboucan-Massimo who as an expert insider witness was present at the launch event as she often would be for subsequent strategic Charged Up local events; the rational for this is stated in her words:

> That's why it's so important for me to go into communities to talk to about the impacts of this spill … because it was it was probably at that time one of the hardest experiences I've ever had in my life … how it affected my family and how it affected me. It was very

traumatizing. (DavidSuzukiFDN, 2018a)

Laboucan-Massimo would share intimate details of the spill in with Suzuki, the panel host, so the audience might sympathize with her but also with members of the impacted community. This is one way Laboucan-Massimo adds dimensionality to the built storyworld since these are disasters to be prevented in the future. But Laboucan-Massimo also knows authentic dialogue takes time so when a question posed by an audience member further assessed the relationship between renewable energy and the fossil fuel corporations Laboucan-Massimo remained poised. As a response to the questions: Are the fossil fuel companies irrelevant? Are they potential partners? Or active opponents? Laboucan-Massimo stated:

> I mean I think there's an interesting link between fossil fuel companies and the renewable
> energy sector … being from a fossil fuel impacted community … not necessarily seeing
> the benefits as much as the impacts … but seeing big companies like Suncor and Enbridge,
> or various different kinds of companies, then turn around and make a profit from the
> destruction of our home … then reinvest into renewable energy, I feel kind of a little bit
> worrisome because essentially it's … maintaining monopoly of the grid or monopoly of
> the energy matrix and so I feel like that's kind of a little bit concerning. (DavidSuzukiFDN,
> 2018a)

An adversarial approach towards industry—which would widen the already existing gap—is not how the level-headed Laboucan-Massimo would frame the next part of her answer. Instead, she continued:

> The thing that I really love about Charged Up is actually talking about community based
> energy, where communities actually own their energy, communities actually run their
> energy … communities are starting to become energy literate so they actually know how the
> energy system works, and so I think that's something that has been left out of our national
> dialogue, really, our global dialogue. People are really energy illiterate unfortunately …
> you talk to anybody on the street and people are not energy literate and I think that's
> why the oil and gas companies continue to kind of rule … I think the thing that I really
> appreciate about Charged Up is putting the knowledge and the power back into the Hand

of the communities. (DavidSuzukiFDN, 2018a)

For Laboucan-Massimo, and the broader Charged Up network at large, that chooses to focus on solutions rather than the controversy, there is a true sense of yearning for dialogue, rather than debate, to push through the barriers of the renewable energy transformation because we know more about the promise of the former approach.

The underlying premise here is that in Charged Up's community-powered renewable energy storyworld there is a need to manage the way we talk and change the way we disagree. There is also no room for "outlandish attacks, out-of-control PR, and distorted information," according to Hoggan (2016, p. 12).

A second special guest at the event might not have been so calculated with his responses as Chief Michell, stated: "You know what an Indian is going to say when you give him a microphone? There's no way you know because I don't know what I'm gonna say" (DavidSuzukiFDN, 2018a). Yet, the Kanaka Bar visionary shared unfiltered from-the-front-line storytelling that only added authenticity to the evening conversation and Chief Michell did what Charged Up excels at: He told another success story to make the transformation relatable to people through dialogue. On the Kanaka Bar projects, Chief Michell said:

> The end result was we have a 50 megawatt project operating at Kanaka Bar and it's providing
> enough electricity year-round … we're gonna just keep expanding solar and we've got a
> 500 kilowatt run-of-the-river project in the final design stage … Why? Because we're using
> the sun and the wind and the water the same way my ancestors did sustainably, there's no
> extraction, you're harnessing Mother Nature's bounty without damage (DavidSuzukiFDN,
> 2018a)

It was critical for the launch event audience to hear Suzuki, Laboucan-Massimo, and Chief Michell. Their presence made the renewable energy storyworld real and accessible. Other local events have had a similar effect, as Yano, who played an instrumental role in many of the cross country dialogues, can attest:

> We have been pushing hard behind-the-scenes with government relations, but that is also
> anchored in our dialogue. So we've done a lot more dialogues. That one in April, for
> example, with Melina [Laboucan-Massimo] … we didn't even advertise it, and we didn't

boost the post, and we invited only our climate concerned people in levels 3 and 4. So not
very many people. And like, 3,000 people signed up. And then at the end, they were like,
can we do this every week because they suddenly didn't feel alone (S. Yano, personal
communication, 2020)

That many of the events were—and continue to be successful—is to applaud the "distributed campaign"
infrastructure that remains in place for the Foundation's climate change campaign. However, Cremier sheds
insight on the fragile nature of this work to be watched:

Dialogues are established by real people and not by organizations. The organization is just
a name, so if you are engaged in a group of 20 citizens in Regina, asking them to lobby in
their city hall, to pass resolution, or to adopt fiscal measure … and that person leaves DSF
you have an empty role, an empty chair, and that's not always filled, and the relationships
are not recreated with the same efficiency and smoothness with the person who left. So
turnover for distributed campaigning, especially in the inception phase, it's really a killer.
(D. Creimer, personal communication, 2020)

And while the distributed campaign model that has been implemented by Charged Up means this
fragility remains in play, with the right people in place, the benefits accrue as stakeholders take "aspects of
the story away with them as resources they deploy in the spaces of their everyday life" (Jenkins, 2009b). This
extractability factor moves the campaign management structure away from a top-down approach towards a
bottom-up methodology that hands over autonomy of local campaigning efforts to community leaders, who
are often first volunteers, before they become more specialized in their roles and add critical resources and
value to the campaign (see Section 4.8.2.5). In this context, SeaLegacy employ a similar approach using the
Only One digital platform that serves to empower local initiatives. Once again, Yano puts dialogue leading to
autonomy into perspective:

So I think this is largely invisible because the other thing that we learned on this campaign
very early is it's way more effective not to brand yourself … And a lot of our climate
stuff happens way behind-the-scenes … We go deep in Regina, Brampton, Mississauga,

Edmonton, and Vancouver, we have people on the ground mobilizing and working with

those communities, and unless you're in those communities, you probably wouldn't see a

lot of our stuff. (S. Yano, personal communication, 2020)

Yano continues, "And I think it's like champions, local champions that understand what has to happen. These

are the people that move the dial" (S. Yano, personal communication, 2020).

4.7.2 - Charged Up: Media Channels

Next, I provide an exemplary list of media channels to demonstrate that a transmedia storytelling

design exists in The Greatest Sanctuary. Table 8 generally categorizes media forms, or the composition for

each media channel, and then specifically details a sampling of 65 media channels that include Core and

Peripheral campaign media, along with Partner and News content.

Emphasis was placed on an analysis of this exemplary list of media channels because these are

individual publication spaces that audiences interact with and they provide the specific connection, or entry

point, into the Foundation's community powered renewable energy storyworld; that is, user-generated content

is often inspired by the core content, the central body of work in this case study.

Here, media channel data strengthens the argument that the Charged Up campaign used integrated

media forms and an increasing number of media channels to advance a core narrative alongside diversified

and controlled storylines, a strategy that we have seen is also at the heart of SeaLegacy's transmedia

storytelling approach. It should be noted that the analyzed media channels are not an exhaustive account of

the ever expanding campaign; for example, it would take some resources and time to work through the extent

of David Suzuki Foundation's social media and local event footprints.

Table 8:

The David Suzuki Foundation's transmedia storytelling structure in the Charged Up campaign as defined by a sample of media channels.

Media Channel Code	Media Channel Description	Media Channel Title	Media Channel Source	Source
DSF-MC01	Campaign Website Landing	Charged Up	https://davidsuzuki.org/take-action/act-locally/charged-up/	Core
DSF-MC02	Campaign Petition 1	Charged Up Petition 1	https://davidsuzuki.org/take-action/act-locally/sign-up-charged-up-network/	Core
DSF-MC03	Campaign Petition 2	Charged Up Petition 2	https://davidsuzuki.org/action/your-renewable-future/	Core
DSF-MC04	Campaign Petition 3	Charged Up Petition 3	https://davidsuzuki.org/take-action/	Core
DSF-MC1	Campaign Website	*Toronto's solar school inspire climate optimism*	https://davidsuzuki.org/story/torontos-solar-schools-inspire-climate-optimism/	Core
DSF-MC2	Campaign Website	*Nelson BC saves money with Canada's first community solar garden*	https://davidsuzuki.org/story/nelson-bc-canadas-first-community-solar-garden/	Core
DSF-MC3	Campaign Website	*Oxford County breaks new ground with rural zero-energy building*	https://davidsuzuki.org/story/oxford-county-rural-zero-energy-building/	Core
DSF-MC4	Campaign Website	*Building a renewable city, one neighbourhood at a time-richmond bc*	https://davidsuzuki.org/story/building-renewable-city-one-neighbourhood-time-richmond-b-c/	Core
DSF-MC5	Campaign Website	*Oil and gas workers go solar with Louis bull tribe*	https://davidsuzuki.org/story/oil-and-gas-workers-go-solar-with-louis-bull-tribe/	Core
DSF-MC5b	Campaign Website	*Oil and gas workers go solar with Louis bull tribe*	https://davidsuzuki.org/story/oil-and-gas-workers-go-solar-with-louis-bull-tribe/	Core
DSF-MC6	Campaign Website	*Ontario's first wind community powers almost 7000 homes*	https://davidsuzuki.org/story/ontarios-first-wind-community-powers-almost-7000-homes/	Core
DSF-MC7	Campaign Launch	*Charged Up -- A Celebration of Renewable Communities*	https://www.youtube.com/watch?v=sHPDL4gMlj0	Core
DSF-MC8	Campaign Website	*Winds of change blow in Lac-megantic*	https://davidsuzuki.org/story/winds-of-change-blow-in-lac-megantic/	Core
DSF-MC8b	Campaign Website	*Winds of change blow in Lac-megantic*	https://davidsuzuki.org/story/winds-of-change-blow-in-lac-megantic/	Core
DSF-MC9	Campaign Website	*Is there anything these secwepemc solar powered tiny houses can't do?*	https://davidsuzuki.org/story/can-solar-powered-tiny-houses-stop-a-pipeline/	Core
DSF-MC9b	Campaign Website	*Is there anything these secwepemc solar powered tiny houses can't do?*	https://davidsuzuki.org/story/can-solar-powered-tiny-houses-stop-a-pipeline/	Core
DSF-MC10	Campaign Website	*This net-zero library in Quebec inspires us all*	https://davidsuzuki.org/story/this-net-zero-library-in-quebec-inspires-us-all/	Core
DSF-MC109b	Campaign Website	*This net-zero library in Quebec inspires us all*	https://davidsuzuki.org/story/this-net-zero-library-in-quebec-inspires-us-all/	Core
DSF-MC11	Campaign Website	*Turning torontow zoo poo into power*	https://davidsuzuki.org/story/turning-toronto-zoo-poo-into-power/	Core
DSF-MC12	Campaign Website	*Faces of the new energy economy*	https://davidsuzuki.org/story/faces-of-the-new-energy-economy/	Core

Media Channel Code	Media Channel Description	Media Channel Title	Media Channel Source	Source
DSF-MC12b	Campaign Website	*Faces of the new energy economy*	https://davidsuzuki.org/story/faces-of-the-new-energy-economy/	Core
DSF-MC13	Campaign Website	*The solar generation*	https://davidsuzuki.org/story/the-solar-generation/	Core
DSF-MC13b	Campaign Website	*The solar generation*	https://davidsuzuki.org/story/the-solar-generation/	Core
DSF-MC14	Campaign Website	*Kanaka bar: harnessing the power of community*	https://davidsuzuki.org/story/kanaka-bar-harnessing-the-power-of-community/	Core
DSF-MC14b	Campaign Website	*Kanaka bar: harnessing the power of community*	https://davidsuzuki.org/story/kanaka-bar-harnessing-the-power-of-community/	Core
DSF-MC15	Campaign Website	*Canadian solar inventor says solar panels' almost cheaper than plywood*	https://davidsuzuki.org/story/canadian-solar-inventor-says-solar-panels-almost-cheaper-than-plywood/	Core
DSF-MC16	Campaign Website	*Youth are the heart of relay education's renewable energy mission*	https://davidsuzuki.org/story/youth-are-the-heart-of-relay-educations-renewable-energy-mission/	Core
DSF-MC17	Campaign Website	*Renewable energy powers food production at just food farm*	https://davidsuzuki.org/story/renewable-energy-powers-food-production-at-just-food-farm/	Core
DSF-MC17b	Campaign Website	*Renewable energy powers food production at just food farm*	https://davidsuzuki.org/story/renewable-energy-powers-food-production-at-just-food-farm/	Core
DSF-MC18	Campaign Website	*Just transitions unites labour unions and environmentalists*	https://davidsuzuki.org/story/just-transition-unites-labour-unions-and-environmentalists/	Core
DSF-MC19	Campaign Website	*Why we vote-pippa, john, erich, karen and Felicia*	https://davidsuzuki.org/story/why-we-vote-pippa-john-erich-karen-and-felicia/	Core
DSF-MC20	Campaign Website	*New kids on the block: youth take climate action in mississauga*	https://davidsuzuki.org/story/new-kids-on-the-block-youth-take-climate-action-in-mississauga/	Core
DSF-MC20b	Campaign Website	*New kids on the block: youth take climate action in mississauga*	https://davidsuzuki.org/story/new-kids-on-the-block-youth-take-climate-action-in-mississauga/	Core
DSF-MC21	Campaign Website	*Why we vote-for the love of kids-joanna, cliff, sarah, brieanna, and David*	https://davidsuzuki.org/story/why-we-vote-for-the-love-of-kids/	Core
DSF-MC22	Campaign Website	*Rising temperatures make theme parks an ally in the climate fight*	https://davidsuzuki.org/story/rising-temperatures-make-theme-parks-an-ally-in-the-climate-fight/	Core
DSF-MC23	Campaign Website	*You took climate action to the streets. Now take it to the ballot box*	https://davidsuzuki.org/story/you-took-climate-action-to-the-streets-now-take-it-to-the-ballot-box/	Core
DSF-MC24	Campaign Website	*Unlikely allies create renewable energy opportunities in Alberta*	https://davidsuzuki.org/story/unlikely-allies-create-renewable-energy-opportunities-in-alberta	Core
DSF-MC25	Campaign Website	*Canada's first net zero church and social housing complex*	https://davidsuzuki.org/story/canadas-first-net-zero-church-and-social-housing-complex/	Core
DSF-MC25b	Campaign Website	*Canada's first net zero church and social housing complex*	https://davidsuzuki.org/story/canadas-first-net-zero-church-and-social-housing-complex/	Core
DSF-MC26	Campaign Website	*Brian iler: the of wind, water, and sun*	https://davidsuzuki.org/story/brian-iler-the-man-of-wind-water-and-sun/	Core
DSF-MC27	Campaign Website	*Finding hope, joy, and community in the climate movement*	https://davidsuzuki.org/story/finding-hope-joy-and-community-in-the-climate-movement/	Core

Media Channel Code	Media Channel Description	Media Channel Title	Media Channel Source	Source
DSF-MC27b	Campaign Website	*Finding hope, joy, and community in the climate movement*	https://davidsuzuki.org/story/finding-hope-joy-and-community-in-the-climate-movement/	Core
DSF-MC28	Campaign Website	*Foundation follow brings power to the people*	https://davidsuzuki.org/story/foundation-fellow-brings-power-people/	Core
DSF-MC28b	Campaign Website	*Foundation follow brings power to the people*	https://davidsuzuki.org/story/foundation-fellow-brings-power-people/	Core
DSF-MC29	Campaign Website	*Old oil and gas wells find new life with renewable energy*	https://davidsuzuki.org/story/old-oil-and-gas-wells-find-new-life-with-renewable-energy/	Core
DSF-MC30	Campaign Website	*Regina researchers urge city to focus on equity in climate planning*	https://davidsuzuki.org/story/regina-researchers-urge-city-focus-equity-climate-planning/	Core
DSF-MC31	Campaign Website	*Atlantic Loop's green-recovery potential lies with collaboration, renewable energy*	https://davidsuzuki.org/expert-article/atlantic-loops-green-recovery-potential-lies-with-collaboration-renewable-energy/	Core
DSF-MC32	Campaign Website	*Racial justice is climate justice*	https://davidsuzuki.org/story/racial-justice-climate-justice/	Core
DSF-MC32b	Campaign Website	*Racial justice is climate justice*	https://davidsuzuki.org/story/racial-justice-climate-justice/	Core
DSF-MC33	Campaign Website	*Young leaders help steer Halifax's climate action plan*	https://davidsuzuki.org/story/young-leaders-help-steer-halifaxs-climate-action-plan/	Core
DSF-MC34	Campaign Website	*How to cool your home over the summer*	https://davidsuzuki.org/queen-of-green/how-to-cool-your-home-over-the-summer/	Core
DSF-MC35	Partner - The Energy Mix - Digital Article - News	*Suzuki Foundation to Stress 'Community-Led Renewable Power'*	https://www.theenergymix.com/2018/03/09/suzuki-foundation-to-stress-community-led-renewable-power/	Core
DSF-MC36	Partner - Straight - Digital Article - News	*David Suzuki: Reconciling energy and Indigenous rights*	https://www.straight.com/news/1110736/david-suzuki-reconciling-energy-and-indigenous-rights	News
DSF-MC37	Partner - Georgia Strait - Digital Article - News	*David Suzuki: Renewable energy brings renewal to Indigenous communities*	https://www.straight.com/news/1206476/david-suzuki-renewable-energy-brings-renewal-indigenous-communities	News
DSF-MC38	Partner - CBC - Digital Article - News	*Blatchford renewable energy utility ready to go*	https://www.cbc.ca/news/canada/edmonton/edmonton-blatchford-1.5345452?fbclid=IwAR0c6YQ35BYebcx9QQbSu2cbMFVwEMrH8RTB2n6RwfqKOtJyxj7u6oOQR1w	News
DSF-MC39	Partner - The Energy Mix - Digital Article - News	*UBC Climate Hub: Finding Hope, Joy, and Community in the Climate Movement*	https://www.theenergymix.com/2020/11/22/ubc-climate-hub-finding-hope-joy-and-community-in-the-climate-movement/	News
DSF-MC40	Partner - Still On - Digital Article - News	*David Suzuki Foundation*	https://www.still-on.ca/projects/david-suzuki-foundation	News
DSF-MC41	Partner - Campaign Doc	*Global Rebellion*	https://www.youtube.com/watch?v=y1_BuAQ8GFU	Partner
DSF-MC42	Email	Don't blame God or nature. We're the culprits	Member Email	Peripheral
DSF-MC43	Email	A message for you from Stephen Cornish	Member Email	Peripheral
DSF-MC44	Email	How cities can tackle congestion and climate change	Member Email	Peripheral

Media Channel Code	Media Channel Description	Media Channel Title	Media Channel Source	Source
DSF-MC45	Email	Carbon pricing is an important tool to tackle climate change	Member Email	Peripheral
DSF-MC46	Email	Reconciling energy and Indigenous rights	Member Email	Peripheral
DSF-MC47	Email	Ontario climate action is non-negotiable	Member Email	Peripheral
DSF-MC48	Email	Help Ontario shape climate action by November 16	Member Email	Peripheral
DSF-MC49	Email	Tackling climate change requires healing the divide	Member Email	Peripheral
DSF-MC50	Email	We're stronger with you	Member Email	Peripheral
DSF-MC51	Email	We have to act: Climate strike at Queens Park	Member Email	Peripheral
DSF-MC52	Email	How to cool your home this summer	Member Email	Peripheral
DSF-MC53	Email	This will be big. Strike for the climate!	Member Email	Peripheral
DSF-MC54	Email	The stories we need right now	Member Email	Peripheral
DSF-MC55	Email	Science Matters - Healthy forests mean healthy people	Member Email	Peripheral
DSF-MC56	Email	Stories that inspire and sustain us	Member Email	Peripheral
DSF-MC57	Email	Message from David Suzuki Foundation board chair	Member Email	Peripheral
DSF-MC58	Email	Enjoy these September updates: Throne speech, green recovery, Butterflyways and more	Member Email	Peripheral
DSF-MC59	CliMate Chat Bot	CliMate Landing Page	Member Email	Peripheral
DSF-MC60	CliMate Chat Bot	Facebook Messenger	Member Email	Partner
DSF-MC61	CliMate Chat Bot	Meet CliMate	Meet CliMate - A Climate Change Conversation Coach Chatbot	David Suzuki Foundation	Partner

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Section 4.8 - Charged Up: Degree of Engagement

The presence or absence of a set of conditions was evaluated to describe the Degree of Engagement in Charged Up, with Degree of Engagement as a measure of a campaign to fulfill a set of engagement conditions to elicit increasingly deeper emotional responses from audience members with the intent to incite participation and actionable events from those individuals who build connections within the storyworld. An examination of any relevance of these strategies and tactics to climate change communications in particular is emphasized.

Furthermore, as I am interested in the conception of a novel transmedia storytelling model, I have also made notes on the applicability of Jenkins's previously examined principles, if and when this is appropriate. This exercise aims to assess how Jenkins's principles might be repurposed and included in my new model to be discussed in Chapter 5.

I posed this research question:

RQ1c: What is the Degree of Engagement across the Charged Up campaign?

4.8.1 - Charged Up: Emotional Responses & Actionable Events

The Charged Up campaign by the David Suzuki Foundation and prominent stakeholders advances a central a core narrative (see Section 4.6.1) that introduces audiences to a community-powered renewable energy storyworld made experiential by diversified and controlled storylines (see Section 4.6.3) that are derived from a suite of media forms and published across multiple media channels (see Section 4.7.2).

The elicitation of emotional responses and actionable events from audience members was evaluated to measure engagement more generally in the Charged Up campaign. As with the previous analysis on the Degree of Narrativity and Transmediality, an examination of any relevance of engagement with climate change communications in particular is emphasized.

In this manner, and with my goal of presenting a novel transmedia storytelling model, I have increased the depth of my analysis of the applicability of Jenkins's previously examined principles in this section; the rationale for this specificity can be reviewed in Section 2.4.3.1 but a brief summary is provided once again for expediency. Jenkins's existing principles could be situated in two different camps during the

production of real world transmedia storytelling in climate change campaigns because responsibility is in the *Hand of the Creator* to introduce continuity, multiplicity, worldbuilding, seriality, and subjectivity, since it is principally practitioners who make choices that influence these principles as a project develops; and by contrast, the responsibility is in the *Hand of the Audience* to bring about spreadability, drillability, immersion, extractability, and performance, because these principles do not reach matureness without user engagement and audience participation.

4.8.2 - Charged Up: Mapping Jenkins's Transmedia Storytelling Principles

4.8.2.1 - Charged Up: Spreadability

In an email dated April 13, 2019, Charged Up Program Lead Yano sent the following note to Foundation subscriber's as part of ongoing communication for the campaign:

> We're so glad you joined the Charged Up network. Renewable energy is local energy. It's pride of place. Ultimately, it's about you, because we know systemic change doesn't happen without people power. With the Charged Up network, we will be working to connect people in Canada to renewable energy opportunities and resources in their communities. To find out about the inspiring renewable energy stories of people in Canada from all walks of life, visit davidsuzuki.org/ChargedUp. There are so many incredible stories to tell, so we'll keep adding new ones and spreading the good news. You are our inspiration. If you have ideas, questions or challenges, we're all ears. Contact us at ChargedUp@ davidsuzuki.org. Thanks again for joining. We look forward to working with you, Sherry Yano, Program Lead, Community Renewable Energy. (David Suzuki Foundation, personal communication, 2019)

Then on May 1, 2019, Charged Up Community Engagement Organizer, Malkeet Sandhu, sent an email that included these excerpts:

Dear Neil,

On March 15, 2019, 160,000 youth across Canada took to the streets to demand climate justice. They did so because youth know that we need widespread, systemic change, and that we need it now. On May 3, 2019, they will strike again from coast to coast. In your community, young people are doubling down and organizing a movement, and they need your support … Here's how you can take action: Go to the strike and bring others with you. Spread the word about the climate strikes on social media. Find out where other strikes are happening here. Share your strike experience and pictures on social media using #fridaysforfuture and #climatestrike and send them to elected representatives and local news outlets … I'll leave you with the words of Aliénor Rougeot, one of the Toronto student strike organizers: "Every single action matters and we need all hands on deck." (M. Sandhu, personal communication, 2019)

In these examples it is apparent that Jenkins's spreadability principle is inherently part of the broader climate change capacity building of the David Suzuki Foundation as well as in the specific campaign at hand. Spreadability of media content involves the viral spread through user sharing that could encourage further participation. While local community events will always remain paramount for Charged Up, spreadability is a key condition to reach the campaign goal that seeks to increase the number of Canadians participating in community-led renewable energy to "80,000" (Social Capital Strategies, 2017, p. 2). A featured story found on Charged Up's website demonstrates the spreadable nature of media derived from user generated content specifically: A supporter authored the following testimonial that compelled the Foundation to share because "we found the statements so moving":

Today I am working inside at a hospital, and everyone around me is wearing masks because of the smoke that has engulfed our city this week. The sight of our city's buildings being disappeared by wafts of grey is truly surreal and terrifying. I regret profoundly that I have given life to someone who has innocently inherited the damage that has come before her. I have guilt for the challenges that she will face in her lifetime as a result of the carelessness of past generations. I feel deeply responsible for not talking louder, fighting harder, and devoting more time to what is the paramount cause in our history, but all I can do now is

insist that more has to be done to resolve our country's environmental state. The right and

only thing that we can do for our children is to show them that voices matter, votes matter,

and someone is listening. (David Suzuki Foundation, 2020h)

As we have discussed already throughout both The Greatest Sanctuary (e.g. Mittermeier witnessing an ice

shelf collapse) and Charged Up campaigns, personal accounts from the field can be an effective storytelling

technique since they create affective experiences for readers who are cued by words such as "regret" and

"guilt," or even "terrifying"; such words carry heavy emotional weight, often eliciting strong feelings in the

reader. At the same time, that someone else is "listening" provides comfort for any new campaign supporter

seeking guidance as they enter into the Foundation's storyworld for the first time.

Foundation staff address the strategy behind spreadable content—both derived from a multitude of

media forms and published across a variety of media channels—from the onset of Charged Up:

Those were the guidelines that we received three yers ago and the terms that were agreed

upon. We said [Charged Up] is a storytelling campaign and we want to inspire people …

with deliverables such as stories published in newspapers and videos shared on social

media, and used at conferences, presentations … So, it was structured, it was in the

deliverables that we had to produce, we all internalized that we had to produce storytelling

tools. (D. Creimer, personal communication, 2020).

From the beginning, Anna Binta-Diallo, a Design, Digital Strategy, and Web Specialist with the Foundation,

understood certain "original" qualities of media made content spreadable as well. It was "because of our

cohesive visuals that we've been able to pierce Quebec … that people can trust our words, our images, and

they credit that to the success (Personal communication, 2020). On this matter, Binta-Diallo stated:

This year we had the big climate change launch. I was asked to design an image of Greta

and David … I had to come up with a visual that everyone could share and post everywhere

to talk about the climate change march in Montreal. We wanted to use something original

to DSF, so I designed a portrait of David and Greta. That was our second most shared

image on Instagram. (A. Binta-Diallo, personal communication, 2020)

Yano also recounts a success story as Jenkins's principle is examined:

> It's a beautiful video, if you look at it, it's called *The Solar Generation*. It's an example
> of a story that we did that would be a good news story … and that story gets shared like
> thousands and thousands of times, but mostly in Regina where they are so proud of it. Some
> of them know the kids, it's not like it's like 200,000 people, so they know each other, that
> story gets shared, people are so excited. SkyFire Energy was like, hey you could use drone
> shots, let me throw some money into the pot, the city wants to now show our next video in
> their big conference on energy transition. (S. Yano, personal communication, 2020)

However, while the organization continues to benefit from shareable "storytelling tools" published by
Charged Up, this was not always the case, as some legacy staff were reluctant to employ this type of media in
the past. Beer who has spent considerable time at the Foundation reports on this work to date:

> At one point there was this constant tension—"It's only about engagement, nobody cares
> about science"—so much back and forth and feelings of challenge as we introduced
> why we need to get our supporters behind the science. It's not been a smooth transition.
> We've landed now at a point where the few scientists left who might question the role of
> engagement have been limited to almost none. It has taken years. From our main scientist
> who has expertise in this group of whales, he hated this approach of bringing in marketing
> firms and putting it on social media. He thought it was a waste of time. Many scientists are
> not on social media at all, they want information and accuracy, evidence. It's a big line …
> All that changed their minds about the importance of visual stories was numbers. Because
> we could go to funders and say we built a community of 40,000 followers in less than a
> year using a Facebook channel. (T. Beer, personal communication, 2020)

Notwithstanding the benefits of shareable media content—that has the potential to go "viral"—
and the effort needed to restructure the ideology of the organization, around social media specifically, as
SeaLegacy have done, Yano is quick to point out that Charged Up aims to go "beyond likes and shares"
(Personal communication, 2020). For Yano, "I think if you're liking or sharing, you're not even on the

pyramid for us … it's more about taking actual action … you want people to move up [the pyramid of engagement] (S. Yano, personal communication, 2020).

What is more is that Yano has insights on the origin and specificity of shareable stories, particularly as the Charged Up campaign thinks more about Jenkins's principle:

> The other thing about movement building … is you can't just think about broadcasting [your own] stories. Stories are like a currency and an exchange. It's like the way we are wired as human beings. It's how we get to know each other and how we connect. And so you can't just think about the strategies of broadcasting out, because ultimately if you want people to join your movement, you got to join theirs and that means listening to their stories, that means making stories together that are new (S. Yano, personal communication, 2020)

New types of shareable stories are important for Jay Jameson, a Digital Strategy Manager, who has worked for the David Suzuki Foundation since 2018. So are the dissemination strategy and tactics, or media channels, used. With campaign coordination, implementation, and analysis on his mind, Jameson specializes in "doing things like SEO," to make "sure it is something people are able to find"—and then share (J. Jameson, personal communication, 2020). Jameson spends a lot of time in "Google Analytics looking at what's getting spikes and traffic, what pages have huge bounce rates"; he then tries to provide feedback to "the content creators to give them information to help them make decisions" (J. Jameson, personal communication, 2020). For Jameson, the frustration is part of the process:

> Sometimes [the Foundation] will involve us upstream. There will be conversations about the types of pieces they would want to do, a web piece or an email campaign or webinar. Hopefully they will be bringing me or one of my colleagues into those conversations to try to help guide it. Maybe this shouldn't be a web page, maybe we should reframe this as some other digital campaign. Helping guide it in that way. But often we're brought in downstream. Content will come to us, we need new content on the site or a new project page. We're doing this new email campaign or we're going to run a contest. If that's when we start we have less control over how it takes shape. (J. Jameson, personal communication,

2020)

With less control of the shape or type of story Jameson and Charged Up have less ability to tailor the spreadability qualities of their campaign products. Conversely, SeaLegacy use the Only One platform to achieve this effect precisely. For the David Suzuki Foundation, this factor might be one reason why the campaign's approach to engage with people on a deeper plane has taken a priority. Jameson's work plays a role here too. He states:

> When it comes to the website I'm looking at bounce rates, pages per session, and session duration. No one of those metrics tells you a lot, but if you look at it and blur your eyes, you can get a sense of how people are interacting with the content. (J. Jameson, personal communication, 2020)

4.8.2.2 - Charged Up: Drillability

According to a Charged Up strategic document, survey data revealed that, "Once individuals get involved in local renewable projects, they quickly become passionate advocates," because these projects are "connected to place, hands-on," and they provide chances to participate with others in a "meaningful, outcome-oriented way" (Social Capital Strategies, 2017, p. 21). In Charged Up, the David Suzuki Foundation can seek to increase "deeper engagement" beyond even that inspired by The Greatest Sanctuary campaign by offering members of the organization a "range of opportunities" to connect with local efforts in the community-powered renewable energy storyworld (Social Capital Strategies, 2017, p. 21).

From a strategic point of view, Jenkins's drillability principle was premeditated in the architecture of the Charged Up campaign in order to move supporters through the organization's "pyramid of engagement" (Social Capital Strategies, 2017, p. 22). Recall, whereas spreadability is interested in "the capacity of the public to engage actively in the circulation of media content" (Jenkins, 2009a), drillability is focused on moving people from one level of commitment to another deeper level where they can "understand the complexity of the story" (Jenkins, 2012).

For example, elements of Charged Up's drillability strategy is apparent in the on-going collaboration with Laboucan-Massimo. Yano puts this in context:

> We're doing a just transition report with Melina Laboucan-Massimo about how Indigenous
>
> communities can transition. That's a report, and that is intentional. We've also done
>
> interviews with her in print … We've done videos with Melina as well … but this [report]
>
> is also for those remote communities who don't have bandwidth, we also have to have
>
> something that helps them capacity wise learn from all of the things that Melina's learned
>
> in working with many, many different communities across Canada on that energy transition
>
> plan. (S. Yano, personal communication, 2020)

The in-print interviews and videos that feature Laboucan-Massimo permit spreadability (see Section 4.8.2.1), but it is the report that specifically provides capacity-building at a much deeper level for those who are concerned with the implementation of their own local projects. In-depth knowledge conveyed by Laboucan-Massimo advances this task at hand.

Moreover, the David Suzuki Foundation pyramid of engagement works as a tool to map how supporters engage at different levels of "depth" in the Charged Up campaign, and importantly the pyramid functions to identify people who "could be ready to jump in a more significant way," with an interest in greater involvement (J. Stark, personal communication, 2020). In this way, "drillable" content is made available to those "members" who have shown a "desire" to engage because they have already performed a preliminary action (see Section 4.8.2.5); for Charged Up, and the broader climate initiative at the Foundation, identifying these members involved a series of automated asks to better understand what else people were willing to do. Micro-targeting helped identify audiences at the right time and what media channel was the right one to reach them (Social Capital Strategies, 2017). In-person dialogue at local events across the country assisted with the endeavour as well (see Section 4.7.1.4). Of note here is SeaLegacy's "approach to growth" which employed similar tactics in their funnel acquisition model discussed in Section 4.4.1.2. Strategic language for the Charged Up campaign states the role of Jenkins's drillability principle alongside the efficacy of these media forms and channels:

> Campaign stories are a great source of inspiration and basic ideas about how to advance
>
> a project. But those who are keen need access to the details of how others were able to
>
> mobilize the people, resources, technology, and other requirements to make a project
>
> successful. Consider where webinars, online meet-ups, and in-person events can be used

to connect members of the network to share questions, ideas, and experiences. A listserv could be set up that allows people to share expertise and resources freely and acts as a technical resource to the network (Social Capital Strategies, 2017, p. 24)

On the matter of more details and greater investment in the renewable energy storyworld the David Suzuki Foundation consider five tiers in their Charged Up pyramid of engagement such that an individual action was assigned to a specific level in the pyramid; it might be signing a petition, writing a letter, or leading an event—says campaign staffer Stark. In an analogous way, SeaLegacy use a tiered system as well. More formally, in Charged Up the tiers consist of a spectrum of actions organized into categories that could include: observing, engaging, advocating, committing, and leading (Social Capital Strategies, 2017). Interestingly, within the denoted activities that people can do are red actions and green actions to be discussed in Section 4.8.2.5 since they primarily involve the application of Jenkins's performance principle. But for our purposes here, the red and green actions require a deeper dive into the campaign.

Stark points to the value of this pyramid engagement strategy since it is about "tracking how many people" enter into the "lowest level" and "step-up" (J. Stark, personal communication, 2020). In other words, the pyramid of engagement can be thought of as a vertical ascent—or deeper into core—into the renewable energy storyworld, where the higher one climbs on the ladder the more rich the affective experiences become; the relationships formed there are increasingly critical for the success of any project, and for the transformation towards renewable energy generally, because it takes committed people to pull off these projects. Transmedia storytellers know that while actions on the first level of the pyramid work to complete routine communications that will always be important, particularly in early phases of a climate change campaign, at the higher level, there is need to foster and retain promising people who might be advantageous for the campaign because of the depth of their interest. As of the writing of this dissertation, the Foundation has calculated that 73,900 people have entered into the lower levels of the climate pyramid of engagement and this number is estimated to be even higher if the still to be determined manual entries for some of the higher levels are included.

Furthermore, keeping key stakeholders engaged in higher levels of the pyramid is paramount, as Cremier has alluded to earlier, so the Foundation thinks strategically about this just as SeaLegacy dedicates much of their social capital to engaging with but a few key politicians. A Charged Up strategic document states that one viable solution to increase partnerships with organizations is to create additional depth in the storyworld:

To help establish a range of meaningful action pathways, DSF should find well-aligned

partners in each province that are already creating opportunities for local residents to

connect with community energy projects or may have advocacy campaigns underway (this

may be particularly relevant in places in like Alberta, Saskatchewan, and Ontario where

consultations around community scale renewables are taking place). These partners could

also be a resource for those who need deeper (technical) support than DSF can provide

for moving a project a forward. Where possible, get these organizations involved in

creating content and responding to comments or questions on social media. (Social Capital

Strategies, 2017, p. 23)

Relatedly, the David Suzuki Foundation make their storyworld navigable to increasing depths using

a parallel strategy to SeaLegacy; that is, the core narrative throughout the expanding storyworld remains

consistent across featured storylines to provide a unified experience from coast to coast to coast. From the

language on the campaign website to the language discussed during the CliMate chatbot training and from the

language used at local events to the language used on social media, the campaign has successfully advanced

the singular notion that Charged Up is "Empowering communities across the country" and that this is a story

written by and for all of us interested in a deeper understanding of our relationship with energy. Yano even

suggests there is more to the depth of the storytelling since it is not only the kind of story you tell that really

does matter, the storyteller matters too:

We may mobilize councillors, mayors, and city staff, and some others. We look at

Indigenous, we look at racialized communities, women. We've picked the groups that we

want to earn the right to work with more deeply. And then it's up to us to say, but we're not

going to send our storytellers. We've got to work with them to identify the stories that are

told by them about their communities. (S. Yano, personal communication, 2020)

4.8.2.3 - Charged Up: Immersion

To get a clearer sense of the challenges ahead for Charged Up one can reflect upon the definition of

some terms that appear on the David Suzuki Foundation's main website. The text on screen reads:

"Climate change" describes a change in the average conditions—such as temperature and rainfall—in a region over a long period of time. Earth's climate is always changing over long periods of time and has been hotter and cooler than it is now, but the pace of change has sped up significantly in recent decades. Scientists are deeply concerned about the changes they've observed since the Industrial Revolution. (David Suzuki Foundation, 2021d)

On the same webpage, below an image of a crowd of people—most of whom are holding signs and have a look of despair—this text can also be found:

Human-caused climate change is affecting the planet in ways that could alter all life on Earth. It's the biggest, most urgent problem we face. In fact, many— including the David Suzuki Foundation—have started using stronger terms such as climate emergency, climate crisis, climate disruption and climate chaos to reflect the severity. (David Suzuki Foundation, 2021d)

It is strategic to describe the impending change as a "climate emergency" or a "climate crisis," or use terms like "climate disruption," or even "climate chaos" (David Suzuki Foundation, 2021d). SeaLegacy does as well. Because climate change is still a danger that exists spatially, temporally, and socially apart from so many of us, there is an immediate need to affectively immerse Canadians into the Charged Up community-powered renewable energy storyworld where they can be stirred to participate in "mitigation" and "adaptation" activities (DSF Website). Recall, in the case of the Charged Up campaign, that number of participating Canadians needs to be at least 80,000, or more. To accomplish this task, the Foundation first thinks about Jenkins's immersion principle more broadly, as Yano explains:

If you want the climate movement to be a democracy, if you want everyone to see themselves in it, and conversely, to see all others in them, you give them control, you want those stories made by them to as much as an extent as possible. So we're constantly learning, and we are constantly trying to earn the right to work with all these disparate groups. (S. Yano, personal communications, 2020)

In this context, to create stories—together with "disparate groups"—serves the purpose of diversifying the immersive dimension of the campaign's storyworld, as communities across the country become nodes for local innovation, and beyond. These communities can then offer real world immersion into renewable energy projects for their citizens and the Foundation's transmedia storytellers can invite audiences to bear witness via narrative transportation. Yano states the relevance of this these concepts: "When we're trying to engage so many different groups, it really has been more effective for us to be able to tell stories in different formats … because everybody is different in the way they absorb stories (S. Yano, personal communication, 2020).

But to fully immerse Canadians into Charged Up's storyworld Yano has even more explicit insight, particularly as this thinking is viewed through the lens of one of transmedia storytelling's focal conditions which aims to encourage individual users to become contributors to the overarching narrative as they author a version of their own story. Yano states: "That's the thing about storytelling, right? If you do it really well, in a medium that suits somebody, and reaches them, they will write themselves into the story" (S. Yano, personal communication, 2020).

Evidence of individuals writing themselves into the campaign's story with personal accounts is presented in *Why we vote* in which everyday Canadians submit statements that, "Tell us why they're voting for climate action." The previously mentioned Pippa, states:

> As I write this, Ottawa is still under a state of emergency because of flooding. We have higher water levels than we experienced in 2017, which was supposed to be the flood of the century. We've also had tornadoes last fall and record heat waves in the past few summers. Climate change is real… it's happening right now, and it's only going to get worse if we don't finally take serious action. (David Suzuki Foundation, 2020f)

And, Karen, an ordained minister of the Presbyterian Church and beekeeper, inserted herself into the story this way:

> In recent years, I have attempted to further support our environment by raising bees. However, despite doing everything that experienced beekeepers told me to do, four out of five years, all my bees died as a direct result of climate change. I have a large garden and several fruit trees. I fear that my crops and flowers may not be pollinated because of a lack

of bees. (David Suzuki Foundation, 2020f)

Narrative transportation ensues in the two scenarios because readers can see themselves, and others, in the reflections.

As with SeaLegacy's powerful and beautiful films, other immersive experiences produced by the Foundation were designed to trigger a positive emotional response using the burgeoning new climate change narrative of hope to bring people into the storyworld. *The Solar Generation* video depicting the grade six and seven students from Regina's Lakeview School is one example (Hall, 2018). Because "cinema not only puts movement in the image," but "also in our mind," audiences are cued by the young character's emotions as they experience a renewable energy installation for the first time (Flaxman & Flaxman, 2000, p. 366 as cited in Weik von Mosser, 2017, p. 53). As the student's share their own candid thoughts on film, the human interest story becomes the main focus of the piece, and an affective response is produced in audiences (see Section 4.6.2.4).

We also feel positive during the immersive experience created throughout the film *Wind of Change* (David Suzuki Foundation, 2018b), as honest accounts of proud Canadians working in Lac-Mégantic stimulate a sense of accomplishment that each of us could be a part of in the future. The use of aerial videography, an advancement in visual storytelling tactics that brings us even closer to these people, the turbines, and the emergent feel good story, enhances the immersive experience (see Section 4.7.1.2).

Moreover, as discussed in SeaLegacy's The Greatest Sanctuary case study, the role of Jenkins's immersion principle is inherently tied to the act of witnessing an event in a real or depicted storyworld. Mittermeier and Nicklen, as experiencing agents, use behind-the-scene footage and first-person narration to document and articulate the spectacular beauty that they see through their cameras, and in doing so, they immerse us simultaneously, so we feel along with them in the moment (see Section 4.4.1.3). Conversely, the Foundation primarily relies on the intimate stories of everyday Canadians which create the immersive experience related to the renewable energy transformation because these back-yard local stories make clear not only what is possible but also who can enter.

Yano provides context again:

We're often asked to do dialogues with them. The city asked is to do a youth dialogue. And so did a bunch of other stakeholders. And we got, like, 70 youth in the room. And we had

the largest participation of Indigenous youth that the city had ever seen (S. Yano, personal

communication, 2020).

4.8.2.4 - Charged Up: Extractability

Jenkins's extractability principle is generally interested in the relationships that audiences have with

media—both forms and channels—and how transmedia storytelling, or worldbuilding, can influence each of

us in our everyday lives, as in the participation of members of SeaLegacy's Tide. While I have examined how

the extractability principle manifests in Charged Up's in-person events (see Section 4.7.1.4), where critical

dialogue sheds light on the renewable energy storyworld and concurrently empowers local leaders to make

transformative change in their own communities using aspects of the campaign, we can return to introductory

notes on the CliMate chatbot for the purposes of analyzing another example of this principle's effect on

climate change communication. The CliMate chatbot (David Suzuki Foundation, 2020f), introduced by the

David Suzuki Foundation is worth brief discussion as this tactic not only appears to be novel, but staff at the

organization have lauded its peripheral role in the Charged Up campaign.

Simply put, CliMate is a digital climate conversation coach.

Jodi Stark, a Pubic Engagement Specialist at the Foundation, summarizes the role of the Facebook

Messenger tool this way:

I just recently launched a climate conversation chatbot that teaches you about having less

polarized conversations about climate change that I'm really proud of … I think there's

some really good value … how to communicate better on divisive issues, but also the

organization is at a stage now where some of the foundational digital pieces are in place

enough that we get to … innovate with tools, so this was the first time we were able to use

a chatbot, so just experimenting with different tools to reach different audiences. (J. Stark,

personal communication, 2020)

The experimentation is needed because of the polarizing nature of topics like climate change, global warming,

and even renewable energy. From Ryan's (2014) perspective, these conversations have affective meaning,

creating an affinity response for some of us, and aversion in others. Copy provided on the chatbot website

elucidates the context:

> Imagine this. You're at a big, family dinner. The food is delicious, the drinks are flowing
> and everyone is having a good time… until your lovable but opinionated uncle starts
> talking about climate change. That sinking feeling creeps in. You know he has it all wrong,
> but you don't know how to reason with him. Nor do you want to offend the host or turn
> a nice dinner into a heated debate (again). Still, you feel it's important to say something.
> (David Suzuki Foundation, 2020e)

Most of us by now have been in a similar situation. CliMate was designed to aid in these challenging scenarios when our language—and reactions that stem from those conversations—plays a significant role in both the denotation and connotation of our underlining beliefs and values. On this matter Glauser states:

> How you talk about it is interesting … just before the holidays in early December, we
> launched a climate conversation chatbot … its through Facebook Messenger and it's
> designed to help coach you in how to have conversations about climate, and I found it
> helpful because I'm one of these people who you know … I can hold strong beliefs, but at
> the same time you provide the right argument with the right stats and info, I can have my
> mind changed, no problem … so that's how I sort of would communicate about climate
> change … if once people just get how bad it is, like if I just give them IPCC stats and some
> … if I tell them how many million hectares just burned … that'll get everyone on board.
> (B. Glauser, personal communication, 2020)

Glasuer continues:

> Not how you do it [laughs] … because all that stuff … people eyes glaze over and you
> know, even over the head and everything and so, what this chatbox tries to coach you to
> do is to have more empathetic conversations based on actually asking more questions than
> doing, more listening, and identifying ways of building common ground and building trust
> and then you might find ways of entering and asking particular questions that get them to

think (B. Glauser, personal communication, 2020)

In many ways CliMate affirms the necessary case for listening, yet the question and answer exercise further gathers insights from scientifically proven approaches that users can use in subsequent conversations in the real world; Karin Tamerius of Smart Politics drew upon her expertise in social and political psychology and extensive experience with online dialogues to assist with the development of CliMate (David Suzuki Foundation, 2020e). For example, during the training when asked to respond to the prompt "Global warming is a hoax," the CliMate chatbot coaches users to think about their response because "it's productive to start with non-threatening, open-ended questions" (David Suzuki Foundation, 2020e); CliMate suggests answering with "Can you say more about that?" because this inquiry "makes people feel safe, demonstrates respect, gathers useful information, contributes to understanding" and "encourages self-reflection" (David Suzuki Foundation, 2020e).

The five-step procedure people can take away from the CliMate training encourages an empathetic approach to discussing climate change and structures these challenging conversations in less polarizing ways. As a result, our language—the types of stories we use in our everyday lives (see Section 4.8.2.4)—changes and we minimize adverse responses in our dialogues often incited by our biases and affect heuristic. The Smart Politics approach used by CliMate includes the following steps:

> Ask open-minded, genuinely curious, non-judgemental questions;
> Listen to what people say and deepen your understanding with follow-up questions;
> Reflect back their point of view by summarizing their answers and noting underlying emotions;
> Agree before challenging them by pointing your areas of common ground; and
> Share your thinking by telling a story about a personal experience. (David Suzuki Foundation, 2020b; Smart Politics, 2020)

Accordingly, because conversations about climate change and global warming can bring up all sorts of emotions, such as "frustration, despair, anger, and embarrassment" (David Suzuki Foundation, 2020f), the David Suzuki Foundation believes CliMate "will teach you how stop arguing and start understanding people" and "it's also sure to make you chuckle, especially if you've tried having these sorts of conversations already"

(David Suzuki Foundation, 2020f). That the CliMate chatbot has the potential to change user behaviour along with ongoing dialogues suggests the Foundation has considered Jenkins's extractability on a number of occasions throughout the Charged Up campaign. As of November 2020, 6,947 total users had visited the CliMate chatbot experience and 303 signed up for the challenge (David Suzuki Foundation, personal communication, 2020).

The organization also sends the reminder email noted below to audiences members who have undertaken the CliMate mentorship training:

I know it can be difficult to have tough conversations with people you don't agree with. But people trust their peers, family members, and loved ones more than they trust experts, scientists, and environmental organizations. So, you can talk to people about climate change in ways that we can't. You are more likely to open people's minds. I'd love to hear how your experience was with the CliMate chatbot and the Climate Conversation Challenge. Please take a few minutes to let us know. Have you memorized the five steps of the conversation cycle yet: ask, listen, reflect, agree, share? Refer to the Climate Conversation Challenge resource page for a cheat sheet and more resources to help keep you inspired. Thanks for taking part in this challenge. Keep your conversations going. (David Suzuki Foundation, personal communication, 2020)

That the email is intended to collect data on user behaviour suggests the pivotal role of analyzing engagement in ongoing transmedia storytelling projects (see Section 4.8) since analyzing data is particularly necessary outside the context of meeting people face to face. Finally, Yano shares an anecdote on the success of the CliMate chatbot:

It was launched last year before the Christmas holidays, and it's been surprisingly popular … I've been surprised that a lot of groups have said, hey, will you do a dialogue for our group in Toronto or in Vancouver or wherever, talking about how to have these climate conversations? … like even [the] City Credit Union … one of the big financial credit unions out in BC. They called us and said, we want to do something with your chatbot, because we think it's great. (S. Yano, personal communication, 2020)

4.8.2.5 - Charged Up: Performance

Before another discussion involving Jenkins's performativity begins (see Section 4.4.1.5 for a prior account), it is worth recalling that transmedia storytelling scholars offer two distinct meanings behind this principle. For some, the actions of Suzuki and Laboucan-Massimo function as "performances" as these characters play out the role of an archetype, such as the hero or victim, in front of watching audiences; in this scenario, and throughout the Charged Up campaign, this "performance" serves as an act of witnessing—and emotionally responding to—unpredictable events in the storyworld as we discussed in Section 4.6.2.3 and in the cases of Mittermeier and Nicklen in The Greatest Sanctuary campaign (see Section 4.2.2.3). For others, Jenkins's performance principle is focused on "the tension between extractability and immersion" and how audience members "can make their own contributions" to a campaign (Jenkins, 2009b). As we have analyzed the performance of Suzuki and Laboucan-Massimo at some length already, we can turn attention to the latter meaning of the performance principle. This interest in the secondary interpretation also aims to specifically address audience engagement which is the current focus of this section.

A David Suzuki Foundation scenario planning document demonstrates how the audience-engagement-oriented performance principle works in Charged Up:

> If you ask me to change a light bulb, for example, to deal with climate change, do you really think it will happen? Especially if it's among 100 other things I might—or might not—do? But if you ask me to join you in persuading the Kennedy School to change all of its light bulbs by signing a student petition, joining you in a delegation to the dean, and adding my name to a public list of KSG students who have committed to changing the light bulbs where they live, what do you think the odds are of success? A story of now works if people join you in action. (Ganz, 2009/2013)

Performance by Foundation members then is about scaling our collective effort. According to Yano "it's about communities, this is about communities taking action, it's about people in communities taking action together" (S. Yano, personal communication, 2020). More specifically, 80,000 Canadians are being asked to perform and so the Charged Up campaign's call-to-action can be understood as a marriage of Jenkins's immersion, extractability, and performance principles; that is, once "immersed" inside the

storyworld, individual actions that benefit people in their own lives (Jenkins's extractability) lead to benefits for the broader community, and over time Charged Up staff work to locate these "performers" who stand to advance the overarching goal of the campaign via the actions that they take. A Foundation strategic document highlights these varying expressions of Jenkins's principles by key local stakeholders:

> A successful decentralized [and distributed] campaign is built on the passion and commitments of its supporters, who play a major role driving its activities. As DSF members begin to take action and become more involved in the campaign [Jenkins's drillability], the organization should take steps to track and better understand those who are most engaged. Find the people who want to be the voices of the network—as volunteers, as mentors, as experts, as spokespeople, as organizers—and cultivate them proactively. The goal is to find the superstars who are ready to be activated as network leaders, figure out the expertise and assets they have to lend the campaign/local projects, and help connect them into opportunities that advance the goals of both. Others doing this work report that these super-supporters are essential to decentralized campaigns but also take time to cultivate. (Social Capital Strategies, 2017, p. 23)

Even still, as performance by key local stakeholders is considered independently, we can revisit the red and green actions of the pyramid of engagement introduced earlier and note specific tasks of greater importance; that is, while Charged Up might demand more from their campaign supporters than what SeaLegacy does, the Foundation does an admirable job of making resources available in this pursuit, particularly on the ground in local communities. For example, Charged Up is interested in having "super-supporters" "participate in a local meet-up" or "volunteer for a community project" to activate a green action or Charged Up might be interested in having these "volunteers," "mentors," "experts," "spokespeople," or "organizers," "sign a petition" or "share content with others" to engage with red actions. Other actions include downloading resources, calling an elected official, writing a letter to an editor, or investing in a project to name a few. In any case, the action performed by a supporter serves the campaign and fulfills Jenkins's performance principle in a expanding way; there is even distinction made by the David Suzuki Foundation if a supporter who performed a single task failed to do so again (Social Capital Strategies, 2017). Yano explains:

So if someone signs an action in year one but doesn't do anything else, we don't have them on our list in year two. We have to drop them off and see if we can re-engage them. So these lists are current, they're not cumulative … And within the three years, I think we're at 70,000 and almost at our five year goal of 80,000. And whether that'll keep up is whether we're giving them the right content and still earning the right to collaborate with them. (S. Yano, personal communication, 2020)

Ultimately, for the Charged Up campaign, performance might be best evaluated by counting the number of renewable energy project installations since the inception of the campaign:

Whether it's remote Northern outposts looking to increase energy security or Southern communities keen to tap into the economic potential of clean energy, First Nations are showing the rest of Canada how to do renewables in a way that empowers the whole [country]. With more than 300 Indigenous clean energy projects taking place across 190 communities, this work offers lessons in project management, partnerships, community engagement, and more, to both Indigenous and non-Indigenous communities. It's also helping drive an emerging narrative around how renewable energy can help recognize Indigenous rights and truth and reconciliation principles, by returning ownership and autonomy over how these communities generate, use, and benefit from energy. (Social Capital Strategies, 2017, p. 6)

Writing a commentary for The Georgia Straight, Suzuki provided an explicit "performative" example and highlighted the "extractable" actions taken by The Secwepemc Nation's Tiny House Warriors, along with Lubicon Solar, who together built solar-powered homes in 2018 "to assert Indigenous title on unceded Secwepemc territory and to block the Trans Mountain Pipeline expansion" (Suzuki, 2019). Charged Up featured this "performance" in the campaign's own way by deploying a visual storytelling team to produce a video in which Laboucan-Massimo states her version of the witnessed action: "Today, we are solarizing the tiny homes. The tiny homes have been constructed this year and now we're putting solar panels on to make [them] a fully efficient effective off-grid home" (DavidSuzukiFDN, 2018c). Laboucan-Massimo continued:

Being from a community that's impacted by tar sands extraction … the impacts are immense to our homelands and I'm here today to demonstrate that we can utilize renewable energy solar technology to empower communities and use the power of the sun to transition away from fossil fuels (DavidSuzukiFDN, 2018c)

Summary of Part B

Part B of Chapter 4 demonstrated that the David Suzuki Foundation pre-mediated many of the structural elements of Charged Up and implemented transmedia storytelling best practices throughout the campaign, while adding key components at intervals along the way, as evidenced by the fulfillment of the following:

H1a: The David Suzuki Foundation effectively performed transmedia storytelling using organization and campaign specific core narrative statements that state, "Our mission is to protect nature's diversity and the well-being of all life, now and for the future" and "Renewable energy is empowering communities across the country. This is the story of you—of all of us—on a mission for a cleaner, healthier, charged-up Canada," respectively. The case study analysis of Charged Up also confirmed the presence of a minimum of 26 diversified and controlled storylines that provided increasing dimensionality of the community-powered renewable energy storyworld (see Table 7).

H1b: The David Suzuki Foundation effectively performed transmedia storytelling using integrated media forms and an increasing number of media channels. The case study analysis examined the presence of language, image, object, and music media forms across the campaign and examined a minimum of 52 core media channels (see Table 8).

H1c: The David Suzuki Foundation effectively performed communicative action that elicited emotional responses and actionable events in the form of audience engagement and participation with the community-powered renewable energy storyworld. The Foundation accomplished this using legacy and localized transmedia storytelling best practices that predominantly married evidence-based research, education, and policy work with visual storytelling experimentation.

AA

Chapter 5
Conclusion

Section 5.1 - Summary of Chapter

This concluding chapter provides an overview summary of my research findings, key recommendations intended for climate change campaign practitioners, and reflections on areas that require additional future research.

Section 5.2 - Research Findings

This dissertation harnessed close to two decades of personal environmental communication consultancy experience, applied research, and an examination of the current literature on narrative, transmedia, and engagement theory, along with a thorough eco-narratological analysis of two case studies aimed at contextualizing a new model to help design more effective communications campaigns aimed at addressing the climate emergency. This multi-pronged research approach, which combines praxis, theory, and analysis, led me to discover three key competencies, or abilities, that can be combined to bring about deeper and lasting emotional engagement with climate change storyworlds (i.e. abstract representations carefully designed to both elicit public understanding about the crisis and, more importantly, foster active involvement with practical solutions).

The three key competencies that my research summarizes include:

1. Narrative Intuition

2. Transmedia Acumen

3. Emotional Intelligence

To facilitate understanding, I summarize each competency below and include comments tracing their origins to my own praxis, the literature review, and the exemplary case studies. Ultimately, my research has informed me that these competencies are necessary to carry out effective climate change campaigns. They can be found in "practice" in the presented TREES Model found in Appendix B. I conclude by providing reflections on how the dissertation findings can be applied into future research endeavours.

5.2.1 - Narrative Intuition

Intuition can be summarized as our human ability to understand complex phenomena without active conscious reasoning. In short: To sense meaning, before overtly thinking about it (see Section 2.2.5).

As a photojournalist, and in the context of this dissertation, this type of intuition first became clear to me in 2004 when I was studying the effectiveness of visual communications and made a single photograph of twin boys running up a hill in rural Appalachia. At the time I recall being an active participant in this event,

but I have no recollection of pre-visualizing the decisive moment I caught on film. It could be said that the image-making may have been automatic, or even unconscious—it just felt right to follow the boys and then click the shutter. Upon this reflection, as I presented the image on a large screen in class, I also remember my professor saying, "Neil has finally got it" (B. Strong, personal communication, 2004). According to Bruce Strong, I had at long last visually assembled the basic elements of narrative—in a fraction of a second—into a photographic frame. My classmates agreed: Behind the image, there was a story.

To elaborate, our ability to identify these basic elements of narrative and subsequently employ a set of narrative conditions requires a heightened sense of Narrative Intuition such that these conditions have not just been assimilated and absorbed, but can actually be sensed.

The Greatest Sanctuary and Charged Up campaigns have arguably been effective at immersing people into their respective storyworlds because staff working for these organizations have a heightened sense of Narrative Intuition. Recall, the SeaLegacy team went back to Antarctica to capture video footage of Nicklen's seminal and remarkable encounter with a leopard seal (see Section 4.2.2.5) and the David Suzuki Foundation shared Laboucan-Massimo's story on multiple occasions knowing the strength of her narrative (see Section 4.6.2.4). To evoke emotions from campaign supporters who empathize with these storylines, both the SeaLegacy and the David Suzuki Foundation focus on characters who exhibit particular emotions that can be simulated (or intimated) by audience members.

For Mittermeier and Nicklen, and other members of SeaLegacy, Narrative Intuition begets world-class visual storytelling. On one assignment in Antarctica a story on krill becomes more than a narrative about a small ocean crustacean. At one juncture, narrative conditions have been pre-meditated; the still and moving images have been mentally sketched before the team even enter the sea (see Section 4.2.2.1); at another, the SeaLegacy team pivot towards an unpredictable moment, a boat on the horizon, to elaborate on the impending conflict involving a fisheries industry keen to encroach on and fish for the krill (see Section 4.2.2.3). SeaLegacy manages these processes, both planned and impromptu, using their Narrative Intuition to disrupt the plot, and draw audiences in. The David Suzuki Foundation, an evidence-based research, education, and policy focused non-profit organization, follows suit, as they use narrative to translate the challenges of climate science. Behind every erected local community wind turbine (see Section 4.7.1.2) or installed solar panel is a potential story with a beginning, middle, and end (see Section 4.6.2.6). The Charged Up media teams employ Narrative Intuition to access the narratives that have the greatest potential to disrupt an equilibrium.

On both accounts, there is evidence that a heightened sense of Narrative Intuition is informing the craft of storytelling: SeaLegacy assembles transformational stories to advance the notion of ocean health and its benefit to humanity, along with the grand vision of securing the largest act of ocean protection in history; the David Suzuki Foundation assemble transformational stories to advance the notion of a community powered renewable energy Canada that benefits all of us. Moreover, throughout Chapter 4, I used Ryan's (2007) narrative conditions as a way to discern if SeaLegacy and the David Suzuki Foundation seek out the basic elements of narrative to enhance the construction of both the Antarctica and community-powered renewable energy storyworlds. Beyond the recognition and selection of apt narratives—and storylines that include many of Ryan's (2007) conditions—it appears to me that SeaLegacy and the David Suzuki Foundation intuitively incorporate particular narrative elements[1] such that we can reframe and rename a subset of Ryan's (2007) ideas that become the most 'fundamental' narrative conditions to be used in the TREES Model (in Appendix B). In fact, it also appears to me that these most "basic rules of narrative," as Olson (2015, p. 13) has put it, are at the core of each campaign's narrative formula.

5.2.1.1 - The Fundamental Narrative Conditions

For SeaLegacy and the David Suzuki Foundation, Narrative Intuition involves the identification and management of a set of fundamental narrative conditions which make up the Degree of Narrativity in a climate change campaign (see Section 2.2.4 and Main Branch A in Appendix B). These conditions include: (1) emotional reactions by characters which need to be omnipresent and paramount (see Condition #1 in Appendix B), such that the human condition of the climate change crisis becomes even more salient; (2) a series of challenges, or a disruption leading to conflict and lived experience (see Condition #2 in Appendix B), such that an equilibrium is broken and characters live through an experience; and (3) a transformation of a character, place, or issue (see Condition #3 in Appendix B), such that some form of equilibrium is reestablished.

To summarize, designing effective transmedia storytelling requires a Degree of Narrativity, such that a campaign fulfills a set of narrative conditions within an individual storyline that is controlled and diversified in order to advance a central idea, or core narrative (see Sections 4.2.1 and 4.6.1). That in turn requires

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[1]Recall from Section 2.2.3, in the pursuit of some semblance of a narrative framework, or Degree of Narrativity, Ryan (2007) offers us this: "Rather than regarding narrativity as a strictly binary feature, that is, as a property that a given text either has or doesn't have," we might work with "a fuzzy-set" of narrative conditions that centres "on prototypical cases that everybody recognizes as stories" (p. 28).

having a talented team with a heightened sense of Narrative Intuition. Furthermore, to effectively share their carefully selected and curated stories, both SeaLegacy and the David Suzuki Foundation demonstrate a second competency, which I examine next.

5.2.2 - Transmedia Acumen

The worldbuilding processes required for achieving effective transmedia storytelling involves having the ability to identify key characteristics for best practices in transmedia project design. A key factor to achieve success in transmedia storytelling is to have Transmedia Acumen, or the ability to produce climate campaigns using context-based judgement and decisiveness such that the selection of media forms and channels function to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced.

For me, the importance of acquiring and nurturing Transmedia Acumen was highlighted as I executed a project for the Smithsonian Magazine[2], The Weather Network[3], and Polar Bears International[4] in the fall of 2020. As I aimed to address the needs of each organization I primarily was interested in immersing audiences into the frozen landscape of the Canadian subarctic where polar bears hunt on seasonal sea ice. Using media forms including imagery—both stills and moving—and carefully selected language—both written and oral—I was aiming to curate stories that can first elicit from my audience an emotion of care about the polar bear, to thereafter highlight the importance of preserving sea ice, while at the same time drawing public attention to the climate change crisis. Having an understanding of the relevance of Transmedia Acumen permitted me to curate climate change campaign media assets that included carefully selected and context-specific storylines designed to be delivered across multiple media channels derived from many media forms with expert collaborators. The outputs included:

  • An hero image on the cover of the printed Smithsonian Magazine;

  • A feature photo essay in the printed Smithsonian Magazine;

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[2]The Ice is Calling: A climate change dispatch from the polar bear capital of the world was my fourth feature photo essay that include text written by myself and co-author Mark Jacquemain; the March 2021 cover depicted an image I made of polar bear waiting by the sea ice edge.

[3]I was appointed the Climate Change and Sustainability Editor at The Weather Network in February of 2020 and in this role I carry out domestic and international assignment that take me to the front lines of climate change.

[4]Polar Bears Internationals is a non-profit polar bear conservation organization. Their research, education, and action programs address the issues that are endangering polar bears; I am currently producing a documentary film pilot with colleagues at this organization.

• A feature photo essay for the digital Smithsonian website;

• A feature written essay in the printed Smithsonian Magazine;

• A feature written essay for the digital Smithsonian website;

• An 11-min documentary film pilot;

• Multiple social media posts using still and video assets, including detailed captions, for

Instagram, LinkedIn, and Facebook, among others; and

• A live Facebook interview broadcasted by The Weather Network

Much of this type of media output—and the platforms we now use to disseminate our stories—was planned with communication experts from the collaborating organizations well in advance. To illustrate, Jeff Campagna (my photo editor in D.C.), highlighted the need for a still image of a lone bear on the sea ice, preferably with cubs, which if successfully captured could be one of the 'hero' images of the edit (which I submitted for the printed version of the story in the Smithsonian magazine). Chris Bilton (my Managing Editor at The Weather Network) highlighted how video footage could be used to produce an 11-minute pilot episode that we could use to pitch a series to a streaming service such as Netflix. Kt Miller (Media and Outreach Manager at Polar Bears International) highlighted a very specific task: To fill holes in their polar bear photography archive, which meant that I needed to find a way to make images that could be used for in-person fundraising events, social media digital campaigns, and other non-profit communications involving transmedia storytelling. Conversely, a live Facebook interview broadcasted to a global audience was conceived swiftly one morning in the field and required decisive actions by a team of people coordinating the event from 1000 miles apart.

Planning such complex media deliverables, or taking advantage of opportunity, involves expert collaboration and as much foresight, as hindsight. In other words: It implies elaborate decisions using a heightened sense of Transmedia Acumen.

The Greatest Sanctuary and Charged Up campaigns have arguably been effective at immersing people into their respective storyworlds because staff working for these organizations combine a heightened sense of Narrative Intuition with a heightened sense of Transmedia Acumen. Recall, that SeaLegacy produced stories derived from varying media forms after considering the "medium that best fits the nature of the information," as proposed by Ryan (2015, p. 14), since still and motion imagery of sweeping landscapes function to rapidly transport and immerse people into the Antarctica storyworld (see Section 4.4.1.3), and language in written form serves as educational panels deep in the campaign portal website that can engage us

on a rational level (see Section 4.2.2.7). Similarly, also recall that the David Suzuki Foundation understood that, "Each medium does what it does best" (Jenkins, 2006, p. 95–96), such that the organization shared stories on stage at a launch event, where the spoken words from Suzuki and special guests resonated with the audience; or using images—the mural size hero image for example—which depicted hope and optimism and associated the campaign event with a community-powered renewable energy storyworld (see Section 4.7.1.4). Importantly, SeaLegacy and the David Suzuki Foundation appreciate how both image and language form—in their myriad combinations—function to make a storyworld multi-platform, thereby connecting with diverse audiences who encounter the stories in one media form or another. SeaLegacy and the David Suzuki Foundation achieve this effect using Transmedia Acumen.

On the matter of Transmedia Acumen, the two case studies I examined in Chapter 4 also recognized that audiences are shifting the way they consume media. No longer is our attention glued to the television or as focused on printed media as it once was. Instead SeaLegacy and the David Suzuki Foundation recognize the importance of digital platforms and mobile devices such that they disseminated stories on an increasing number of media channels. Recall that SeaLegacy broke up chunks of The Greatest Sanctuary campaign and disseminated these storylines across social media platforms (see Section 4.3.1), at an outdoor film screening in a remote village (see Section 4.4.1.4), and in the pages of a fine art book to be used as a strategic gift (see Section 4.2.2.1); these are among other media interfaces that function as connection or entry points into a storyworld. In a parallel way, the David Suzuki Foundation uses diverse media channels including social media and filmmaking, as well as a CliMate chatbot to reach unique audiences (see Section 4.8.2.4).

Additionally, both organizations acknowledge the need to tell multiple stories such that new storylines expand the dimensionality of the storyworld. While Mittermeier and Nicklen and Laboucan-Massimo and Suzuki, as expert witnesses, effectively immerse us into respective storyworlds with their personal perspectives, SeaLegacy and the David Suzuki Foundation acknowledge the roles of secondary characters. On this point, it could even be argued that some of the most affective experiences found in the Antarctica and community-powered renewable energy storyworlds are made possible as the organizations featured encounters with spectacular wildlife (see Section 4.3.1.1) or introductions to ordinary Canadians (see Section 4.7.1.2) .

Moreover, throughout Chapter 4, I used insights from a literature review to narrow in on the key characteristics[5] of transmedia storytelling as a way to discern if SeaLegacy and the David Suzuki Foundation

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5 The collective wisdom of Srivastava (2013), Ciancia (2015), Ciancia, Piredda, and Venditti (2018), Canavilhas (2018), Lovato (2018), Moloney (2018) and Gambarato, Alzamora, and Tárcia (2020), offer up a summary of guiding questions to use in transmedia storytelling

seek out best practices to enhance the construction of both the Antarctica and community-powered renewable energy storyworlds. In addition to the recognition and selection of these key characteristics, it appears to me that SeaLegacy and the David Suzuki Foundation implement them such that we can reframe and rename the key characteristics as the most 'fundamental' transmedia conditions to be used in the TREES Model I present in Appendix B. In fact, it also appears to me that these most fundamental conditions are at the heart of the "worldbuilding" process, as noted by Jenkins (2009a, 2009b), and as a result they become a core part of each campaign's transmedia storytelling formula (see Section 1.1.3).

5.2.2.1 - The Fundamental Transmedia Conditions

For SeaLegacy and the David Suzuki Foundation, Transmedia Acumen involves the identification and management of a set of fundamental transmedia storytelling conditions which make up the Degree of Transmediality in a climate change campaign (see Section 2.3.6 and Main Branch B in Appendix B). These conditions include: (1) media forms (see Condition #4 in Appendix B), which disseminate storylines through integrated media; (2) media channels (see Condition #5 in Appendix B), which disperse chunks of storylines; and (3) multiple storylines (see Condition #6 in Appendix B), which expand the dimension of the storyworld.

To summarize, designing effective transmedia storytelling requires a Degree of Transmediality, such that a campaign fulfills a set of transmedia conditions to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced. That in turn requires having a talented team with a heightened sense of Transmedia Acumen. Achieving effective public engagement (and actions) also requires engagement with media forms and channels incorporating a third competency, which is briefly summarized next.

5.2.3 - Emotional Intelligence

A heightened sense of Narrative Intuition permits a storyteller to absorb and assimilate a set of fundamental narrative conditions. Transmedia Acumen does the same with a set of fundamental transmedia conditions using context-based judgement and decisiveness. Emotional Intelligence involves recognizing, understanding, and managing narrative emotions—and affect—to create meaningful connections with

project design or the Degree of Transmediality in the TREES Model; the transmedia storytelling conditions I present in the TREES Model are a reframing and renaming of the key characteristics identified by this group of prominent scholars.

members of the audience such that a campaign's stories ultimately affect how supporters live out their lives.

Having team members with enhanced Emotional Intelligence facilitates effective and, ideally, long-lasting engagement. This is because emotional stories help each of us communicate our experiences to others and this in turn activates our ability to be empathetic beings. To illustrate the above, try to visualize what I faced during a recent Smithsonian Magazine assignment, where I held the hand of my guide on the volcanic slopes of Virunga National Park in front of a mother mountain gorilla with a newborn in the cloud forests of the Democratic Republic of the Congo. At that proximity, I felt the immediate presence of the magazine's audience. Yet, before I took even one photo I remember pausing to reflect on my photographic pursuit. More precisely, I wanted to make a picture of a specific emotion that illustrated a relationship between the animals and us. On other occasions I sought out joy, sorrow, and desire such that an onlooker might feel a certain way when they witnessed this body of work. On assignment in Africa I photographed joy, as newborn gorillas tumbled near my feet. I photographed sorrow from a helicopter as I depicted clear cutting of forests. I photographed desire in the faces of local townspeople who wanted to work as porters in the park for a day. Never before had I prepared for an assignment with such a conviction to better recognize, understand, and manage emotions, in order to create images and a carefully curated portfolio[6] aimed at affecting my audience's experience and thereafter trigger their own capacity to act.

To identify with a spectrum of emotions is to create a range of affective experiences that SeaLegacy and the David Suzuki Foundation use to pull people towards the periphery—and then the core—of a storyworld built by the worldbuilding processes of transmedia storytelling—to identify how affective experiences lead to deeper emotional engagement inside a storyworld is to consider the emotional complexity of said storyworld.

The Greatest Sanctuary and Charged Up campaigns have arguably been effective at immersing people into storyworlds because staff working for these organizations combine a heightened sense of Narrative Intuition working in concert with a heightened sense of Transmedia Acumen, and finally, Emotional Intelligence. Recall that SeaLegacy drew our attention to the effects of climate change using slow-motion video footage of the harrowing scene of the starving polar bear (see Section 4.3.1.4); and using sublime images of icebergs they transported us into the icy realm of The Greatest Sanctuary (see Section 4.2.2.4). In a similar way, the David Suzuki Foundation emotionally engaged audiences with recounts of an oil spill affecting an Indigenous community and with youth touching solar panels for the very first time on a school field trip (see Section 4.6.2.4). As such, SeaLegacy and the David Suzuki Foundation appreciate how both

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[6]*The Comeback* photo essay was featured in the *Smithsonian Magazine's* 50th Anniversary of Earth Day issue in April 2020 and was awarded an industry Communication Arts award in 2021.

positive and negative affect function to make a storyworld accessible (or not). In this vein, transmedia storytelling might involve good or bad, fearful or safe, hopeful or depressing emotional stories presented alongside facts in order to bridge the gap between scientific data and human emotion with the aim of moving people from apathy to action.

On the matter of Emotional Intelligence, SeaLegacy and the David Suzuki Foundation recognize affect can be used to elicit short-term emotional engagement, for example, in the form of eliciting audience participation on social networking sites. For Mittermeier and Nicklen, SeaLegacy's abrupt rise to global fame was centred around shares and likes, specifically on Instagram posts, where content in curated square boxes combined visual storytelling prowess with salient affect to engage audiences (see Section 4.4.1.1). For the David Suzuki Foundation, although to a lesser degree, the same was true on their social media sites where youth expressed emotion centred around a climate justice march (see Section 4.8.2.1), however, what was more apparent for the Foundation, was the need to manage the negative emotions found in comments on Facebook such that campaign supporters on the periphery of the storyworld would not be persuaded away by naysayers (see Section 4.7.1.3).

Beyond the likes, shares, and comments, or short-term emotional engagement, SeaLegacy and the David Suzuki Foundation recognize, understand, and manage emotional transmedia storytelling to pull people into deeper levels of their built worlds where greater mid- and long-term commitments—and actionable events—aligned with a campaign can be encouraged (see Sections 4.4.1.2 and 4.8.2.2 respectively). In order to achieve this effect the two organizations expand the complexity of the storyworld using both existing and new affective storylines (see Chapter 4), which are communicated via an increasing number of media channels made up of varying media forms (see Sections 4.3.1 and 4.7.1 respectively). In this capacity, transmedia storytelling—or the worldbuilding process—plays an important role in influencing the four domains[7] associated with Emotional Intelligence (see Section 2.4.5). Firstly, transmedia storytelling about climate change can make us more self-aware of our emotions and those of others that surround this topic; second, transmedia storytelling about climate change can encourage us to self-manage, and better handle, the distressing emotions of climate change in a productive way, as well as nurture the positive emotions that align with our passions, as we witness others do the same; third, transmedia storytelling about climate change can create social awareness, such that we can emotionally empathize with those less fortunate than us; and finally, transmedia storytelling can affect intergroup behaviour—particularly at the local level—by

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[7]Goleman, Boyatzis, and McKee (2013) elaborate on the domains of Emotional Intelligence in the book, *Primal Leadership: Unleashing the Power of Emotional Intelligence*.

first coordinating community members and then persuading them to imagine a shared future. In other words, transmedia storytelling creates "affective experiences," as described by Weik von Mossner (2017) at the onset of this dissertation, that over time work to connect audiences with the possibilities of doing something about the crisis we face. Most notably, this transmedia influence was evident in The Greatest Sanctuary as campaign supporters made donations, signed call-to-actions, and organized events at the community level. Ultimately, it was clear that SeaLegacy's transmedia storytelling works to create deep and lasting emotional engagement—with millions of online supporters and government officials—in order to deliver the largest act of ocean protection in history through the creation of three new marine protected areas (MPAs). Correspondingly, this influence was evident in Charged Up as campaign supporters performed similar actions as described above, but also erected renewable energy projects in their own backyards to make a cleaner and healthier Canada.

Moreover, throughout Chapter 4, I used Jenkins's (2009a, 2009b) transmedia storytelling principles as a way to discern if SeaLegacy and the David Suzuki Foundation recognize, understand, and manage emotions to increase engagement with the Antarctica and community-powered renewable energy storyworlds. In addition to the recognition and selection of Jenkins's transmedia storytelling principles, in particular those principles that mature through audience participation (see Section 2.4.3.1), it appears to me that SeaLegacy and the David Suzuki Foundation implement certain principles such that we can reframe and rename a subset of Jenkins's (2009a, 2009b) ideas that become the most 'fundamental' engagement conditions to be used in the TREES Model I present in Appendix B. In fact, it also appears to me that "affective experiences," as Weik von Mossner (2017) described, are at the core of each campaign's narrative formula.

5.2.3.1 - Three Fundamental Engagement Conditions

For SeaLegacy and the David Suzuki Foundation, Emotional Intelligence involves the identification and management of a set of fundamental engagement conditions which make up the Degree of Engagement in a climate change campaign (see Section 2.4.4 and Main Branch C in Appendix B). These conditions include: (1) spreadability affect (see Condition #7 in Appendix B), such that storyworld content—chunks of storylines—must be made available on social networking sites in order to increase the likelihood of viral spread and short-term emotional engagement in the form of likes, shares, and comments; (2) enrichability affect (see Condition #8 in Appendix B), such that storyworld complexity must expand using multiple media

forms and channels and new storylines in order to increase the likelihood of mid-term emotional engagement in the form of answering a call-to-act: e.g. donate, email sign-up, or petition signature; and (3) actionability affect (see Condition #9 in Appendix B), such that storyworld complexity must continue to expand using multiple media forms and channels and new storylines in order to further increase the likelihood of long-term emotional engagement in the form of action taken in their own lives: e.g. organize community event; protest; vote; or devise personal climate plan expand the dimension of the storyworld.

To summarize, designing effective transmedia storytelling requires a Degree of Engagement, such that a campaign fulfills a set of engagement conditions to elicit increasingly deeper emotional responses from audience members with the intent to incite participation and actionable events from those individuals who build connections within the storyworld. That in turn requires having a talented team with a heightened sense of Emotional Intelligence who can attach certain affect to transmedia storytelling—and in particular the use of expanding media forms—to engage people with the climate change crisis at a personal level that resonates with them because they are emotional engaged.

Section 5.3 - Summary of Reflections

Emotional engagement, which can be manifested from transmedia storytelling can also lead to a collective act of bearing witness as audiences around the world experience climate change on the level of imagination through images and narratives. However, the three competencies described above aim to push audiences beyond simply bearing witness, they aim to create campaigns that elicit lasting audience engagement on climate solutions.

That rationale contextualizes the TREES Model whose elements have been described throughout earlier chapters of this dissertation and which were specifically designed to help achieve the goals of climate change campaigners. To develop my TREES Model, I identified SeaLegacy and the David Suzuki Foundation as exemplary organizations that exhibited aspects of effective climate change communications; that is, it was apparent that these two organizations were achieving audience engagement at a high-level due to their ability to influence the broader climate change narrative.[8]

Furthermore, as my research on the topic of narrative affect and emotional engagement evolved it became clear to me that members of SeaLegacy and the David Suzuki Foundation held particular abilities that have since been identified as the key competencies I have presented herein: Narrative Intuition, Transmedia Acumen, and Emotional Intelligence; as my research continued, I started to appreciate the crucial role of these exemplified competencies such that, in combination, these abilities seem to bring about deeper and lasting emotional engagement with climate emergency storyworlds—those worlds designed to elicit understanding of the crisis and foster involvement with practical solutions to the climate emergency (as discussed throughout Chapter 4). To the best of my knowledge, this is the first time these competencies are being labeled, arranged in concert, and presented as key abilities to design successful climate emergency campaigns. If these competencies are indeed behind the demonstrated success in SeaLegacy and the David Suzuki Foundation's campaigns, there is high value embedded in summarizing these key conditions so others can achieve success in their own climate change campaigns.

The TREES Model is a roadmap and a blueprint. It can also be a template to elicit emotional responses and actionable events from diverse audiences whose real-life attitudes, behaviours, and values are effected as they enter into the depths of a climate change storyworld.

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[8]For example, the Only One platform earned 1 billion media impressions in 2019, reaching 25% of share of voice, a measure of the percentage of the market that a brand owns in comparison to its competitors (Only One, n.d.); this measurement factors into how much SeaLegacy dominates the conversation around ocean conservation.

Effectively curated stories can also help us make better sense of climate change. More specifically, as I mentioned at the onset of this dissertation, the multifaceted set of challenges that are unique to climate change communications is to reflect on the elemental capacity of narrative to evoke our emotions and stir in each of us the ability to act. In other words, because the climate change crisis exists spatially, temporally, and socially apart from so many many, statistics and facts are simply not enough to bring about the necessary social change required to address this very serious problem.[9] Because of this, climate change communicators should consider the efficacy of narrative affect—or how affective experiences result in varying levels of emotional engagement and influence how people live out their lives.

Moreover, the premise of the TREES Model is as follows: Cued by a set of narrative conditions—and communicated across media platforms—this new strategic framework can function to successfully transport audiences into immersive storyworlds where states of emotion can create felt experiences of the urgency of the climate change crisis as well as with others and with the non-human species and places that connect us all.

The greater purpose of the TREES Model is to create storyworlds according to Herman's (2009) definition of the term, that states, "Storyworlds are global mental representations enabling interpreters to frame inferences about the situations, characters, and occurrences either explicitly mentioned in or implied by a narrative text or discourse" and as such storyworlds are models … "of who did what to and with whom, when, where, why, and in what manner" (p. 107). To state plainly, to make better sense of climate change, is to become immersed into storyworld.

Because I believe this concept should be central to climate change communication, I sought out a metaphor to pair with the TREES Model and considered how the storyworld dimension of a campaign could be represented.

In this pursuit, I determined that the tree ring, with concentric circles that permeate out from a central core, will work as a visual representation of the TREES Model (see Figure 41 in Appendix B). The rationale is as follows. A climate change storyworld manifests as inner and outer rings of a tree, such that levels—or depth—of engagement, are determined by which ring a campaign supporter can be found in: Inner rings are closest to the core, or the "heartwood" of a tree, and are where a campaign finds its most loyal followers who

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[9]There have been many critiques of the deficit model of science communication in journals like Environmental Communication, Journal of Science Communication, Science, Technology and Human Values, etc. and the promise of the TREES Model rests on the important groundwork by these scholars whose research underscores the challenge of communicating the climate emergency in ways that engage publics; my TREES Model extends the notion that affective, emotional forms of engagement, are to be our priority and as such I contribute to this important body of scholarly material.

exhibit high-levels of engagement because they have become emotionally invested to a greater degree; outer rings, the periphery of the storyworld, involves less emotional engagement, but still captures the attention of the public in some manner. In this vein, the tree ring metaphor replaces the pyramid of engagement triangle. Moreover, as this visual representation might suggest, the tree ring metaphor functions to draw attention to supporters found at the core of a campaign because these members have taken matters into their own hands as their real-life attitudes, behaviours, and values have been significantly affected by the media content they engage with in storyworld form.

Much like the measure of engagement in the pyramid, where supporters can migrate up from level to level, climate change campaigns should seek to pull supporters existing on the periphery—the outer rings—towards the core (see Figure 45 in Appendix B). I propose that a second purpose of the TREES Model is to achieve this objective. While I believe the TREES Model will set us off on a new course—which might ground subsequent climate change campaigns in heightened and varying affective states through the novel combinatory use of emotion and climate change narrative conditions—there is a need to manage the expectations of the model's concepts and address its inherent limitations. In doing so, I want to comment on future research as well.

Section 5.4 - Limitations & Future Research

The originality of the TREES Model is derived from the renaming and reframing of its constituent branches and conditions, and importantly, the recognition that existing transmedia storytelling models are too complex, inapplicable to climate change, or otherwise lacking (see Section 2.3.4). In a recent synthesis Gambarato, Alzamora, and Tárcia (2020) state that while existing transmedia storytelling frameworks have been informative—they have laid down some groundwork—they are also "extremely detailed" and most, if not all of them, remain "impractical for implementation" (3. Methodological Stance, para. 1).

So while the introduction of my novel model might minimize this complexity, it has a series of limitations to address at the same time that might assist with future research. I comment on some of these limitations next.

To begin, more broadly, the inductive methods I used to conceive the TREES Model required that I set some limitations to this research or I would have been otherwise overwhelmed by the expansive topics of narrative, transmedia, and engagement. My shortcomings in this boundary-defining procedure mean I have omitted important aspects of these large topics—my own committee have repeatedly mentioned that this is, and always will be, the case. Relatedly, because I have twenty years of experience working in climate change communications there was no way I could completely remove my own subjectivity as I completed the inductive analysis. Where I should have looked one way, or at one story, or at one aspect of a campaign, but did not, could have been influenced by existing biases. While I aimed to minimize this interference through a coding procedure in MAXQDA (see Section 3.2.3.2), admittedly, the architecture of the TREES Model is based on some of my 'gut feelings' which could be wrong; that said, my gut tells me I am not misdirecting us.

There are other limitations to consider. For one, the methodology I used—that placed a particular emphasis on the conception of an original climate change communication framework more than anything else—was partial to qualitative evidence of engagement. This is an important limitation to recognize since my evaluation of campaign success is based on ethnographic observation only. For example, in The Greatest Sanctuary and Charged Up campaigns, I documented audience members extracting resources from each campaign—physical, philosophical, or behavioural elements to use in their personal and lives and spaces—but I did not quantify any aspect of this engagement or analyze this actionability affect factor, as it has been renamed in my model, beyond the presented observations I make. As such, this approach prohibited me from

measuring the extent or impact of audience engagement. Future studies that use my TREES Model should consider quantitative tools of evaluation. On this matter, Evans's (2020) engagement framework might be a starting place since the type, form, cost, and value are parameters to watch for in engagement analyses. Similarly, while I was able to successfully document the use of the pyramid of engagement (or funnel) in campaigns by SeaLegacy and the David Suzuki Foundation I did not measure the number of people that advanced from one level of engagement to the next. Future climate change campaigns that use my TREES Model should assess the conditions of the Degree of Engagement with metrics to perform quantitative analyses. It could be as easy as using surveys to document how campaign supporters move from an outer ring in the model to an inner ring; conversely, the opposite could be true if a campaign loses support, so these members that migrate away from the central core should also be tracked.

The second limitation of this research involves the assumption that all forms of media have the potential to charge us emotionally, or "prick us," as Barthes (2010) commented (p. 27), such that engagement with media can affect how we live out our lives because stories continue to stir us. This is an assumption I make because I have been pricked myself—on a number of occasions—and I believe it is the climate change storyworlds I have entered into over the years that have influenced some of my own life choices. That said, I suppose it remains that case that not all people will be engaged by climate change communications, at least until we become more effective at earning attention and people's time. The assumption of the TREES Model in this context is that affective experiences trigger subsequent actions.[10] However, my model does not assess what particular valence of affect (see Figures 49-50), or "taxonomy of climate emotions" (Pihkala, 2022), might be the best to do so. Good or bad, happy or sad, I simply assert, like many other scholars do,[11] that emotions are more effective than facts at eliciting a response, so a framework like the TREES Model should take priority over increased dissemination of the science, which has a role to play, but has limited capacity to scale the needed response to the crisis. On this second limitation, there is much to learn about the role of affect, and emotion, in climate change communications[12] and this is a fruitful arena I look forward to

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10 In addition to the evidence of media's affect on audiences that I provided in Chapter 4, Netflix documentaries have been known to alter people's eating behaviour (e.g. consuming less fish after watching *Seaspiracy* and buying more plant-based protein after watching *The Game Changers*).

11 Recall that Chapman, Lickel, and Markowitz (2017) warn that the search for "the right emotional recipe" of a narrative oversimplifies the challenges of climate change communication that should really take into account "how different segments of the population respond to these appeals" (p. 2). That emotions are thought of as "simple levers" that can be pulled to "promote desired outcomes" has led to our "misuse and misunderstanding" of what "fear and hope" can do to motivate or inhibit public engagement with climate change (p. 1). Moreover, Chapman, Lickel, and Markowitz (2017) address the complexity of using affect and emotion to address the climate crisis since many studies still "debate … the current evidence" and "dominant approaches to studying climate change communication do not support definitive, simplistic, and overly broad assertions" (p. 2). Chapman, Lickel, and Markowitz (2017) further note, "Emotions should be viewed as one element of a broader, authentic communication strategy rather than as a magic bullet designed to trigger one response or another" (p. 2).

12 Latour, Hulme, O'Neill, and Jasanoff, among others, Including Weik von Mosser, and Chapman, Lickel, and Markowitz, all of whom are featured in Chapter 2, have been making the case for greater research in the area of affect and emotion for some time now. It is my

contributing to.

The third limitation of this research identifies a narrowing of scope—out of necessity, as the world is warming too fast—because it was a goal of mine to produce a model that could be swiftly adopted by the broader climate change community at large and as soon as possible. On this matter, I was obligated to reduce the model down to its most fundamental parts to make it accessible to a wide audience of practitioners; even more to this point, I wanted the model to be available to the myriad of underrepresented voices that might not have the means to communicate like others do because of the privileges they may or may not have. The simplification of my model leans towards this universality, but in doing so I have likely failed to account for the finer details of each identified condition within each branch. In other words, entire dissertations could be dedicated to each of the conditions, root concepts, and/or competencies I present in my pragmatic model found in Appendix B. In fact, I would welcome future research that revealed greater intricacies within the TREES Model's framework which could be put to the test. While I believe I have synthesized the most fundamental parts of the transmedia storytelling system, I would welcome criticism on important elements that might be missing, or understated.

Finally, this dissertation provided me the time to research and conceive the model. I now need to seek out the time to put it to the test. With this endeavour in mind, I welcome collaborations[13] to do so.

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hope testing of the TREES Model aligns with their trajectory.
[13]As of February 2020, I began using aspects of the TREES Model to conceive a multi-year strategic plan for The Weather Network's burgeoning climate change and sustainability storytelling initiative. As the Climate Change & Sustainability Editor, I am already seeing benefits exhibited in robust analytics that the TREES Model's framework has much potential; see Figures 47-48 in Appendix B.

Section 5.5 - A Roadmap for Future Research

Over the course of my twenty year career, as an environmental communications consultant and a photojournalist covering climate change from the front lines, my final insights come down to this: Across the ethnosphere, that physical, mental, and spiritual space where "all thoughts and dreams, myths, ideas, inspirations, intuitions brought into being by the human imagination since the dawn of consciousness" become manifest (Davis, 2003), there exists an abundance of stories, an ever increasing inventory too innumerable to measure, that help us make better sense of the world.

Which of these stories we encounter really does matter.

All good stories have some measure of conflict—to bring us to the edge of our seats—and our collective story is no different: There will likely always be counter narratives entrenched in our lives that coordinate opposing forces and persuade us to act a certain way, so what is needed now and tomorrow are those stories which best express some semblance of grace, beauty, and justice in our world.

A growing number of us want to be a part of telling those stories because narrative affect can influence how people live out their lives; *how we combine compelling storytelling with visual imagery about the climate change crisis—in transmedia ways—might be pivotal in this pursuit*.

However, a two-fold problem remains: (1) "systemic and chronic underfunding" has limited the true potential of environmental communications and (2) underpinning this dilemma is the fact that environmentalists have never had an audience that is "large enough" (SeaLegacy, 2020a, p. 13).

To briefly expand on this, as the Climate Editor for The Weather Network (TWN), the first issue concerning money is a discourse I explore in my *climate finance file* as I track the pennies—and the billions of dollars—that will be needed to mitigate and adapt to the consequences of a warming world. Where is the money going to come from? How is it being spent? What demands are investors making? Who will ultimately benefit from climate mitigation and adaptation funding? And, are financial promises being made and kept? On these matters, according to the UN, the world military expenditure in 2020 was estimated at $2 trillion, and we promptly found trillions of dollars for COVID-related relief (UN News: Global Perspective Human Stories, 2021), so the money is out there. However, as Weik von Mossner (2018) has stated:

> If we aim to convince people who do not share our cognitive frames about urgent
> environmental issues, it is unwise to tell them what to think. A more promising approach is

to help them discover for themselves what feels right to them. (p. 5)

I believe the TREES Model will assist this endeavour and testing out my new framework to produce climate change campaigns that make people *feel*, more than they think, might prove fruitful. As a short aside, the climate team of storytellers at TWN have been using elements of my TREES Model for more than a year now and we are seeing anecdotal yet promising audience responses. For example, local solution stories that focus on the *human condition*—a central facet of the TREES Model and a theme generally missing from current climate change communications—are growing in interest.

As the second part of our current dilemma is concerned, there has never been a time before now which has granted each of us the opportunity to scale our audience numbers. On my desk, this file aptly entitled *how to scale*, is also much aligned with TWN because we have an estimated global audience of 65 million people viewing our content across numerous languages and on many platforms. While that number might only be a fraction of the 7.9 billion people we need to reach, it is a mere 0.82% of the global population, TWN is not alone, so I remain optimistic that environmentalists can indeed continue to scale the size of our audience using the best practices described in the TREES Model. While mostly pioneered in the entertainment industries, climate change campaigners have much to learn about the promise of combining media forms across media channels to make spreadable, enrichable, and actionable content that can be used to coordinate and persuade both existing and new campaign followers. Much of the transmedia models available today are "extremely detailed" and "impractical for implementation" (Gambarato, Alzamora, and Tárcia, 2020, 3. Methodological Stance, para. 1), so the offering of the TREES Model could be quite timely.

Collectively, we have much work to do on the climate change crisis.

Too many untold stories still need telling, and in particular, it is the stories from underrepresented voices of the world that should take priority. In fact, I think we have an obligation to focus on those stories since many of them are full of hope and insights that might very well provide a roadmap—a mental picture—of the change so many of us want to see. On this matter, I also think the TREES Model has a role to play because this framework reminds us of the ways we have always engaged with each other—through connection, experience, and through story.

Indeed, Jenkins, Peters-Lazaro, and Shresthova (2020) might have got it right when they defined their term, "civic imagination" as "the capacity to imagine alternatives to current cultural, social, political, or economic conditions," because "one cannot change the world without imagining what a better world might

look like" (p. 5).

It is fitting that we now have transmedia storytelling tools at our fingertips to bring about climate change storyworlds that can help us all imagine—and emotionally experience—our shared future, one that might be more equitable and prosperous for all.

BB

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460

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DD

Appendices

Appendix A
Image Index

A (pp. II-III)
Turtle on plastic bottle, 2006
Tortuguero National Park, Costa Rica, Latin America
On assignment for *Santa Cruz Magazine*

B (pp. IV-V)
Manatee, 2008
Crystal River, Florida, USA
On assignment for iLCP

C (pp. VI-VII)
River, 2010
Boise National Forest, Idaho, USA
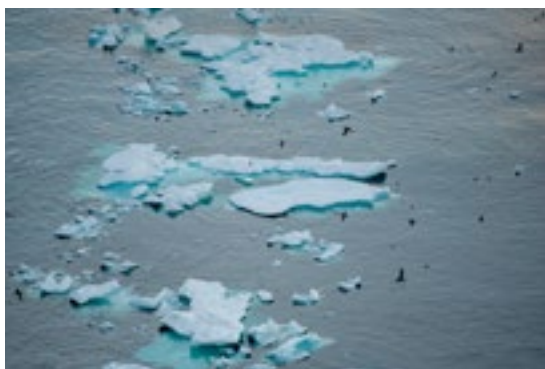On assignment for Save Our Wild Salmon
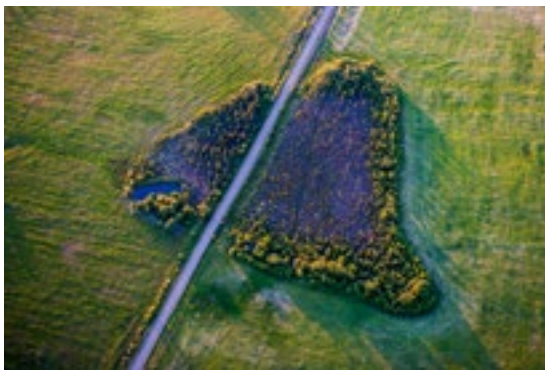
D (pp. X-XI)
Road through forest, 2011
British Columbia, Canada,
On assignment for iLCP

E (pp. XX-XXI)
Coywolf pup, 2011
Ontario, Canada
On assignment for *Canadian Wildlife Magazine*

F (pp. XXVII-XXIX)
Don Chuy, 2013
Baja California Sur, Mexico
On assignment for Grupo Tortuguero

G (pp. XXXVIII-XXXIX)
Thick-billed murres, 2013
Canadian Arctic Archipelago, Nunavut, Canada
On assignment for *Canadian Wildlife Magazine*

H (pp. XL-XLI)
Sea turtle hatchiling, 2013
Costa Rica, Latin America
On assignment for Sea Turtle Conservancy

I (pp. XLIV-XLV)
Bugaboos, 2013
Purcell Mountain Range. British Columbia, Canada.
On assignment for *Canadian Geographic Magazine*

J (pp. LII-1)
Jim Coneybeare with his bees, 2013
Ontario, Canada
On assignment for *Canadian Wildlife Magazine*

K (pp. 16-17)
Girl with monkey, 2014
Kayapó Territory, Brazil, South America
On assignment for International Conservation Fund of Canada
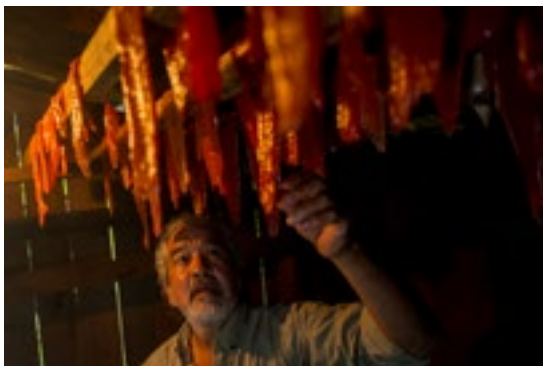
L (pp. 28-29)
Guujaaw at his home, 2015
British Columbia, Canada
On assignment for *Canadian Wildlife Magazine*

M (pp. 30-31)
Trail through wetland, 2015
Point Pelee National Park, Ontario, Canada
On assignment for *Canadian Wildlife Magazine*

N (pp. 32-33)
King penguins, 2016
Falkland Islands (Islas Malvinas), South Atlantic
On assignment for Nikon Inc.

O (p. 44-45)
Tree frog, 2016
Yasuni National Park, Ecuador, South America
On assignment for *Audubon Magazine*
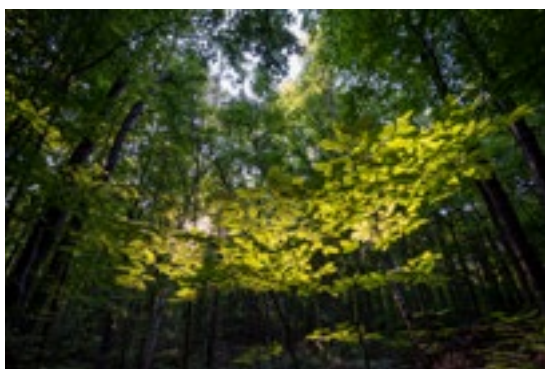
P (pp. 46-47)
Forest understory, 2016
Ontario, Canada
On assignment for Nature Conservancy of Canada

Q (pp. 56-57)
Cod fishing, 2016
Newfoundland, Canada
On assignment for *WWF Magazine*

R (pp. 70-71)
Fossil on cliff edge, 2016
Mistaken Point Ecological Reserve, Newfoundland, Canada
On assignment for *Smithsonian Magazine*

S (pp. 72-73)
Men outside hunting cabin, 2017
Nunavut, Canada
On assignment for *Canadian Geographic Magazine*

T (pp. 82-83)
Grizzly bear, 2017
K'tzim-a-deen Grizzly Bear Sanctuary, British Columbia, Canada
On assignment for *Smithsonian Magazine*

U (pp. 84-85)
2nd Engineer Jonathan Whitson, 2017
Gulf of St. Lawrence, Canada
On assignment for Oceana Canada

V (pp. 106-107)
Sumatran orangutan returned to the forest, 2017
The Thirty Hills, Sumatra
On assignment for *WWF Magazine*

W (pp. 122-123)
Camp, 2018
Arctic National Wildlife Refuge, Alaska, USA
On assignment for The Wilderness Society

X (pp. 128-129)
Elephant tail, 2018
Kafue National Park, Zambia, Africa
On assignment for *WWF Magazine*

Y (pp. 144-145)
Spirit bear, 2019
Great Bear Rainforest, British Columbia, Canada
On assignment for the National Geographic Society

Z (pp. 146-147)
Coastal wolves, 2019
Great Bear Rainforest, British Columbia, Canada
On assignment for the National Geographic Society

AA (ppp. 402-403)
Wind turbine installation, 2019
Ontario, Canada
On assignment for EDF Renewables

BB (pp. 430-431)
Newborn mountain gorilla, 2019
Bwindi Impenetrable National Park, Uganda, Africa
On assignment for *Smithsonian Magazine*

CC (pp. 464-465)
Polar bear with cubs, 2020
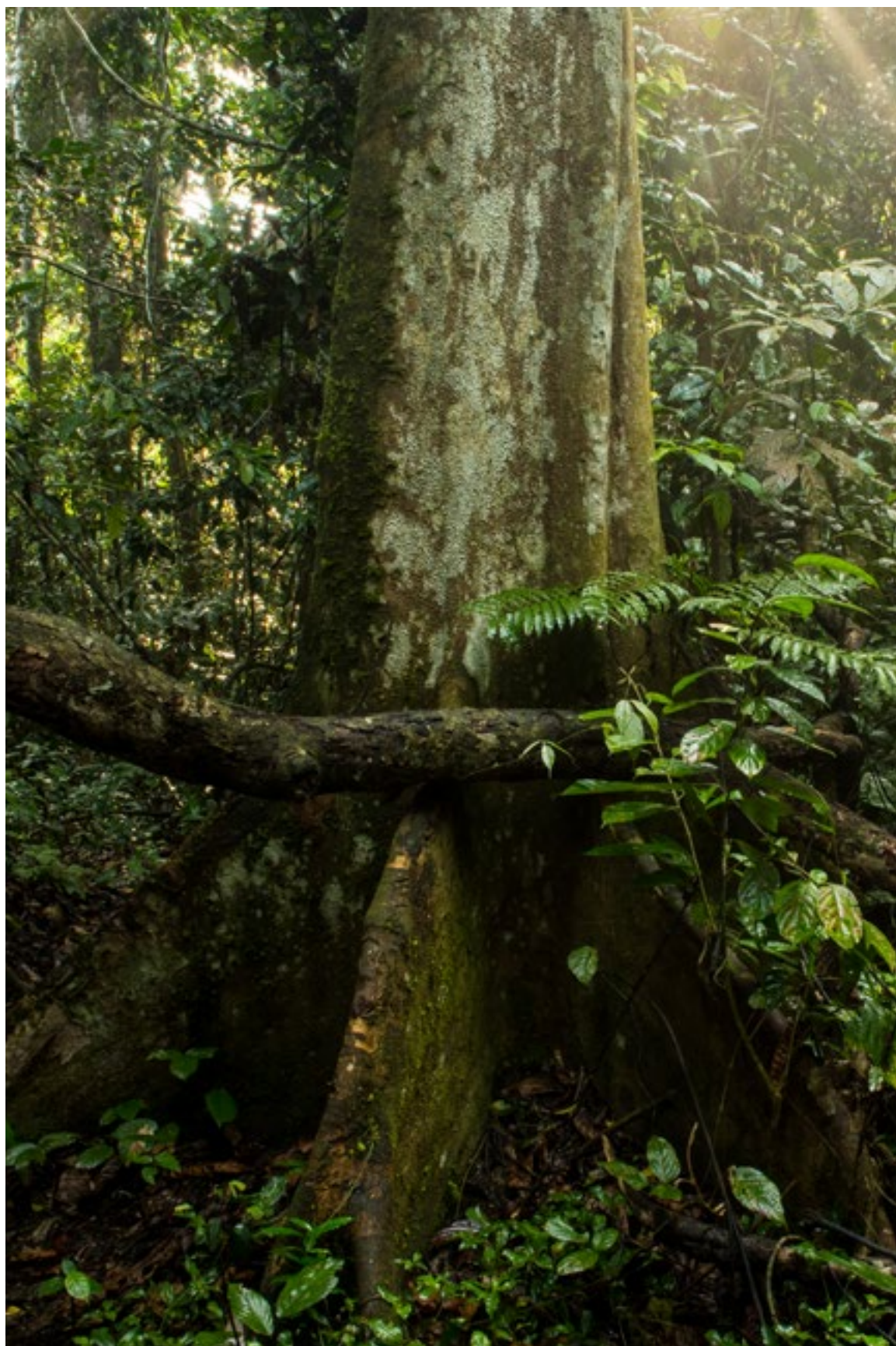Manitoba, Canada
On assignment for *Smithsonian Magazine*

DD (pp. 466-467)
Block Island wind farm, 2021
Rhode Island, USA
On assignment for *Smithsonian Magazine*

Appendix B
The TREES Model

The TREES Model

RQ2: What does a novel transmedia storytelling model for the modern climate change campaign comprise?

Cued by a set of narrative conditions—and communicated across media—the Transmedia Emotional Engagement Storytelling (TREES) Model (see Figures 42-45) is a new strategic framework that will function to successfully transport audiences into immersive storyworlds where states of emotion can create felt experiences with the urgency of the climate change crisis as well as with others and with the non-human species and places that connect us all.

The three main branches of the TREES Model, along with the *root conditions*, *root concept*, and *root competency* subsumed in each branch, can be found in:

1. Degree of Narrativity
2. Degree of Transmediality
3. Degree of Engagement

I consider the specific architecture of the TREES Model next.

The TREES Model - Main Branch A

The first main branch of the TREES Model involves the Degree of Narrativity and the three conditions I propose in this section are the most fundamental of narrative characteristics as determined from my research. I add notes on a root concept, or central idea, and a root competency, or ability, to complete the introduction of this branch. Finally, I share rationale for the branch structure and its conception using both inclusion and exclusion notes principally derived from the important work of Ryan and Jenkins.

Degree of Narrativity: Defined

The Degree of Narrativity is the measure of a campaign to fulfill a set of narrative conditions within an individual storyline that is controlled and diversified in order to advance a central idea, or core narrative.

Degree of Narrativity: Root Conditions

These fundamental narrative conditions include:

Condition #1 - Emotional Reactions by Characters:
A storyline must consist of human characters that have mental lives and react emotionally to an inciting incident (i.e., an unexpected event);

Condition #2 - A Disruption Leading to Conflict and Lived Experience:
The inciting incident in each storyline must create a disruption that leads to a conflict—singular or repeated over time—so characters are obligated to live through challenging experiences; and

Condition #3 - A Transformation:
Purposeful actions by characters, often involving interpersonal relationships, must form a sequence of events in each storyline that leads to closure, and as a consequence, the transformation of character, place, or issue occurs

Degree of Narrativity: Root Concept

A *core narrative* statement defines a campaign's overarching purpose—this strategic narrative serves to persuade and coordinate audience members.

Degree of Narrativity: Root Competency

A heightened sense of Narrative Intuition permits a campaign practitioner to identify and implement a set of advantageous narrative conditions.

Degree of Narrativity: Notes on Inclusion & Exclusion

As I have examined at some length, Ryan's (2008) fuzzy-set of narrative conditions (see Section 2.2.3) serve as a starting place for the conceptualization of the first main branch of the TREES Model, or the Degree of Narrativity. For the purposes of developing my framework I found it strategic to rename and reframe Ryan's conditions such that their inclusion or exclusion would better suit a climate change campaign.

I absorb Ryan's first through sixth narrative conditions into the Degree of Narrativity in the following manner:

Ryan's #1: "Individuated existents" are included as characters in my Condition #1 because people follow people, empathy is derived from our ability to relate to another person's feelings, and the broader climate change campaign has omitted the human condition, or face of the crisis up to this point in time—for example, it has regularly emphasized disastrous weather events, rather than show people expressing emotion;

Ryan's #2: "Significant transformations" are included as transformation of character, place, or issue in my Condition #3 because all good stories should reveal a moral or lesson after a character, place, or issue has changed (also see strategic or core narrative);

Ryan's 3#: "Non-habitual physical events" that break an equilibrium are included as

disruptions in my Condition #2 because conflicts setup characters to endure a challenge or a lived experience that advances a plot in a way that builds tension;

Ryan's #4: "Intelligent agents" with a "mental life" and "emotion" are included as emotional reactions in my Condition #1 because my TREES Model argues that it is emotion rather than facts that elicit action;

Ryan's #5: "Purposeful actions" are included as purposeful actions in my Condition #3 because a character's purpose defines why they do what they do; and

Ryan's #6: "Closure" or "structure" are included because all good stories should have a beginning, middle, and end.

In pursuit of a simplified model for climate change campaigns specifically, I excluded two of Ryan's (2008) conditions from her fuzzy-set with the following rationale in mind:

Ryan's #7: I exclude Ryan's seventh condition that specifies, "The occurrence of at least some of the events must be asserted as fact for the storyworld" because "asserted facts" are to be subsumed under the ethics of the journalistic pursuit, such that climate change campaigns originally deal with real "people, testimonies, documents" and "scenarios that will progressively be transformed into characters, actions, dialogues, conflicts" or the "turning points" of transmedia storytelling (Ryan, 2008). In other words, as I have stressed on a couple of occasions now, the fact that climate change is asserted as a human-caused crisis that exists in the real world means that events in the storyworld are nonfictional and fact-based. For this reason, we can remove Ryan's seventh narrative condition from the framework of the TREES Model; and

Ryan's #8: I also exclude Ryan's eighth condition that states "The story must communicate something meaningful to the audience," because Ryan's meaningfulness is specifically addressed via the authoring of a core narrative statement that by definition makes a climate

change campaign worth doing; that is, the campaign is meaningful as it strives to answer

the questions of what is at stake and what are we fighting for? Because my model asks

practitioners to author a core narrative we can eliminate Ryan's eight condition which has

the same intent.

Relatedly, because a climate change campaign is obligated to adhere to a "unified experience" that

advances the meaningful core narrative, or the definitive version of a story, I can absorb Jenkins's principle

of continuity into the Degree of Narrativity main branch of my model since his principle achieves a similar

effect as my core narrative and I can exclude Jenkins's principle of multiplicity altogether in the TREES

Model because the idea behind this latter principle would have an opposite effect on the campaign; that is,

multiplicity is focused on unauthorized extensions and the possibility of alternative versions that I argue

would open the door for climate change denialism or other perspectives that might distort a storyworld's

boundaries or characteristics.

As the Degree of Narrativity is concerned it should also be noted that Jenkins's principles

of worldbuilding and immersion can be interpreted as the product and result of transmedia storytelling,

respectively; that is, worlds are built by narratives and narratives also function to immerse us into mental

representations, or storyworlds. I therefore subsume these principles into the TREES Model more generally

speaking such that they do not fit into a particular branch and instead are expressed across multiple branches

of the model.

The TREES Model - Main Branch B

The second main branch of the TREES Model involves the Degree of Transmediality and the three conditions I propose in this section are the most fundamental of transmedia storytelling characteristics as determined from my research. I add notes on a root concept, or central idea, and a root competency, or ability, to complete the introduction of this branch. Finally, I share rationale for the branch structure and its conception using both inclusion and exclusion notes principally derived from the important work of Jenkins, whose principles are at the heart of this second branch.

Degree of Transmediality: Defined

The Degree of Transmediality is the measure of a campaign to fulfill a set of transmedia conditions to create new entry points into the expanding dimension of a storyworld where multiple storylines can be explored and experienced.

Degree of Transmediality: Root Conditions

These fundamental transmedia conditions include:

Condition #4 - Media Forms:

Storylines disseminated through integrated media forms (i.e., language, image, object, and/or music, among others) must be used to make a storyworld multi-platform;

Condition #5 - Media Channels:

An increasing number of media channels—which disperse chunks of storylines—must be used to create additional entry points into a storyworld; and

Condition #6 - Multiple Storylines:

Multiple storylines must be present to offer audiences new immersive experiences that expand dimensionality of a storyworld

Degree of Transmediality: Root Concept

Storyworlds are worlds designed by narrative and are products of transmedia storytelling, or the worldbuilding process.

Degree of Transmediality: Root Competencies

A heightened sense of Narrative Intuition combined with Transmedia Acumen permits a campaign practitioner to identify and implement a set of advantageous transmedia conditions.

Degree of Transmediality: Notes on Inclusion & Exclusion

As I have examined in parallel with Ryan's narrative conditions, Jenkin's (2009a, 2009b) transmedia storytelling principles (see Section 2.3.4) serve as a starting place for the conceptualization of the second main branch of the TREES Model, or the Degree of Transmediality. For the purposes of developing my framework, I found it strategic to rename and reframe Jenkins's principles such that their inclusion or exclusion would better suit a climate change campaign.

I absorb Jenkins's worldbuilding and immersion principles into the Degree of Transmediality because these principles can be interpreted as the product and result of transmedia storytelling, respectively, as I mentioned in Degree of Narrativity; that is, these principles do not fit into a particular branch and instead are expressed across multiple branches of the model. Jenkins's continuity principle also belongs in the Degree of Transmediality in some manner since media channels, or entry points into built storyworlds, play a role in defining how a world is experienced. For example, comments on social media channels can disrupt the advancement of a core narrative so campaign practitioners need to be cognizant of this feature to control the narrative.

I also absorb Jenkins's seriality and subjectivity principles into the Degree of Transmediality in the following manner:

Jenkins's Seriality: "Story chunks" or "transmedia components" are incorporated into my Condition #5 which states that media channels disperse chunks of storylines can provide

new entry points into a storyworld; and

Jenkins's Subjectivity: "Unexplored dimensions" or "transmedia extensions" that, "broaden" and "show us the experiences and perspectives of secondary characters" are included as storylines in my Condition #6 because multiple storylines offer audiences new immersive experiences that expand dimensionality of a storyworld.

In my TREES Model, as the Degree of Transmediality is concerned, it is also worth noting that as media channels disseminate multiple storylines—and chunks of these storylines across media channels and platforms—a climate change campaigner must continue to observe continuity of the core narrative as found in Degree of Narrativity.

The TREES Model - Main Branch C

The third main branch of the TREES Model involves the Degree of Engagement and the three conditions I propose in this section are the most fundamental of engagement characteristics as determined from my research. I add notes on a root concept, or central idea, and a root competency, or ability, to complete the introduction of this branch. Finally, I share rationale for the branch structure and its conception using both inclusion and exclusion notes principally derived from the important work of Jenkins, whose principles are at the heart of this third branch.

Degree of Engagement: Defined

The Degree of Engagement is the measure of a campaign to fulfill a set of engagement conditions to elicit increasingly deeper emotional responses from audience members with the intent to incite participation and actionable events from those individuals who build connections within the storyworld.

Degree of Engagement: Root Conditions

These fundamental engagement conditions include:

Condition #7 - Spreadability:

Storyworld content must be made available on social networking sites in order to increase the likelihood of viral spread and short-term emotional engagement in the form of likes, shares, and comments—supporters participating in these actionable events exist in the outer ring of the TREES Model where emotional engagement is minimal since real-life attitudes, behaviours, and values are only affected slightly.

Condition #8 - Enrichability:

Storyworld complexity must expand using multiple media forms, channels, and storylines in order to increase the complexity of the storyworld and the likelihood of mid-term emotional engagement in the form of answering a call-to-act: e.g. donate, email sign-up,

or petition signature—campaign supporters participating in these actionable events exist in the middle rings of the TREES Model where emotional engagement is moderate since real-life attitudes, behaviours, and values are marginally affected by the media content.

Condition #9 - Actionability:

Storyworld complexity must continue to expand using multiple media forms, channels, and storylines in order to further increase the likelihood of long-term emotional engagement in the form of action taken in their own lives: e.g. organize community event; protest; vote; or devise personal climate plan—campaign supporters participating in these actionable events exist in the inner rings of the TREES Model where emotional engagement is high since real-life attitudes, behaviours, and values are significantly affected by the media content.

Degree of Engagement: Root Concept

Use of *affect* in spreadable and enriched media increases emotional engagement and the likelihood of actionable events by those individuals who experience deeper levels of the storyworld.

Degree of Engagement: Root Competency

A heightened sense of Narrative Intuition, Transmedia Acumen, and Emotional Intelligence used in concert permits a campaign practitioner to identify both negative (e.g. fear and guilt) and positive (e.g. hope and optimism) emotions and implement a set of advantageous engagement conditions.

Degree of Engagement: Notes on Inclusion & Exclusion

Jenkin's (2009a, 2009b) transmedia storytelling principles (see Section 2.3.4) serve as a starting place for the conceptualization of the third main branch of the TREES Model, or the Degree of Engagement. For the purposes of developing my framework, I found it strategic to rename and reframe Jenkins's principles such that their inclusion or exclusion would better suit a climate change campaign.

Firstly, I revisit the idea that Jenkins's principles of continuity, worldbuilding, and immersion are

expressed across multiple branches of the model—they are included in the Degree of Engagement because these principles can be associated with engagement in storyworlds.

I also absorb Jenkins's spreadability and drillability principles into the Degree of Engagement along with his principles of extractability and performance in the following manner:

Jenkins's Spreadability: "The capacity of the public to engage actively in the circulation of media content through social networks" is incorporated into my Condition #7 which states that storyworld content must be made available on social networking sites in order to increase the likelihood of viral spread and short-term emotional engagement in the form of likes, shares, and comments; and

Jenkins's Drillability: The capacity of audiences to "dig deeper, probing beneath the surface to understand the complexity of a story" is incorporated into my Condition #8 which states that storyworld complexity must expand using multiple media forms, channels, and storylines in order to increase likelihood of mid-term emotional engagement in the form of answering a call-to-act: e.g. donate, email sign-up, or petition signature;

Note: I rename Jenkins's drillability principle to enrichability in the TREES Model.

Jenkins's Extractability: Extractability involves the ability of the audience to take "aspects of the story away with them as resources they deploy in the spaces of their everyday life" and this characteristic of a climate change campaign is incorporated into my Condition #9 which states that storyworld complexity must continue to expand using multiple media forms, channels, and storylines in order to increase the likelihood of long-term emotional engagement in the form of action taken in their own lives: e.g. organize community event; protest; vote; or devise personal climate plan; and

Jenkins's Performance: Performance involves the ability of the audience to deploy "themes, characters, and situations," from a distinct narrative, "to motivate real world social change, as a logical extension both of performance and of the tension between extractability and

immersion" (Jenkins, 2009a, para. 24) and this characteristic of a climate change campaign is incorporated into my Condition #9, as just stated;

Note: I combine Jenkins's extractability and performance principles in the Degree of Engagement and rename my Condition #9 actionability to account for this third level of engagement.

In my TREES Model, as the Degree of Engagement is concerned, it is also worth pointing out that Jenkins's existing principles appear to be located in two separate camps; that is, control is placed in the *Hand of the Creator* to achieve continuity, multiplicity, worldbuilding, seriality, and subjectivity, since transmedia storytelling practitioners primarily make choices first about the inherent project design that includes these "principles" or "qualities," or control is in the *Hand of the Audience* because it is only through user engagement with content that the dimensions of spreadability, drillability, immersion, extractability, and performance can foster. In other words, the latter five principles of transmedia storytelling only manifest their full maturity through user engagement and audience participation, whereas the former five qualities can be implemented by practitioners without engagement necessarily activated; i.e., this is why I believe there was a need to rename and reframe Jenkins's principles. Moreover, to appreciate this dichotomy is to better understand the architecture of a transmedia storytelling campaign.

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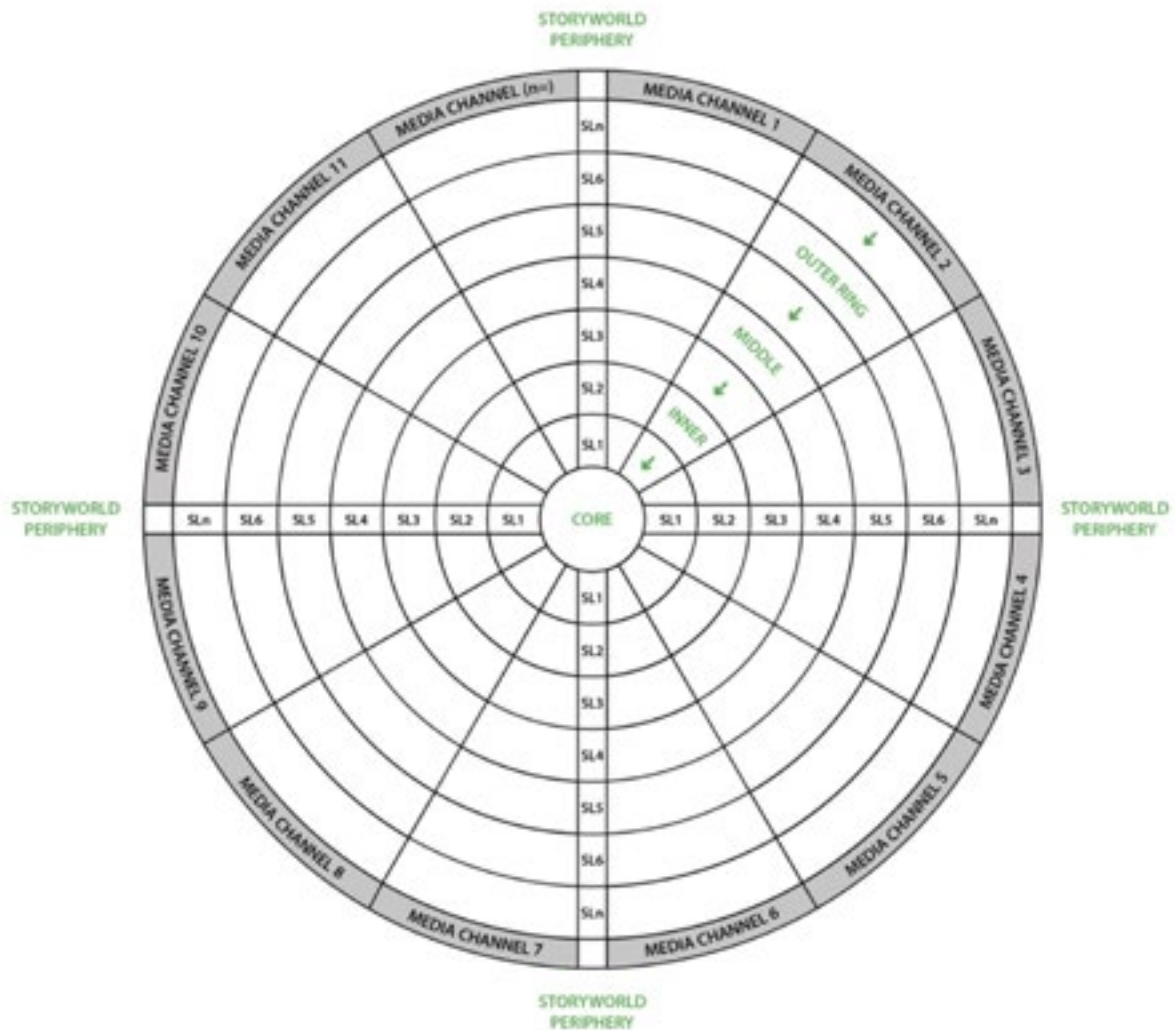
Figure 41:

Origins of the TREES Model.

Figure 42:

Treering schematic of a climate change storyworld. Two conceptual frameworks are represented: (1) media channels and storylines map the complexity of the storyworld; (2) levels of audience engagement can be measured as a campaign participant migrates from an outer ring on the periphery of the storyworld towards an inner ring at the core of the storyworld (i.e. the treering schematic functions much like the pyramid of engagement).
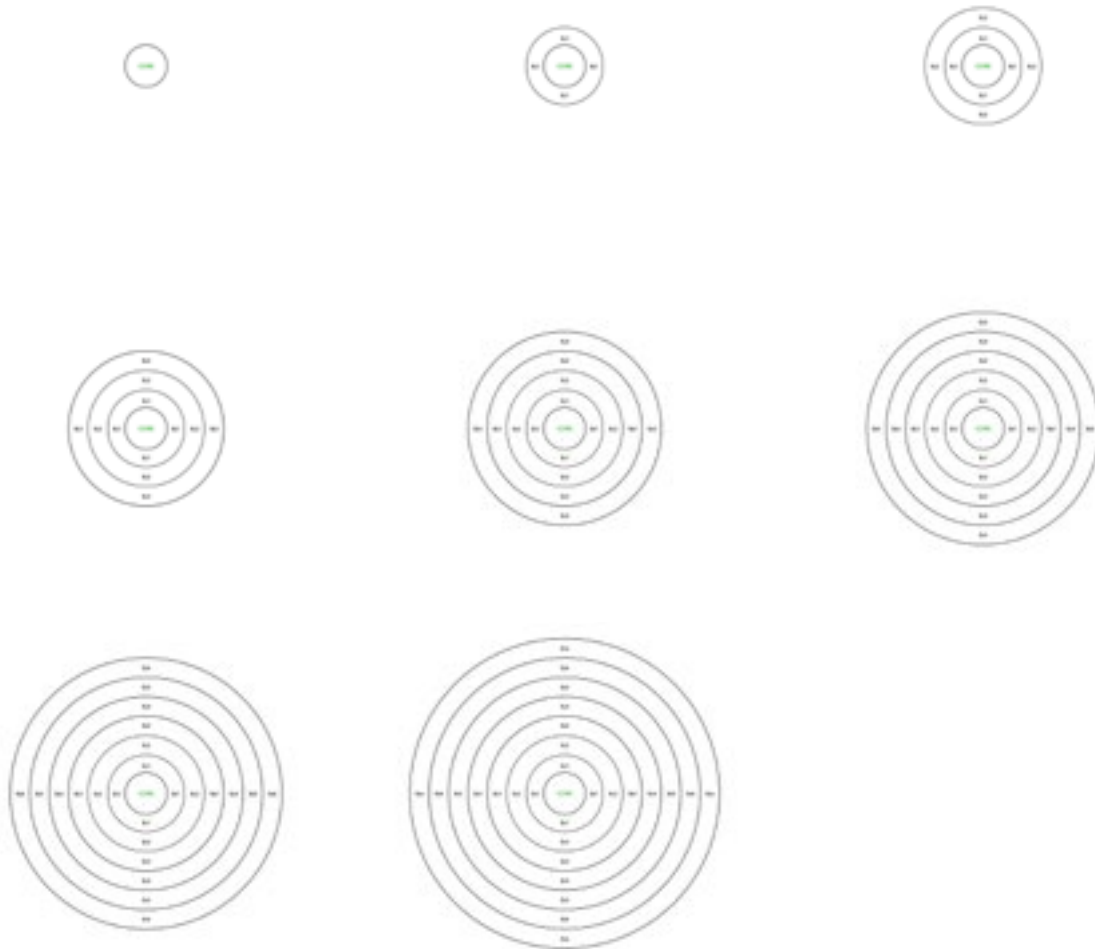
Figure 43:

Individual and unique storylines increase the dimension of a storyworld and map its complexity.
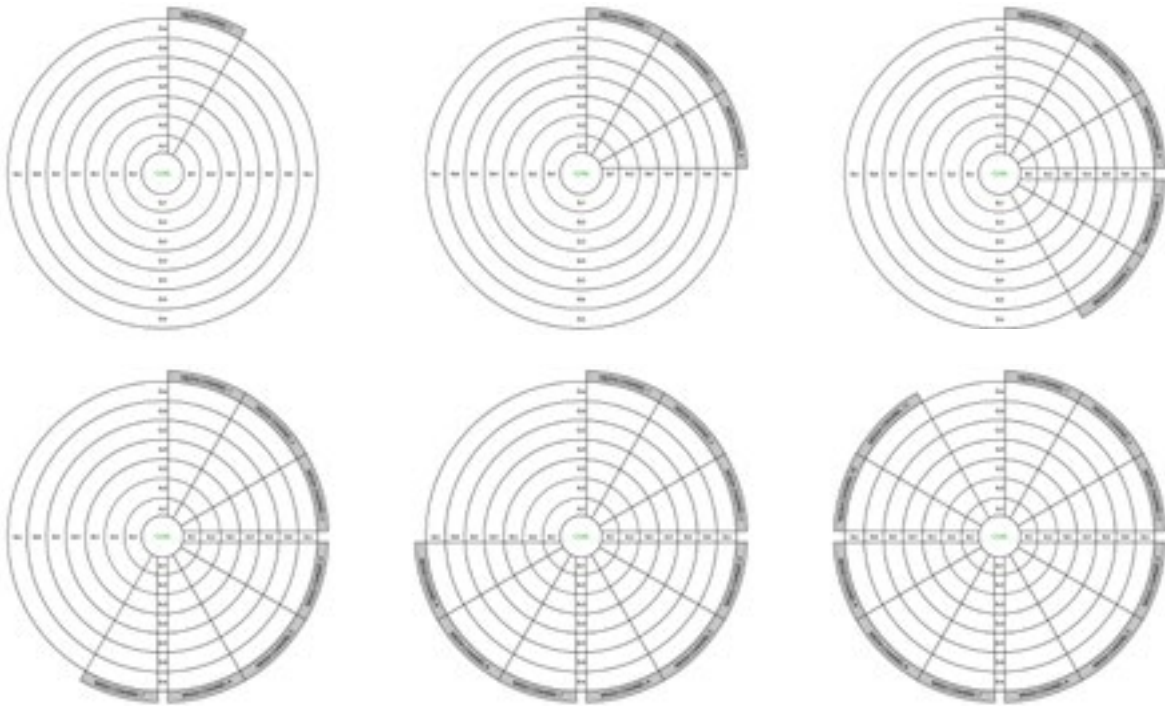
Figure 44:

Media channels increase the dimension of a storyworld and map its complexity; storyline chunks can be found dispersed across multiple media channels.
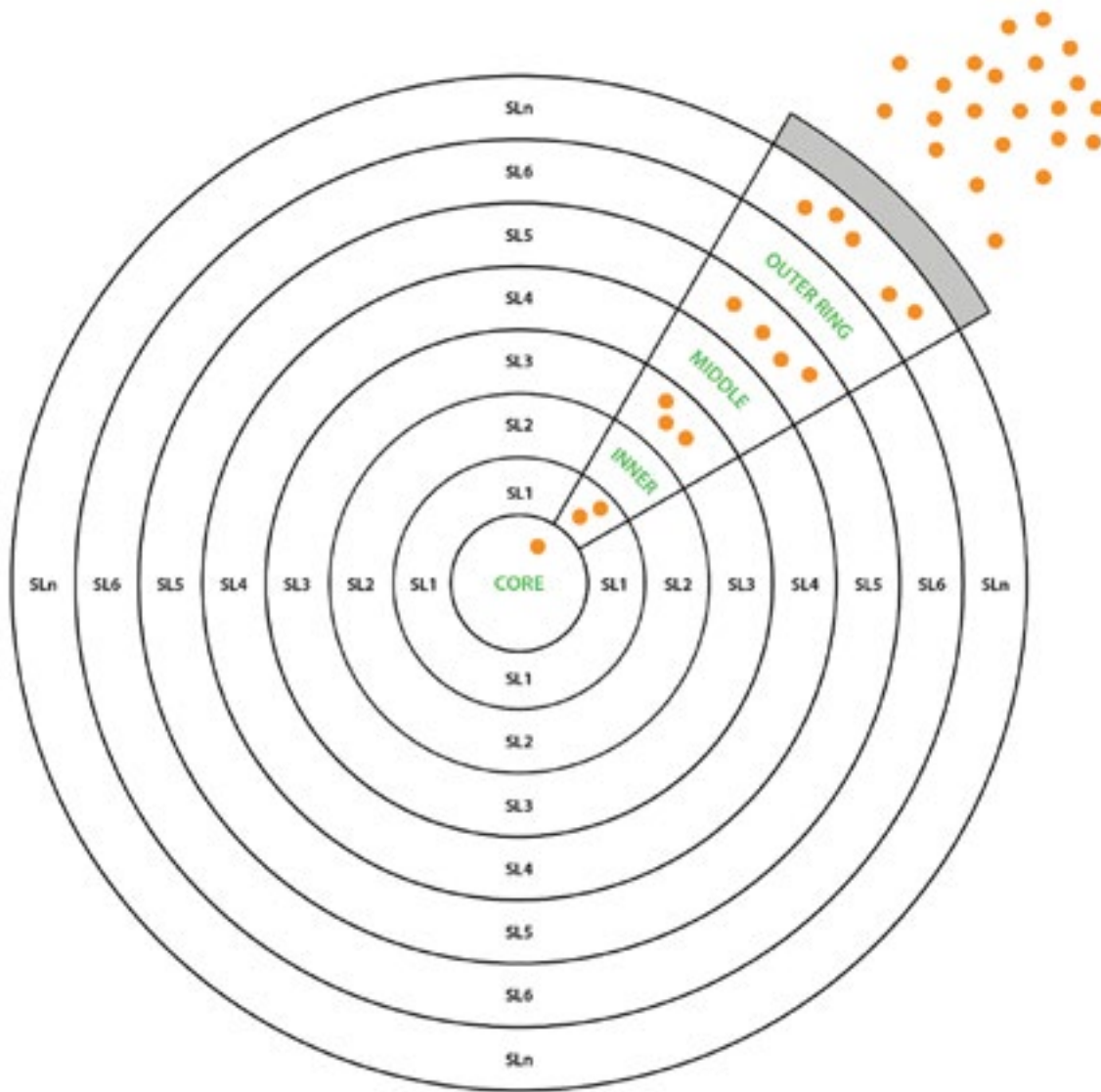
Figure 45:

Levels of audience engagement can be measured as a campaign participant migrates from an outer ring on the periphery of the storyworld towards an inner ring at the core of the storyworld (i.e. the treering schematic functions much like the pyramid of engagement).

Figure 46:

Ulimately, the TREES Model is predicted to increase the willingness to act to support, as campaign participants increase their understanding of the other's experience (Potential Project & Harvard Business Review, 2022).
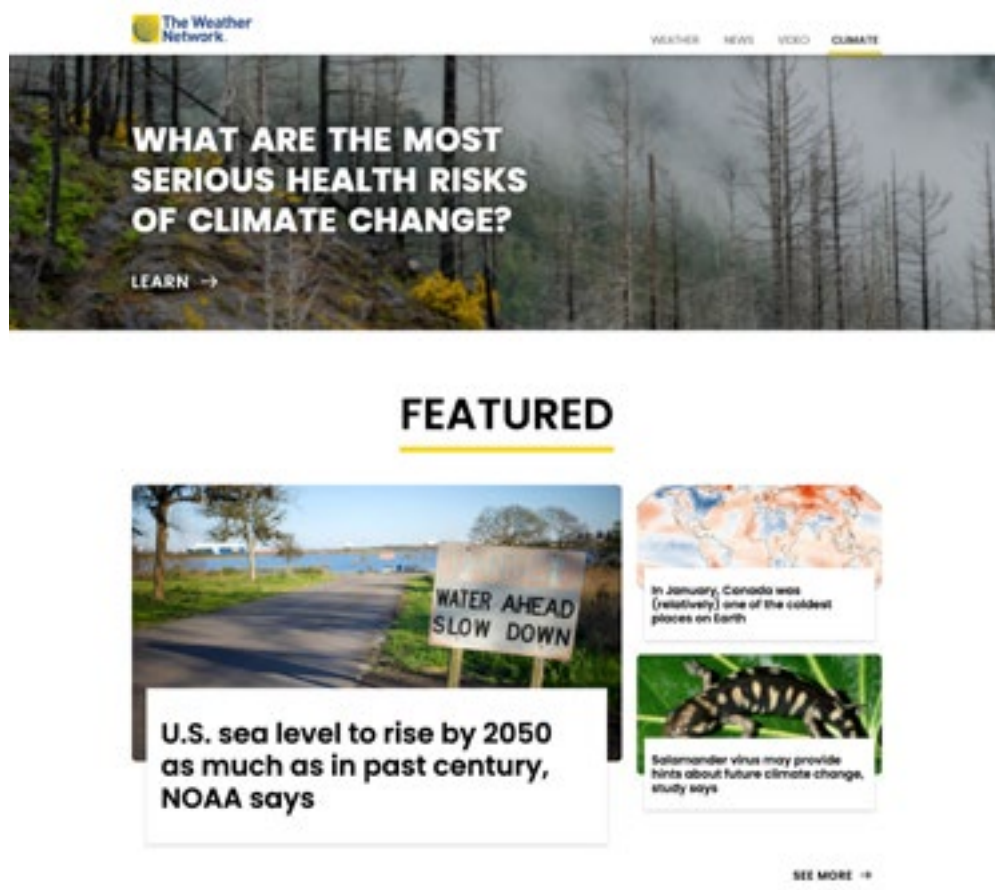
Figure 47:

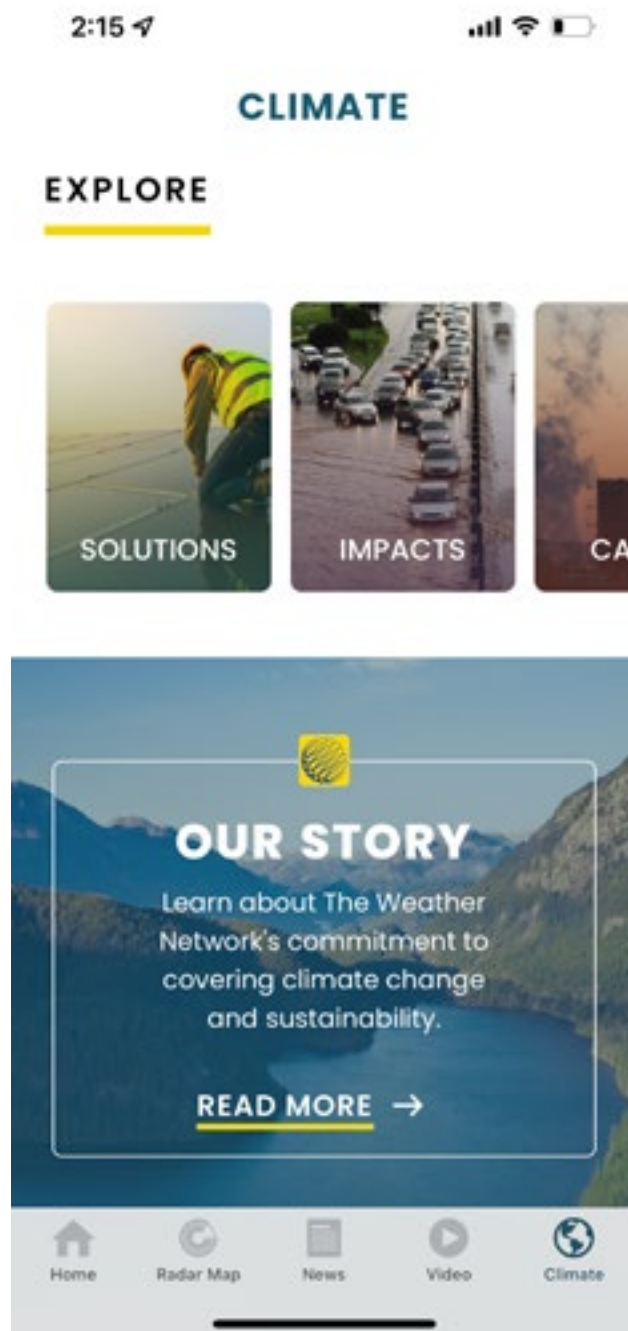The new desktop landing page of the "Climate Experience" by The Weather Network.

Figure 48:

The new mobile landing page of the "Climate Experience" by The Weather Network.

Figure 49:

The affective dimension of climate change involves negative emotions as depicted in this image
(© Konstantinos Tsakalidis | Bloomberg | Getty Images).

Figure 50:

The affective dimension of climate change involves positive emotions as depicted in this image
(© Neil Ever Osborne).