



27 **1. Introduction**

28 In *Sense of Place, Sense of Planet* (2008), environment and sustainability scholar
29 Ursula Heise demonstrates how the public can be influenced by environmental narratives.
30 Because artwork can both reflect or influence cultural events and trends, they are a useful tool
31 to understand people's views and opinions about the environment specifically by examining
32 how they shape public perception by developing and promoting certain kinds of
33 environmental discourse.

34 Using environmental discourse analysis as a narrative inquiry, I investigated two
35 animated eco-blockbusters: *The Lorax* (Chris Renaud, 2012) and *Tomorrow* (Mohammad
36 Shihab Uddin, 2019).¹ The films were produced in Hollywood (United States) and
37 Dhallywood (Bangladesh, Bangladeshi production house Cycore Studios), respectively.
38 Animated films may be a powerful medium of environmental education and shape the public
39 discourse, as discussed below. While *The Lorax* describes the severity of waste and
40 environmental collapse caused by deforestation (and implicitly climate change, given the
41 media environment and promotional material around the release of the film),
42 *Tomorrow* describes how such events result in climate change. *The Lorax* uses a fictional
43 world to deliver a general message while *Tomorrow* highlights the reality of severe climate
44 injustices in the global South such as Bangladesh.

45 Humanities scholars such as Alexander Elliott and James Cullis (2017) argue that
46 research on climate change has shifted to a global scale from a previous focus on the Euro-
47 American perspective. The film *Tomorrow* reflects this trend in the realm of popular culture.
48 *Tomorrow* came out in 2019, after Bangladesh had experienced several environmental
49 disasters, including flash floods. 2012's *The Lorax* is similar, despite not being set in a

¹Although the television version of *The Lorax* produced by DePatie-Freleng Enterprises is closer to *Tomorrow* in terms of time format, the 1972 TV version is not suitable for a social media analysis due to the time of its release risking viewer nostalgia being a factor in the discourse, potentially compromising the analysis.



50 specific place, in that it was released at a time when environmental catastrophes including
51 earthquakes, wildfires, and hurricanes were major stories in media across the globe, including
52 the previous year's Fukushima disaster. Both films therefore addressed the global nature of
53 environmental crisis in a timely manner. Through the joint analysis of the films and their
54 reception by viewers on social media, this study finds evidence that these two films gave their
55 viewers thematic narratives and talking points that they then incorporate into personal
56 discussion and in general promotion of environmental causes.

57

58 **2. Methodology**

59 Using environmental humanities discourse analysis as a tool, the principal question of
60 this study is: *How do The Lorax and Tomorrow instruct viewers about key environmental*
61 *messages?* To answer this overarching question, I consolidated the public comments and the
62 narrative analysis of the films into three main categories: *environmental catastrophe*,
63 *environmental storytelling*, and *environmental education* in order to address three questions
64 related to these three environmental discourses. First, *how are these two films situated within*
65 *the discourses of environmental catastrophe?* Second, *how do these two films perform*
66 *environmental storytelling while emphasizing a sense of place?* Third, *what sorts of*
67 *educational messages do these two films spread regarding sustainability?* I use an
68 environmental discourse analysis model drawn mainly from anthropologists Peter
69 Mühlhäusler's and Adrian Peace's scholarship. My narrative analysis also incorporates
70 spatiality as it shows how discourse may vary in different local, regional, and global contexts
71 even when they address the same environmental concerns. While discussing the methods of
72 environmental discourse analysis, Peace states that emphasis on keywords and select
73 terminologies is vital to the anthropological contribution to environmental discourse analysis
74 (p. 415). As a part of the environmental discourse analysis, I chose the selected words and



75 phrases from the content and comments of the two films. The study also deals with spatiality
76 as both comments and contents highlight local and global concerns about the environment.

77 The environmental discourse analysis in the paper is structured as follows. First, this
78 paper provides a brief synopsis of the films. Second, this study considers the literature on
79 how public comments online pertain to broader environmental media. Continuing the
80 discourse analysis, a select sampling of activity on social media pages related to each film is
81 analyzed to understand the discourse surrounding each. Third, the paper provides an
82 environmental discourse analysis to extract the themes and narratives from both films with
83 the most impact. By using both an analysis of social media posts about the films and a direct
84 analysis of the films themselves, this study demonstrates how aspects of each film influenced
85 public discourse.

86 I use social media as a platform to measure and understand public reactions. To
87 extract public comments about *The Lorax* on social media, I used the search term: “lorax” on
88 Twitter using the Netlytic social networks analyzer, which yielded exactly 1000 comments.
89 This number of comments was chosen as it is the default used by Netlytic and represents a
90 reasonable sample for manual coding of sentiments. I confined the study to Twitter because
91 Netlytic does not extract comments from Facebook, and because *The Lorax* Facebook page
92 has very few public comments from which to glean data. Furthermore, *The Lorax* does not
93 have a YouTube page. For *Tomorrow*, I extracted comments from *Tomorrow’s* YouTube
94 page, as *Tomorrow* does not have either Facebook or Twitter pages. I extracted comments by
95 using a web scraping method written in the Python programming language, using the search
96 term: “tomorrow animated movie”; which yielded 1510 comments (Bengali and English) out
97 of 4974 total, based on which comments received more “likes” (the remainder of comments
98 were omitted for falling below a threshold of likes). For *The Lorax*, the Twitter comments
99 spanned a decade, as the film was released in 2012. As *Tomorrow* is a relatively recent



100 release, so are all its comments. After transferring the data to a Microsoft Excel spreadsheet, I
101 manually examined it, developing codes to analyze public reactions pertaining to different
102 environmental discourses. I began with a total of twenty-five codes, re-examined the data,
103 and condensed them to seven major codes. Using the statistical programming language R, I
104 present a graphical text categorization algorithm that generates skip-gram phrases selectively,
105 by extracting and using phrases. Commenter names and online handles have been excluded
106 for anonymity.

107

108 **3. Film synopses**

109 The animated film *The Lorax* (2012) is loosely based on Dr. Seuss’s children’s book,
110 *The Lorax* (1971), although the plot of the film diverges from the source material. Visual
111 communication studies scholar Dylan Wolfe (2008) notes that environmentalism is a key
112 feature of the work.

113 Produced by Illumination Entertainment and released by Universal Pictures in 2012,
114 *The Lorax* had a budget of \$70 million and grossed \$348.8 million worldwide. It showcases
115 the process of industrialization, portraying the cause and effect of the hypocritical nature of
116 “human progress” when externalities are not addressed, and the environment is not thought of
117 as worth protecting. It must be noted that environmental messaging in media adjacent to the
118 film was compromised, as noted by Caraway and Caraway (2020) in their article, while the
119 film railed against greenwashing, cross promotion in advertising with the film was used to
120 showcase gas-powered automobiles. In her article, communication scholar Ellen Moore
121 (2016) also notes this as a flaw as it changes the focus from reducing consumption to
122 encouraging a nebulous “green” consumption.

123 Ted, the protagonist, wants a real tree, which is now so rare as to be mythical. The
124 tree is intended to impress a girl he likes named Audrey. Audrey personifies trees and is



125 described using words such as “softer than silk” and “smelled like butterfly.” Because of
126 Audrey’s love of nature, her character invokes a sense of conservation. Audrey shows Ted a
127 painting of trees with a sense of loss and lamentation. Unlike how the general population and
128 especially the industrialists of their town of Thneedville approach trees, Audrey’s approach
129 produces a renewal in environmental consciousness. To investigate the disappearance of the
130 real trees, Ted visits a hermit known as the Once-ler and the Lorax who “speaks for the
131 trees.” Speaking for the trees (Earth) is portrayed in a positive light.

132 The Once-ler represents industrialist society, which profited from development, but at
133 the cost of pollution and deforestation. The Once-ler employs subterfuge in his
134 industrialization, including “greenwashing.” The Lorax’s warnings were ignored by the
135 Once-ler when he became an industrialist, and the sky was filled up with smoke, the water
136 polluted with sludge, and the land was left barren. Greed and the illusion of progress
137 deafened the Once-ler to the words of the Lorax until one day the last Truffula tree was
138 chopped down, and the Once-ler discovers that he is condemned to grow old and waste away
139 in the wretched badlands of his own making. This very clear cause and effect is a cautionary
140 tale to viewers, showing how unethical profiteering can one day leave them worse off, with
141 gains that were fleeting. Because the Lorax disappeared when the last Truffula tree was
142 chopped down, the Once-ler relays to Ted the Lorax’s cryptic last message, “Unless someone
143 like you cares a whole awful lot, nothing is going to get better, it’s not” (1:02:09). This is a
144 clear call to action to the audience, as Ted is the archetype of the everyman, a person who the
145 audience can relate to. Indeed, the Once-ler charges Ted, and by extension the audience, with
146 repairing the devastated environment. However, other industrialists in the movie, chief
147 among them a clean air tycoon named O’Hare, fight to keep the status quo by tricking the
148 populace, subconsciously warning the audience that pushback from people they know may in
149 fact be misdirection from real-life industrialists.



150 The 2019 film *Tomorrow* (budget: 10 million BDT, converted roughly to ~119,000
151 USD; a reliable figure for gross income could not be found) similarly portrays a dire future in
152 the hopes that the present generation will find a way to avoid it. *Tomorrow* begins when
153 Ratul and his father, a nature lover, learn that sea levels are rising, which will make them and
154 their fellow villagers ecological refugees. Despite this knowledge, they and the villagers are
155 reluctant to take any actions to prevent the hazard. One of the villagers' comments, "why
156 would we ruin today thinking about tomorrow?" (4:10) is a refrain viewers may be familiar
157 with, a carelessness about their own future.

158 In a dream, Ratul learns that Bangladesh is going to face a disastrous fate because of
159 rising sea levels combined with the melting ice caps in the Himalayas. To answer Ratul's
160 questions, Batasher Buro, a shamanic figure known as "the Old Man of the Winds," takes
161 him to the future, in which most of southern Bangladesh is submerged, with almost 30
162 million homeless and destitute people taking shelter in the north. This reflects real life—for
163 some time now, residents of southern Bangladesh have been migrating to the capital city,
164 Dhaka, and other comparatively highland parts of the country. But there is still hope: the Old
165 Man of the Winds takes Ratul to another possible future, where solar panels and windmills
166 are commonplace and there is no usage of fossil fuels. This alternate future implies that
167 mankind has a choice. Ratul wants to know how to build a future like this, but the Old Man
168 of the Winds leaves, saying this is Ratul's planet and he himself needs to seek an answer.
169 Similar to *The Lorax*, Ratul is an everyman, with the audience implicitly being told to
170 personally care about the environment themselves.

171 Ratul awakens concerned about the welfare of Earth. Inspired by his father's
172 motivational speech about saving the environment, Ratul starts a campaign on social media
173 focused on taxing fossil fuels, inspiring protests, which start taking place all over the world.
174 (Posting on social media and protesting are actions that viewers may be able to take on their



175 own; these easier actions are shown first, lowering the barrier for meaningful action by the
176 audience.) The film then leaps 25 years in the future to show a grownup Ratul delivering a
177 speech at the United Nations. By then, many parts of the world, including southern
178 Bangladesh, are submerged. But there is optimism that Bangladesh can rehabilitate its people
179 with money from a tax on fossil fuels; the other countries of the United Nations begin helping
180 to address the climate crisis, following in the footsteps of Bangladesh. Ratul hears the voice
181 of the Old Man of the Winds, who tells him that he has been successful in saving the world.
182 This is more than a narrative statement; it is a clear statement to the audience that their
183 actions have the potential make a real impact.

184

185 **4. Analysis of public reactions to the films on Twitter and YouTube**

186 The audience is a key part of the environmental discourse equation, and these two
187 films generated many positive reviews on the social media pages related to the films.
188 Audiences' reactions to media are important to understand so that artists, activists, and
189 academics may even more effectively contribute to environmental awareness. Despite this
190 clear need, some scholars caution that we lack sufficient knowledge regarding how audiences
191 react to environmental communication, calling for more such studies (Kluwick, 2014;
192 Garrard, 2014, p. 20). Solitary public comments on social media may be inconsequential on
193 their own, but together, they are important to understand public reception. Unlike formal
194 media, informal social media is often free from the traditional trappings of media criticism;
195 the opinions on social media are often that of laypeople who are concerned with different
196 aspects of the film than a professional critic would be. Furthermore, the opinion of a friend or
197 family member on social media may have more impact on someone than that of a distant
198 critic whom the reader does not know. Social media comments are not a perfect stand in for
199 an "average" opinion of the film, as social media posts come with their own biases, and there



200 are economic and geopolitical factors that affect who is able to access the internet, and by
 201 extension social media platforms.

202 I manually examined each of the selected 1510 public comments about *Tomorrow*
 203 (beginning with the comment with the most “likes” (1.4K), ending with those with just one).
 204 The most-liked comment states that *Tomorrow* is a locally made film with a global
 205 international standard that carries an environmental narrative. The most-liked comments after
 206 that are about the quality of the film and that it deserves international accolades. The major
 207 seven environmental discourses derived from such public comments are presented in Table 1.

208 **Table 1: Example of YouTube Comments from *Tomorrow***

209 *(Arranged by total number of likes in sample)*

Discourse	Total number of likes of the combined comments	Total number of comments	Example of comments ²
Environmental education	1541	131	“It should be premiere in every School in Bangladesh ... It's the most Realistic animated short movie I ever seen!”
Climate change	1239	95	“This film ... [shows] examples of how climate change can affect us environmentally and as a community”
Sense of place	142	116	“Local places are getting destroyed because of global places” (my translation)
Environmental activism	191	88	“It’s our duty to save our world, to save our people to save the wildlife # stand Against fossil fuel 🍌 # Raise awareness among all the people 🙌”
Environmental storytelling	189	309	“Story is beautiful...I love this story...”
Sustainability	152	158	“If we plants tree more, one day we get a beautiful Bangladesh. Let’s go we plants tree for a beautiful future”
Plastic/waste	110	29	“We should not destroy the environment by producing plastic” (my translation)

210

² Except for my translations, grammatical and spelling errors in comments have been left as is.



211 Public reactions juxtapose positive reviews of the content of the film with negative
212 statements about the current local and global environmental conditions. Online commenters
213 urge showing *Tomorrow* in all primary and secondary schools across Bangladesh while
214 encouraging elected officials to watch and screen it as well. This commentary connects with
215 the film narrative as the protagonist of *Tomorrow* is a schoolchild, who goes on an abridged
216 hero’s journey to affect global politics regarding environmental laws and policies.

217 The comments for *Tomorrow* demonstrate the power of locally produced media, an
218 aspect of the film which may prove valuable to other environmental communicators and
219 educators. Climate communication scholars Candice Howarth and Alison Anderson (2019)
220 highlighted that stronger collaborative bonds between local media and scientific research
221 helps form a more trusted relationship between local media and other local stakeholders and
222 increases engagement with climate change. Many comments express an emotional response
223 to seeing environmental destruction in their own localized area, for example, “Alas! My
224 home is in Hatia, the southern part of Bangladesh” (my translation). Since *Tomorrow* was
225 made in Bangladesh, it may create a greater local impact than if it had been produced in
226 Hollywood, or even Bollywood. Relatedly, Howarth and Anderson (2019) have noted that
227 climate change is often understood as “abstract and distant” (p. 718). *Tomorrow*, by contrast,
228 shows how climate change is an issue requiring both local and global action.

229 Earth’s restoration is possible only if we can imagine it clearly. Stories occupy an
230 important role in that ability. For all of us, stories matter; if we know our local story³,
231 especially through local media, we can participate in a range of actions to restore our local
232 landscapes. However, the public of Bangladesh often do not believe that their elected
233 officials will reduce the use of fossil fuels on their own. Yet the movie instills civic hope in
234 some viewers—comments like “should the Prime Minister watch this movie, the country

³ That is to say, how our local environment came to be, and how our actions alter it.



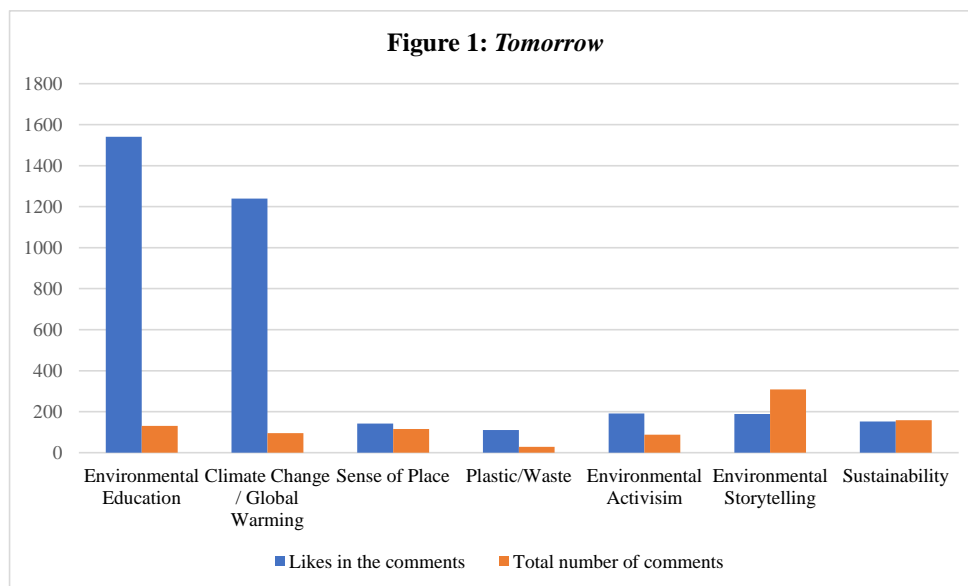
235 would benefit greatly” (my translation) reinforce the position in the public discourse that the
236 ordinary people of Bangladesh do not trust the government to take adequate action.

237 Intriguingly, this mirrors the events of the film, where the government increases taxes on
238 fossil fuels following public outcry—showing that such a strategy is viable in the real world.

239 Public comments carry a sense of responsibility and an ethics of care. Commenters
240 use words and phrases such as “I cannot control my emotions,” “my eyes were moistened
241 while watching the movies,” “the Earth needs to be protected,” “save Earth, save
242 Bangladesh” and many more, explain their sense of empathy and responsibility with local and
243 global places. These are virtual comments, yet this sense of awareness is exhibited,
244 nonetheless. This is again demonstrated when commenters give attention to the occasional
245 hypocrisy or at least inconsistencies in the story. They appreciate the protest against fossil
246 fuels, and critique Ratul’s flight on a fossil fuel–powered airplane; they appreciate the
247 message about the environment.

248 Regarding environmental activism, there were many comments such as “we each have
249 a responsibility to save the world,” and “all mass media ought to disseminate this film
250 massively to create public awareness regarding climate change... the UN must force a new
251 policy plan over the globe for building green planet again as soon as possible, avoiding
252 further environmental degradation. Let’s reduce fossil fuel usage, stop cutting trees by
253 planting more, ban the Rampal project, together heal the world, make it a better place.”
254 Comments emphasized the need to act locally, for instance, stopping the Rampal coal-based
255 power plant, located near the Sundarbans, a UNESCO World Heritage Site, which is causing
256 an adverse impact on the Sundarbans’ biodiversity and ecological conditions. The current
257 administration built the power plant, ignoring feedback from both environmental experts and
258 the masses. There was a collective effort to stop the project, but it went forward anyway.

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262 Figure 1 shows the relationship between the total number of comments by topic in the
263 sample alongside the total number of likes for that topic. A high like bar indicates many likes,
264 the easier of the two participatory actions. Total comment bars tend to be lower as
265 commenting is harder; the higher an orange bar, the greater the desire to perform deeper
266 participation. The ratio between the two shows how well comments are received.

267 Public comments demonstrate two major demands. First, this film should be
268 disseminated more widely, including being translated into English and other languages. (The
269 film was indeed later translated into other languages.) People from outside Bangladesh
270 should know that the Bangladeshi film industry can make a film that meets international
271 standards, and people from everywhere should be aware of climate change and become active
272 in civic discourse to hold their leaders to accountable. Second, common people should
273 engage in environmental activism and take peaceful civic action. The film suggests imposing
274 taxes on fossil fuels and investing in renewable energy, solutions echoed in the comments:



275 the public—individually and collectively, locally and globally—want to create and contribute
276 to a broad environmental movement.

277 The commenters exhibit a sense of urgency to create a sustainable planet Earth, as
278 well as their local environment. The tax solution to climate found in *Tomorrow* is also found
279 in comment analysis: online commenters want to create a movement to combat climate
280 change and plastic production. This shows that the calls to action given by the film in both its
281 visual and narrative storytelling were effective in at least inspiring viewers to comment on
282 their desire to act.

283 The public reactions to *The Lorax*, based on 1000 tweets, are similar to, yet distinct
284 from, those to *Tomorrow*. For example, “The Lorax is a cinematic masterpiece” and similar
285 comments show the widely shared opinion that the film had a high production value and was
286 enjoyable. As was the case with *Tomorrow*, the public reaction was also emotional for *The*
287 *Lorax*—the public cannot tolerate injustices and environmental destruction, even in fiction.
288 Table 2 and Figure 2 demonstrate the major environmental discourses coded from the public
289 comments, and the counts of these comments.⁴

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⁴ Netlytic derived Twitter comments excluded “likes,” thus the exclusion compared to Table 1.



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Table 2: Examples of Twitter Comments from *The Lorax*

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(Arranged by total number of comments)

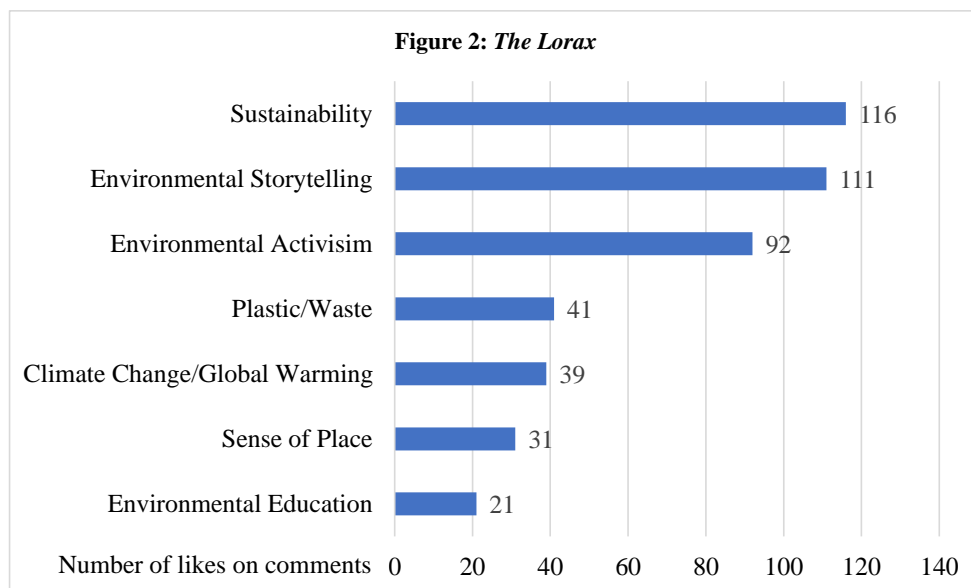
Discourse	Total number of comments	Examples of comments
Environmental education	21	“y’all are getting literal degrees and careers still not believing in climate change. my 2 year old sister understands climate change and all she did was watch the Lorax.”
Sense of place	31	“I am the Lorax and I speak for the trees Save the Amazon, or I’ll break your knees.”
Climate change	39	“#Earth #water The biggest issue of our time #climatechange #unless ‘Unless someone like you cares a whole awful lot, Nothing is going to get better. It’s not.’
Plastic/waste	41	“i am the lorax and i speak for the trees litter again and i’ll break your fucking knees 😂”
Environmental activism	92	“@JohnBrennan @tedcruz He read Green Eggs and Ham on the Senate floor. I read the book to my 3 children countless times. Can I be a Senator from Texas now? The Lorax is the finest Dr. Seuss book and when Senator I will read that on the Senate floor.”
Environmental storytelling	111	“It is a very deep and inspirational movie ... I truly think it should have won movie of the year in 2012. It has changed my life for the better. This post is not satire.”
Sustainability	116	“The Lorax are we planting more trees — In sha Allah, many more 🌱❤ https://t.co/evJu2P0iIb .”

293

294 The most frequent subject of public comments relates to the multifaceted issue of
 295 sustainability. The audience knows that online activism can be an effective tool for creating
 296 political pressure and social action. An example of a commenter calling for social action is as
 297 follows:

298 “As the wise Lorax once said “Unless someone like you cares a whole awful lot,
 299 nothing is going to get better. It’s not.” On Saturdays, join us for a Self-Guided Beach
 300 Cleanup. Make a difference in as little as two minutes. <https://t.co/1UpXKlmoy3>
 301 #volunteer”

302 Perhaps the environmental storytelling used by the films is why commenters actively ask for
 303 initiatives aimed at reducing the plastic impact.



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305 Figure 3 compares the terms found in the environmental discourse seen within the
306 public comments. Since *Tomorrow* has more analyzed comments (1510), it appears higher
307 than *The Lorax* (1000) in all discourses when directly comparing raw data. Figure 4 therefore
308 compares the percentage of comments by coded subject.

309 Today's academic environmental activism draws inspiration from Thoreau, Muir,
310 Leopold, and Carson, among others, with this academic discourse indirectly influencing ideas
311 found in public activism through the broader environmental movement. *Walden* (1854) laid
312 the foundation of modern-day activism because Thoreau coexists with nature. Muir's
313 establishment of the Sierra Club and encouraging ordinary people to explore Yosemite
314 Mountain shows activism. Leopold (1986) considers the land as a teacher and emphasizes the
315 restoration of land is an enduring example of environmental activism. Leopold (1986)
316 remarks, "A thing is right when it tends to preserve the integrity, stability, and beauty of the
317 biotic community. It is wrong when it tends otherwise." Carson's (1962) *Silent Spring* is
318 enduring because it shows women's activism contrary to men's, and it demonstrates her bold
319 statement against the patriarchy, which is responsible for pesticides and insecticides. In

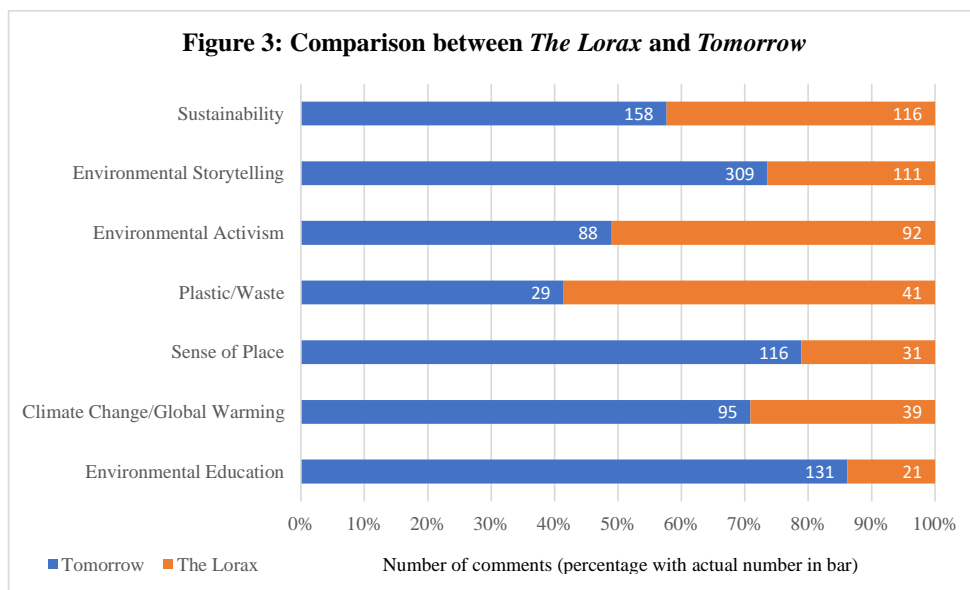


320 addition, like *Silent Spring*, Wolfe (2008) argues that *The Lorax* warns of a present danger
321 and a rapidly approaching future. Comment activity demonstrates that the public also relates
322 race, ethnicity, and gender with environmental activism. Some comments contend that *The*
323 *Lorax* is racist and sexist because the Lorax speaks for only for certain trees, as exemplified
324 by the comment “Quick question: is the Lorax racist against certain trees? He just seems like
325 the type”⁵ and some believe Audrey should have been the protagonist instead of Ted. Despite
326 the fact that online commenters presumably do not often have backgrounds in academia, it is
327 notable that a casual informal understanding of intersectionality is sometimes seen within the
328 comments. In the United States, campaigns about environmental justice have been
329 historically intertwined with race, class, and gender. For instance, environmental historian
330 Nancy Unger (2012) has written about how women often interact more closely with their
331 local environment than men do. Similar to the work of Unger, Afro-American cultural
332 geographer Carolyn Finney (2015) addresses environmental justice in *Black Faces White*
333 *Spaces*. Finney reviews the history of African American engagement with the mainstream
334 environmental movement from the early 1900s to the present. Finney focuses on how African
335 Americans are excluded from the environmental justice movement, but she espouses the
336 human experience of the story. Public comments tend to deconstruct the hegemonic racist
337 elements, if informally.
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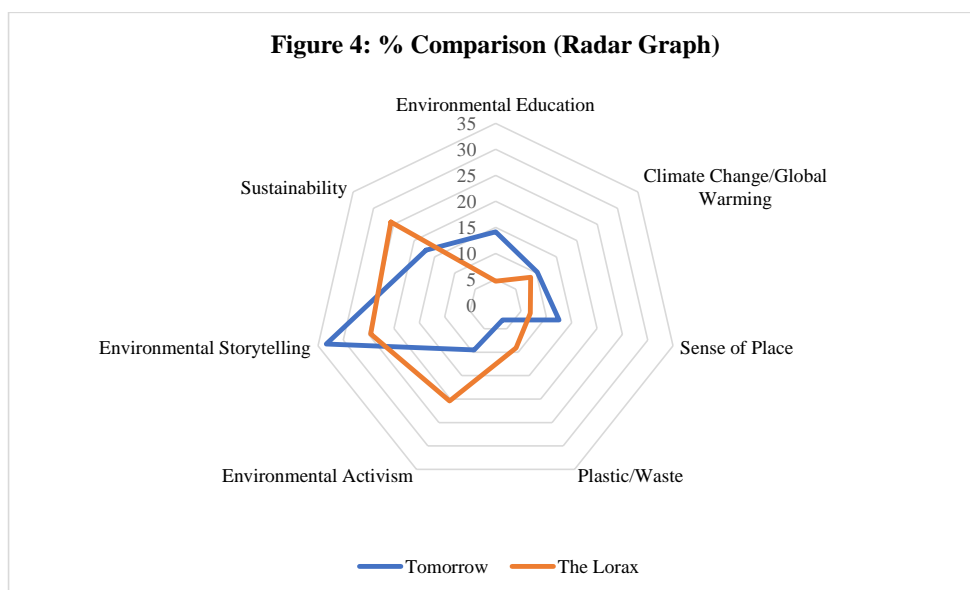
⁵ Username expunged.



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343 When analyzing the discourse of any text, through skip-grams, bigrams, or n-grams, a
344 word association network prioritizes word-by-word analysis. It is important to note that
345 methodologically speaking, a single analysis of just one of these graphs could be highly



346 misleading – they must be interpreted together, and with context of the films, to avoid
347 making inferences which are not based in reality. For example, methodologically, the value
348 of “Lorax” appearing in a word frequency table so much should be discounted, because the
349 use of the word could plausibly refer to the film, the book, the old television episode, or the
350 character himself. However, by viewing the other graphs, enough context can be gleaned to
351 provide cautious insight.

352 For *The Lorax*, the word-frequency table demonstrates the top word counts of the
353 selected tweets, in which the word “Lorax” appears in nearly 800 tweets while “Once-ler,”
354 the least common term on the list, is in many fewer tweets. However, the count for the word
355 “Lorax” is included below to provide greater context for a later skip gram analysis. Because
356 of the discounting of the word “Lorax,” the most significant term here is perhaps “like”
357 which while not a perfect indicator, generally indicates positive sentiment in conjunction with
358 the relatively high-ranking word “good.” This is especially noteworthy when compared to the
359 lower ranked word “bad” (which may also be affected by its heavy use in the fan favorite
360 song “How bad can I be?”). The word “trees” appears to be relatively highly ranked,
361 indicating strong environmental sentiment in viewers.⁶ Finally, the pair of words “watch” and
362 “watching”, while individually ranked lower on the graph, would jointly rank higher, and are
363 often used in comments to indicate personal interaction with the film itself. One example
364 comment illustrating this follows: “@⁷ Hey lol, wanna watch the lorax together 🤝👉”
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⁶ The use of the Truffula tree as a movie plot point could contribute to this word being highly ranked, however since the Truffula Tree is a fictional proxy for the overall environment, this inference is appropriate.

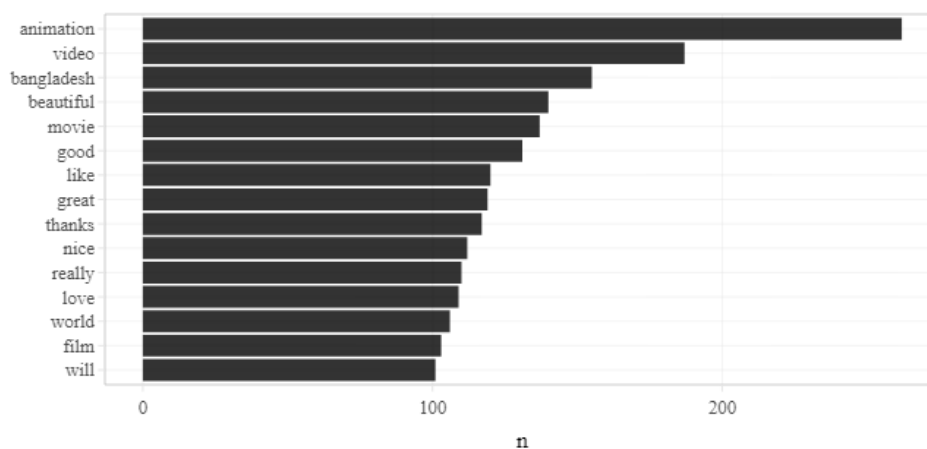
⁷ Username expunged.



379 movie itself or the character to these ideas, making it more useful within this context
380 compared to the previous figure. For the roughly half of instances which emphasize the
381 narrative of the film over the movie itself, this is linked with the environmental discourse
382 regarding climate change. Other notable words are revealed by the skip-gram word count,
383 including “redditships,” referring to offsite discussion of non-canonical romantic relations
384 between characters, and “dress,” which can perhaps be explained by the distinctive clothing
385 worn by the characters. In the skip-gram, the word “dress” is directly connected to the word
386 “redditships”, indicating a close attachment to characters within the narrative, and is also
387 located (albeit indirectly) in close proximity to the word “looks” indicated an emphasis on
388 aesthetic value judgements. Perhaps factors such as fashion and the aspect of potential
389 romance between characters are also something to be considered when designing new
390 environmental media in order to improve audience engagement.

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Figure 7: Top Word Count for *Tomorrow*

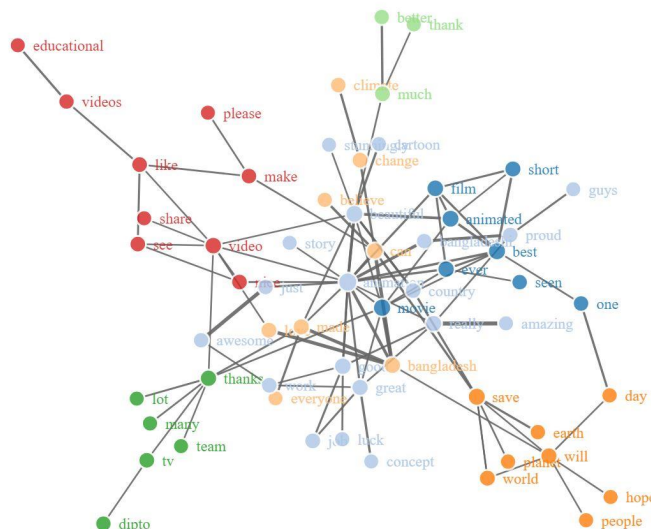


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Figure 8: Skip-gram for *Tomorrow*



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For *Tomorrow*, the word-frequency table shows that “animation” is the most frequent

word that appeared, though this is perhaps affected by the discussion of the film industry in

Bangladesh.⁸ Many of the highly linked words in the skip-gram demonstrate the positive

sentiment of the film and its content generally, such as “awesome”, good, “great”, etc. It is

notable that even though the word “Bangladesh” is ranked so high in the top word count, the

word “world,” while relatively low ranked among the top words, still demonstrates a global

consciousness among the online commenters. This is especially illustrated by the skip-gram,

where the word “world” is closely associated with the words “hope,” “save,” and “planet.”

Further analysis of the skip-gram count network for *Tomorrow* reveals a more decentralized

network when compared to *The Lorax*. This is potentially influenced by the lack of a specific,

unifying catchphrase in *Tomorrow*, whereas the central “unless” catchphrase of *The Lorax*

comprises a significant wordchunk.

⁸ A number of online comments take nationalistic pride in a progressing film industry in Bangladesh, using *Tomorrow* to exemplify advancing standards in domestically produced computer animated films.



410 **5. Environmental discourse analysis**

411 How film characters deal with environmentally catastrophic issues is part of what
412 viewers imitate and can be influenced by in a film. These two films exhibit several major
413 environmental themes, including the concept of unspoiled nature, the sense of place,
414 pollution, deforestation, and land erosion.

415 Environmental discourse analysis has been adapted and developed from several
416 branches of social sciences, primarily anthropology, and is therefore inherently multifaceted.
417 Adrian Peace (2018) explains that “academic disciplines go about their interrogation of
418 discourse in different ways” (p. 415), but in general describes discourse as “specific ways of
419 talking about particular environments and their futures” (Mühlhäusler and Peace, 2006, p.
420 458). A social anthropologist, for example, “become[s] familiar with the natural discourses
421 local people draw upon to describe environments of greatest significance to them” and in this
422 way contributes to environmental discourse analysis by highlighting environmental discourse
423 on a local level (Peace, 2018, p. 415). Peace (2018) is a social anthropologist, but there are
424 many historians, political scientists, or communication studies researchers who examine
425 power abuse, inequality, and other significant concerns within the social and political
426 environment. The many discourse analysis techniques cannot be summarized in this brief
427 space, but all approaches, at least to an extent, view language as a social practice and
428 discourse as pertinent to the broader social order. This paper avoids the debate over the
429 (dis)similarities of environmental ideologies and environmental discourses to focus on
430 empirical findings. Mühlhäusler and Peace (2006) underscore that “[m]uch environmental
431 discourse elaborates the theme that human actions are detrimental to the survival of
432 humanity” (p 461). My analysis correspondingly highlights the irreparable damage that
433 humanity is contributing to the environment which viewers witness within the selected films.



434 Mühlhäusler and Peace (2006) speculate that it is yet unknown how much the
435 environmental discourses and metadiscourses improve the condition of the environment (p.
436 457). Environmental discourse analysis can show which narratives instill feelings of
437 hopelessness, apathy, and inaction in viewers. Conversely, environmental discourse analysis
438 may highlight narratives about environmental issues and matters of environmental justice that
439 give the viewer a manageable sense of alarm, spurring them to act before it is too late. In
440 “Envisioning A Sustainable World,” Sustainability scholar Donella Meadows (1994) regrets,
441 “Whatever the reason, hardly anyone envisions a sustainable world as one that would be
442 wonderful to live in” (p 2). She is hopeful nevertheless, “I have noticed, going around the
443 world, that in different disciplines, languages, nations, and cultures, our information may
444 differ, our models disagree, our preferred modes of implementation are widely diverse, but
445 our visions, when we are willing to admit them, are astonishingly alike” (1994, p. 4). Two
446 different movies from two different parts of the world with two different senses of place both
447 demonstrate a singular desire to save the world from environmental catastrophes.

448

449 **6. Environmental catastrophe**

450 *The Lorax* takes a social constructionist view of nature as the film explains that the
451 trees, the forests, have agency, but must act within a framework established by mankind—an
452 anthropocentric view. The Lorax, the guardian of the forest, thus establishes a space to
453 advocate for the rights of nature. The Lorax’s proclamation in the opening scene, “I am the
454 Lorax, I speak for the trees,” (0:00:56) establishes the role of the Lorax in representing nature
455 more broadly. The tone of the film is set by the deceptively bright city of Thneedville, set
456 against a foreboding sickly purple dawn. This city is one of artificiality, in which every entity
457 is made of artificial products: “a town without Nature, not one living tree” (0:01:24). In this
458 city, trees are made of plastic and their colors can be changed by clicking remote buttons.



459 Environmental pollution in the film is often implied through use of plastic, and the exclusive
460 use of synthetic materials instead of those found in nature. The artificiality of Thneedville
461 constitutes a major crisis in the film. Thneedville society takes capitalist pride in
462 commodifying nature: O’Hare informs Ted, “I make a living selling fresh air to people”
463 (00:31:19). Ted’s search for an original tree is a business threat to O’Hare’s company. Moore
464 (2016) explains the intimate relationship that exists between children, consumer culture, and
465 commercial media in the United States. Moore (2016) shows that both “the news and
466 entertainment industries reveal that the way Hollywood treats a subject like the environment
467 is not an exception to the rule; instead, the consistent subjugation of environmental concerns
468 is part of a broader capitalist logic in a concentrated market” (p. 5). This also connects to
469 real-life industrialists, as in when Frankfurt School critics Max Horkheimer and Theodor
470 Adorno (2007) discuss capitalist social structures, arguing that material identities are assigned
471 to nonmaterial cultures (perhaps also natural resources), commodifying them into the
472 products from which capitalists could profit. These natural resources are manufactured,
473 bought, and sold like a commodity. Environmental historian William Cronon (1996) has also
474 described the impact of nature as commodity not just in American culture and landscape but
475 in the entire planet Earth for centuries.

476 The excessive use of plastic and artificiality are symbols of late-stage capitalism. In
477 that regard, the opening song’s lyrics stress the phrase “brand new” that references that we
478 live now in an advanced capitalist society which fetishizes consumerism: “If you put
479 something in a plastic bottle, people will buy it” (11:24). Commodification increases when
480 natural entities are treated without respect with some exceptions. The film implies that
481 Truffula trees are valuable and a positive, desirable asset, because by providing food, shelter,
482 and oxygen, Truffula trees help reduce environmental threats.



483 *Tomorrow* also presents the idea of nature, but it is not a socially constructed nature,
484 nor a nature that is soothing and tranquil. Rather, it emphasizes that reckless behavior from
485 humanity not only damages the environment, but also makes nature uninhabitable for
486 humans. Irresponsible human actions not only damage the environment, but they also make it
487 more vulnerable to future damage. The village in *Tomorrow*, unlike Thneedville, is not
488 artificial, yet its people lack a sense of environmental consciousness just as in *The Lorax*,
489 until Ratul’s father joins the conversation about the land erosion with the people. Their
490 conversation and the conversation between Ratul and the Old Man of the Winds change their
491 attitude—they gain an understanding of nature which make them proactive in slowing down
492 the unfolding disaster and envisioning—literally showing the audience—a future full of hope.
493 Such a positive narrative work against the idea that it is too late to act to prevent catastrophes.

494 Plastic waste is another environmental catastrophe on its own, which additionally is a
495 contributing factor to global warming, as plastic production and transportation require fossil
496 fuels. *The Lorax* shows the audience the impact of waste and wanton consumption on the
497 environment. The Lorax demonstrates that the process of wanton cutting down trees and
498 making clothes (fantastical knitting) out of it as a wasteful practice. But the Once-ler,
499 considers the result of this tree-cutting and knitting process “revolutionary.” The product has
500 a multitude of uses, and the audience may be inclined to agree at first, enhancing the impact
501 of this cautionary tale. “Whoa,” is Ted’s reaction when he steps out of the walled Thneedville
502 and sees the industrial waste. Thneedville produces a lot of waste but has no policy regarding
503 waste management beyond hiding it from public view; this is a reminder that the whole world
504 suffers from waste management policies that are effectively wishful thinking and likely
505 encourages the viewer to consider the impact of the industrial society fuelled by their own
506 wanton consumption.



507 Industrial waste is also a critical theme in *Tomorrow*. In the dream, when the Old Man
508 of the Winds takes Ratul on a tour of the world, Ratul notices chimneys spewing greenhouse
509 gases in the atmosphere. The Old Man of the Winds instructs Ratul that coal needs to be
510 replaced as a source of energy.

511 Both *The Lorax* and *Tomorrow* encourage the viewer to foster a desire to protect
512 nature, albeit in different ways. *The Lorax* fosters a protective desire through Audrey's and
513 Ted's quest for Truffula trees, Grammy's Indigenous sense of conservation, and the Lorax's
514 mission to speak for trees. Although Wolfe (2008) focuses on Dr. Seuss's book, Wolfe's
515 observation that, "[. . .] nature is elevated from inferiority to a form of divinity" is germane in
516 the context of film (p. 14). *Tomorrow* fosters love for nature by creating an awareness about
517 climate change and biodiversity.

518

519 **7. Environmental storytelling: sense of place**

520 These films deal with both place and displacement, important concepts in
521 environmental education. "The integration of place into education is important," writes
522 sustainability scholar David Orr, as "knowledge of place where you are and where come from
523 is intertwined with knowledge of who you are. Landscape, in other words, shape mindscape"
524 (2013, p. 93). These films use storytelling show how human beings and animals are
525 displaced.

526 Storytelling is an important element in combatting large-scale problems such as
527 climate change. Stories lead to greater emotional attachment than raw data does. In looking at
528 the impact of stories, I return to Jonathan Gottschall's (2012) statement, "we are, as a species,
529 addicted to story. Even when the body goes to sleep, the mind stays up all night telling itself
530 stories" (12). Cherokee author Thomas King's (2003) statement, "The truth about stories is
531 that that's all we are" (2) or environmental historian William Cronon's (1992) statement



532 inspired by Graham Swift that human beings are “storytelling creatures” underscore the
533 importance of storytelling. But humans are not the only storytelling creatures; other animals,
534 plants, spirit beings are the storytelling creatures too. The tree, the land, the other non-human
535 entities have agency, and they are storytelling creatures too, as demonstrated in the films. In
536 *The Lorax*, although of course somebody else has to speak for those trees, they nonetheless
537 have agency, and in *Tomorrow*, the Old Man of the Wind is not human but rather a spiritual
538 entity. By incorporating non-humans into storytelling, these movies help combat human
539 supremacist attitudes, by showing that man cannot stand alone against environmental
540 collapse.

541 Movies cover important environmental features in the form of storytelling discourse,
542 which also encompasses the field of storytelling discourse aimed at children. Dolores Subia
543 BigFoot and Megan Dunlap (2006) note that “[s]tories give reason to the overall scheme of
544 things” (p. 134). *The Lorax* and *Tomorrow* carry an environmental storytelling tradition to
545 teach children a sense of place through stories (animated films are often aimed at children,
546 and teach both children and the parents; if children miss out anything, the parents can pick it
547 up). BigFoot and Dunlap (2006) suggest that “Parents, grandparents, and other relatives used
548 stories to help children understand their place in the world and how they could show their
549 gratitude for their existence” (p. 135). This is evidenced in the social media analysis, where
550 one commenter stated “my 2 year old sister understands climate change and all she did was
551 watch the Lorax”

552 Both films have a simple environmental storytelling trajectory, but that simplicity is
553 grounded within the place of each respective culture. *Tomorrow* focuses on a specific place
554 along the coastline of Bangladesh; *The Lorax* is a fantasy place that could be anywhere and
555 nowhere. If places are ecological and cultural, I would argue that the sense of place is linked
556 to the art of storytelling, ultimately linked to education and pedagogy. Orr (2013), for



557 instance, demonstrates the nexus between place and pedagogy. Orr’s understanding of place
558 as an educational tool emerges from Thoreau’s *Walden* (1854) (to be exact, “*Walden* is a
559 model of the possible unity between personhood, pedagogy, and place”) and conservationist
560 Leopold’s (1986) philosophy of “man as a biotic citizen.” Although non-human entities are
561 appropriated for our use, *Walden* (1854) emphasizes natural entities in a way that could help
562 contemporary culture be more sustainable, such as in issues like bottled water compared to
563 tap water. A similar perspective can be seen from Leopold, who draws us across time and
564 space by introducing ideas like the “land ethic” and asking human beings to think “like a
565 mountain.” These philosophies should be highlighted with a greater emphasis in popular
566 culture. Beyond Thoreau’s and Leopold’s philosophies, I would add the controversial
567 philosopher Martin Heidegger’s idea of nature as “*physis*,” as discussed by Timothy Clark
568 (2011), in conjunction with Orr’s idea about place, which is useful and has awe, splendor,
569 beauty, majesty, and a force. Heidegger’s “*physis*” is visible when Orr suggests
570 that *Walden* is a dialogue between a human being and a place. This dialogue refers to a sense
571 of love with a cultural identity for the place. By and large, these philosophies demonstrate
572 how place plays a role in our moral and psychic transformation. In *Tomorrow*, although
573 commoners lack an academic or formal understanding of place consciousness, they
574 eventually show the unity and a sense of belongingness needed to protect and preserve their
575 local place. In *The Lorax*, the not-real place still demonstrates influences from its Californian
576 creators of 2012, such as general heightened concern over environmental catastrophes like
577 the 2011 Fukushima disaster in areas on the Pacific. In the film, a child begins glowing a
578 radioactive green as he sings “I just went swimming, and now I glow!” (0:03:03). Stories
579 with connections to place are important as “[s]tories can give children a sense of belonging to
580 their family, community, and tribe, and this can instil a sense of purpose, identity, and hope.
581 Stories could be an extremely positive force in the life of children” (BigFoot and Dunlap,



582 2006, p. 5). *The Lorax* and *Tomorrow* share the spectrum of life stories: as evidenced by
583 online comments such as “local places are getting destroyed because of global places,” these
584 stories can create a compelling connection between the storyteller and listener/spectators.
585 These two films are similar in that common people within the films are engaged to love their
586 local places. Initially, the Once-ler’s family is not respectful of the local place and
587 environment, but when the Once-ler gives Ted a seed to make the local place abundant with
588 trees, the local place matters. People rally around Ted for planting the seed, although they had
589 almost been convinced otherwise by O’Hare’s deceptive speech. In the same way, the
590 common people start a movement to save their village from climate crisis in *Tomorrow*.

591 Storytellers can create a sense of connectedness with the stories. The Once-ler and
592 Ted’s grandmother serve as the role of storyteller. Granny initiates the storytelling session,
593 but she sends Ted to the Once-ler for firsthand experience. The Once-ler starts sharing the
594 story with “it all started a long time ago” (00:16:45). The Once-ler’s starting cue gives us a
595 sense of hearing a “once upon a time” story. He later uses the phrase “a long time ago,” at
596 least three times, hinting that the environmental destruction on Earth started a long time
597 before. As a storyteller, the Old Man of the Winds, in *Tomorrow*, appears in Ratul’s dream
598 and blames him for the deplorable condition of the planet. He takes Ratul away with him to
599 show the cruelty of people on nature: factories are emitting fumes and the use of fossil fuels
600 are resulting in air pollution, the greenhouse effect, and related human eco-sicknesses.

601

602 **8. Environmental education: sustainability**

603 Today, many animated films are incorporated into educational curricula because of
604 the impact they can have. *The Lorax* and *Tomorrow* are ideal candidates to be educational
605 tools for children as these films visually show (rather than just tell) fundamental



606 environmental problems and potential solutions. Both films can also be a platform to teach
607 children about preserving nature.

608 *The Lorax* and *Tomorrow* promote a world where sustainability and environmental
609 consciousness are prioritized over reckless economic and technological development. Both
610 films critique capitalism for setting society down a path of self-destruction. When Ted leaves
611 the town in search of the Once-ler, Ted is being watched on his way out by the corporate
612 enforcers of O'Hare, who report on anything that threatens their industrial progress. Progress
613 is the main goal for Thneedville's people. The Once-ler's mother rebukes him for not being
614 "successful." The Once-ler thus starts changing the world, but the spell of capitalism does not
615 fool the Once-ler forever, as he eventually recognizes the monstrous effects of unchecked
616 capitalism. In *Tomorrow*, Ratul learns about the impact of capitalism when he travels with the
617 Old Man of the Winds who shows him the advanced capitalist societies which are least
618 sustainable (even though some pretend to be). Ratul becomes conscious of the negative
619 aspects of the socio-political-economic nexus of capitalism, but he cannot remain free from
620 it. The films show the audience through visual storytelling what the consequences of life in a
621 capitalist society that reveres progress and success, and, later, how the lives of the people
622 within that society improve when environmental consciousness triumphs over the
623 commodities market.

624 The films both suggest that the destruction caused by unrestrained capitalism may be
625 averted through action. In *The Lorax*, Ted brings meaningful change by helping begin to
626 restore the environment. *Tomorrow* also offers solutions, such as imposing taxes on fossil
627 fuels and implementing green energy around the world. *Tomorrow* asks its audience "Are you
628 with us?" (20:55) and tries to create a sense of urgency to get its audience to act.

629 These films can help instill the idea that sustainability is more about actions rather
630 than just caring about nature. *Tomorrow* suggests an alternative to the present world by



631 showing a world occupied with environmentally responsible inhabitants; *The Lorax* suggests
632 a return to a more natural environment as an alternative to an artificially lavish life. These
633 alternatives are designed to preserve nature. It is important to note that these films do not
634 reject societal progress outright, but they oppose development rooted in industrial toxic
635 consumerism which can cause the displacement of millions of people and the extinction of
636 species.

637 Perhaps the most important characteristic for any educational tool is to leave a
638 discursive space. These films question their surroundings, the human interference with our
639 environment, the inevitable consequences of such interference, and they provide examples of
640 a remedy. *The Lorax* suggests it is “not too late”; that is, if people give up their
641 anthropocentric attitudes and seek harmony between nature and human, their doom can be
642 prevented. *Tomorrow* shows the need to be prepared for a calamity that cannot be evaded, but
643 also shows a glimmer of hope. It endows the audience with agency, when it tells Ratul, the
644 audience surrogate, “This is your planet, you have to find out the answer” (21:54). These
645 films leave unfinished tasks to be comprehended and finished by the audience.

646 These films also offer pedagogical opportunities because they convey their messages
647 through non-traditional formats such as social media, humor, song/rhyme, satire, etc. For
648 example, the song “How Bad Can I Be?” in *The Lorax* provides insight into the greed-driven
649 soul who avoids caring for a few trees in the desire to make money. In *Tomorrow*, there is the
650 presence of social media. Ratul starts campaigning on Facebook about fossil fuels from a
651 local place, and he receives global responses, as people from around the entire world protest.
652

653 **9. Conclusion**

654 Using environmental discourse analysis to understand how discourses about climate
655 change and sustainability, to list a few, are changing, is an important task. This is



656 acknowledged in the literature—Elliott and Cullis (2017) have written, “the humanities
657 should be more confident and vocal in addressing climate change” (p. 15). Although the
658 number of creative works on climate change is increasing, their growth is not as substantial as
659 the increase in risks we are encountering. Heise (2008) argues that “climate change poses a
660 challenge for narrative and lyrical forms that have conventionally focused above all on
661 individuals, families, or nations, since [climate change] requires the articulation of
662 connections between events at vastly different scales” (p. 205). Although it is challenging, the
663 most powerful environmentally driven artwork and films focus on local, regional, and global
664 riskscapes. The combination of these different scales described by Heise can be tricky, but
665 these films show it can be done. In *Tomorrow*, local action leads to global change, and in *The*
666 *Lorax*, action within Thneedville leads to improvements in the lands outside the city.

667 In *The Lorax*, as time passes, new trees begin sprouting, animals return, and the
668 repentant Once-ler joins the Lorax, everything in its proper place. The film ends with the note
669 that unless someone comprehends the awful consequences that awaits us and takes prompt
670 action, “nothing is going to get better.” *The Lorax* seeks to promote ecological awareness
671 among people showing the repercussions of their deeds “unless” they start taking care of the
672 environment. Film critics say that *The Lorax* is too political or scares children from the
673 environment by giving them “ecophobia” (Potts, 2019). Yet some are more hopeful, such as
674 critic Deidre Pike (2012), who deems *The Lorax* a “‘dialogic enviro-toon’ not presenting a
675 subject merely for entertainment but creating a safe zone for exploration of environmental
676 facts, ideas, images, and perspectives” (p. 13). Public commenters generally seem to agree
677 with Pike, and do not seem hindered by the message of *The Lorax*. Rather than them being
678 too political and ecophobia-inducing, I would argue *The Lorax* and *Tomorrow* have the
679 power to inspire the next Greta Thunberg in households around the world.



680 The uncertainty with which *Tomorrow* starts is a recurring theme throughout its entire
681 runtime. The film ends with a note of hope which environmentalist Bill McKibben (2019)
682 praises in his tweet saying, “it never blinks at the horrors in store, but refuses to give up
683 hope.” Human beings are driving the great sixth mass extinction, but there is still time to take
684 initiative—a sentiment demonstrated in both the environmental discourses in the content of
685 these films and the public reactions. We need creativity, imagination and hope to face the
686 environmental crisis. The environmental discourse analysis of these films and the public
687 comments symmetrically convey the message: nature is on the brink of disaster in both films,
688 nevertheless both give the audience hope for the future.

689 **10. Ethical Statement**

690 Hereby, I, Mohammad Mizan-Rahman, consciously assure that for the manuscript “Unless
691 someone like you cares a whole awful lot, nothing is going to get better”: An environmental
692 discourse analysis of animated films *The Lorax* (2012) and *Tomorrow* (2019), the following
693 is fulfilled:

- 695 1) This article is my own original work, which has not been previously published
696 elsewhere.
- 697 2) The paper is not currently being considered for publication elsewhere.
- 698 3) The paper reflects my own research and analysis in a truthful and complete
699 manner.
- 700 4) All sources used are properly disclosed (correct citation).
- 701 5) The paper did not receive any funding from anywhere.
- 702 6) I only include data that has been processed in ways that do not identify individual
703 users, typically by describing the content of tweets/YouTube comments and/or citing
704 fragments that have generic wording in order to comply with recent ethical guidance
705 on the handling of social media data (Townsend and Wallace, 2016).

706 Date: January 10, 2023

707 Author’s name: Mohammad Mizan-Rahman

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