

The Crisis Communicated: A Study of the Chronology and Content of Environmental Documentaries in the United States, from 1990 to 2019

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Abstract

The immediacy of the climate change crisis demands informative and influential messaging strategies that advance awareness and action. Environmental documentaries aim to meet this demand with rhetorical strategies. A study of the history, industry, and methods of this genre will inform future communicators as they contribute to climate action. This paper sought to understand how environmental documentaries influence audiences, and how the corresponding messaging strategies evolved over the past 30 years. The author used quantitative and sociolinguistic content analyses to examine environmental documentaries produced in the United States from 1990 to 2019. Findings indicate that the genre is driven by small productions with a wide gender gap and limited profit. Chronologically, films shifted from sanitized to intimate perspectives of the environment and narrowed in scope. Films used rhetorical expression to link audiences to their environment.

I. Introduction

Humanity's success or failure to repair the destruction we continue to wage on the environment is not the issue of the next century, or even the next decade. It is the crisis of now. Evidence of climate change and environmental devastation is clear. Yet communication of this reality is mired in denial, disinformation, and dirty politics. Beyond formal education, media is the primary source of environmental information (Cooper, 2018). By educating and motivating audiences, environmental documentaries are integral in shaping public expertise and attitudes (Cooper, 2018; Spoel et al., 2008). Harnessing the power of media to spread information and create change is a skill that environmental documentarians have been practicing for nearly a century. Studying their work provides insight into the efficacy of their strategies, informing current and future environmental communicators as they seek to accomplish the same goals.

This paper examined a content analysis and chronology of environmental documentaries produced in the United States between 1990 and 2019. The chronology collected quantitative industry and production data of 50 documentaries. The sociolinguistic content analysis evaluated six films in-depth, two per decade. The author combined patterns found in the chronology and content analysis to explore how framing, structure, and content of environmental documentaries have evolved over the past 30 years.

Keywords: environment, documentary, communications, climate change, film, rhetoric
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II. Literature Review

To examine any topic, a consensus must be reached on what the topic *is*. What is an environmental documentary? To “document” is to record and reproduce reality in an objectively indexical form. No film, documentary or otherwise, is fully objective. All productions require subjective judgments. Despite this, documentaries are “discourses of consequence” (Mossner, 2014, p. 55) – viewers expect documentaries to educate or impact them. A documentary is distinguished from fiction by a filmmaker’s intent to produce a “creative treatment of actuality” (Kerrigan & McIntyre, 2010, p. 111).

How narrowly that treatment is construed depends on stylistic approach. “Essentialists” consider documentaries as interpretations of a filmmaker’s reality that are intended to be received as nonfiction, regardless of how selective or distorted that interpretation may be. “Realists” argue that “the purity of a documentary depends on how sparingly the filmmakers inject themselves into the portrayal of reality” (Duvall, 2017, p. 8).

“Environment” is arguably more difficult to define, as the nuance of the concept make a concrete definition challenging. Interpretations range from “in the sense of surroundings” (Williams, 1983, p. 111), to “both a complex natural ecosystem and a socially constructed abstraction” (Duvall, 2017, p. 15), to “the complex of physical, chemical, and biotic factors (such as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival” (*Definition of ENVIRONMENT*, n.d.). Every combination of a person’s education, profession, nationality, etc. could determine an individual’s interpretation. Environmental communications, of which documentaries are only a part, meld these definitions together. The environment is not only the web of natural ecosystems; it is also the web of human interactions with those natural ecosystems.

Therefore, a documentary must represent a filmmaker’s interpretation of reality, be intended to be received as nonfiction, and exist on the spectrum of stylistic approaches. A documentary in which purpose, theme, and content are centered on environment is considered an environmental documentary.

Environmental Documentary: History in Context

The rise of environmental documentaries in the United States parallels public opinion of the environment. Early 20th century films emphasized education, natural beauty, and humankind’s superiority over the wild. From Robert Flaherty’s “Nanook of the North” (1922) to Disney’s “True Life Adventures” (1948-1960), filmmakers exposed audiences to an idyllic version of nature. As awareness of environmental concerns spread, so did similar representations in film. Pare Lorentz’s “The Plow that Broke the Plains” (1935) and “The River” (1937) were among the first documentaries to blame humans for environmental problems. “The Sea Around Us” (1953) broke ground with cinema’s first allusions to global warming (Duvall, 2017; Register, 2019).

Growth of the environmental movement in the 1970s and development of cable networks in the 1980s made channels like Discovery and National Geographic a popular means to reach larger audiences (Register, 2019). While television programs, such as “Nova” (1974) and “Frontline” (1981), engaged audiences through awareness and activism, feature films took a different approach. For example, Godfrey Reggio’s “Koyaanisqatsi” (1983) centered on the relationship between nature and civilization and emphasized lyrical, montage cinematography.

As this paper illustrates, environmental documentaries of the 1990s, 2000s, and 2010s transcended these historical tendencies in scope, rhetoric, and content. Documentarians are constantly reinventing documentary form to engage audiences, and success of their strategies is crucial to effective climate change communication (Ahn, 2018). These strategies can be interpreted and categorized by scholars using framing theory. Introduced in 1974 by sociologist Erving Goffman, framing theory states that media not only dictates the importance of events, but also contextualizes them within a field of meaning. This framing influences the way audiences view events (Goffman, 1974). Environmental documentaries use strategies such as mode, theme, rhetorical expression to frame environmental issues.

Six Modes of Documentary

Bill Nichols, widely known as the founding scholar of documentary studies, established six “modes” of the genre. Similar to subgenres, modes “define the relationships between the subject matter, the filmmaker, and the viewer, in terms of interaction and stylistic interpretation” (Duvall, 2017, p. 12–13). Throughout the

genre's evolution, new modes arose with "the desire to come up with different ways of representing the world" (Nichols, 2001, p. 101).

Poetic Mode. Popular in the 1920s, poetic documentaries value artistic form and content equally and dispense of direct argument entirely. *Everything* is up to a viewer's interpretation. (Nichols, 2001). Hughes categorizes environmental documentaries by the way they represent environmental problems to audiences. Contemplative response are similarly thematically ambivalent (Hughes, 2014).

Expository Mode. The expository mode also took root in the 1920s but remains influential today. These films directly address the audience to advance perspectives or convey knowledge. This mode popularized voice-of-god narration, in which the speaker is heard, but is never seen or connected to the film's contents. This creates the impression of objectivity because the narrator seems otherworldly, therefore incapable of being subjective (Nichols, 2001). Hughes' argumentative response documentaries, which inform and persuade viewers to care about environmental problems, are built on this mode (Hughes, 2014).

Observational Mode. The invention of mobile 16mm cameras and magnetic tape recorders in the 1960s allowed filmmakers to record observations without the hindrance of expensive and immobile technology. The resulting observational mode embodies the idea that a film is a window to the world. The filmmaker is an observer, and the viewers must actively make inferences and determine significance (Nichols, 2001). Observational filmmakers use minimal narration, manipulative editing, and interviews.

Participatory Mode. The participatory mode, also introduced in the 1960s, combines observational footage with subject engagement. The filmmaker could act as a "mentor, critic, interrogator, collaborator, or provocateur" (Nichols, 2001, p. 116). The interactions between the filmmaker and the subjects, and the contents of the film itself, are synonymous.

Reflexive Mode. Originating in the 1980s, reflexive documentaries focus on presentation of an issue rather than the issue itself. Style and editing techniques remind viewers that they are watching a film produced by individuals with their own viewpoints, to evoke critical reflection. These films rely on irony and satire to make arguments and often lose sight of their original message if not structured coherently (Nichols, 2001). While this approach, akin to Hughes' irony response, can provide needed entertainment and engage audiences, the ironic tone could increase confusion and apathy (Hughes, 2014).

Performative Mode. The performative mode, also a newcomer in the 1980s, uses the *production* of the documentary as its focus. A performative documentary may follow a filmmaker as they investigate a crisis or travel a path of self-discovery, giving audiences the sensation of being on a parallel journey (Nichols, 2001). While these documentaries evoke emotional responses, they are inherently subjective.

While these six modes seem distinct, it is rare that a documentary adheres to one mode. A dominant mode gives a film structure, and other modes support that structure. Cooper identifies expository and participatory as most common in environmental documentaries (Cooper, 2018).

Rhetorical Expression

In terms of film, rhetoric is not limited to the linguistic means of argument. Documentarians communicate with all elements available to them – visuals, sound, composition, and editing are all unspoken languages of film. Combined, they create powerful rhetoric vital to shaping audiences' perception of the environment (Aaltonen, 2014; Ahn, 2018).

Neutral and Explicit Argument. Rhetorical form environmental documentaries are structured around argumentation. They address the viewer, make an emotional appeal, and persuade viewers to make choices that have an impact on their lives (Aaltonen, 2014). The argument is either neutral and presented as a natural fact, or explicit and presented as subjective. Neutral arguments often use expository voice-of-god narration, whereas explicit arguments are characteristically direct appeals. Rhetoric editing techniques can support either type of argument. Aaltonen, Duvall, and Hughes identify causal connection editing (combining two images together to "convey a sense of causality, opposition, polarity, resemblance, comparison, analogy, or metaphor") (Aaltonen, 2014, p. 64) as vital for rhetorical argumentation.

Ethos, Pathos, Logos. Duvall and Aaltonen use Aristotle's forms of rhetoric: ethos, pathos, and logos, to further classify the types of arguments made by environmental documentaries. Logos is the argument itself, and the evidence and reasoning that supports it (Duvall, 2017). Pathos is the use of emotional appeal to influence the audience. Ethos is how a film establishes credibility for its arguments, such as the presence of experts (Aaltonen, 2014).

Anthropocentric Synergy. Environmental ethics “rest upon a single premise: that the individual is a member of a community of interdependent parts” (Leopold, 1949, p. 171). Humankind is historically anthropocentric; we believe we are the most important member in our environment, or community. Intrinsically, we value the environment in and of itself. Instrumentally, it is valuable to us as a resource. Environmental documentaries appeal to viewers’ intrinsic and instrumental values by conveying the concept of anthropocentric synergy: Humans are inexplicably intertwined with the ecosystem they live in, and therefore they should care what happens to it. Collins and Duvall identify rhetorical typologies that communicate this idea. Scientific and utilitarian narratives focus on environmental information and appeal to instrumental values (Collins, 2008; Duvall, 2017). Aesthetic frames evoke the spiritual, intrinsic wonder of nature (Duvall, 2017). Value narratives “are validated by deeply held personal beliefs” (Collins, 2008, p. 132), emphasizing both intrinsic and instrumental values.

Conflict and Solutions. How environmental documentaries address blame, conflict and solutions is central to their success. Viewers are likely to respond poorly to direct accusations of culpability, especially since environmental issues tend to be abstract. Indirect implications of blame have the opposite effect. Viewers use ambiguity to escape accountability, decreasing motivation to act. Collins suggests that while attributing blame adds drama, it may detract from the message and minimize common ground between interest groups, viewers, and filmmakers (Collins, 2008). Emphasizing conflict may cause “fear fatigue” in audiences desensitized by apocalyptic narratives (Cortese, 2017).

Solution-centered rhetoric could be an alternative source of audience motivation. Metonymy is the strategy of taking complex and intangible issues, like climate change, and conveying them as tangible problems with concrete solutions, like local pollution (Collins, 2008). This personalization ascribes accountability, but simultaneously builds collaboration.

Synecdoche connects individual action to global success. The filmmakers argue that one person really can make an impact, and this impact is necessary because of the community’s culpability (Collins, 2008).

Thematic Categorizations

Duvall layers rhetorical frames with thematic categorizations. He focuses on documentaries that “attempt to express a critical point of view about environmental problems and promote an activist stance in response to them” (Duvall, 2017, p. 3). He examines seven themes: 1) General Environmental History and Concerns, 2) Climate Change, 3) Peak Oil, 4) Pollution and Waste, 5) Food and Water, 6) Animals and Extinction, and 7) Direct Activism and Community (Duvall, 2017). These themes are identified by a film’s emphasis, but Duvall notes there is significant overlap between them, and each theme has its own subcategories.

Research Questions

Historical context of the documentary genre, combined with theories of documentary rhetorical expression, mode and theme, provided the framework of research with which the author sought to answer the following research questions:

1. How do environmental documentaries attempt to influence audiences?
2. How have the messaging strategies used in environmental documentaries evolved in the past 30 years?

III. Methods

To examine the evolution and thematic patterns of environmental documentaries, this study used two methods. First, a quantitative content analysis, in which data are objectively and systematically coded to describe the “manifest content of communication” (Rosenberry & Vicker, 2017, p. 195), was used to code 50 environmental documentaries produced in the United States between 1990 and 2019. Second, a sociolinguistic content analysis, in which texts are examined “for their relevance, significance, and meaning” (Rosenberry & Vicker, 2017, p. 217), was used to analyze six randomly selected titles from the collected sample.

The author used IMDb (Internet Movie Database) as the population for the quantitative sample. To ensure that variability among the films did not detract from the credibility of the findings, the following parameters were set:

1. The film must be an English documentary between 30-200 minutes.
2. The film's country of origin must be the United States.
3. The premiere date of the film must be between January 1, 1990, and December 31, 2019.

While environmental awareness in the United States grew in the 1970s, the genre amassed popularity significantly in the 1990s, where this research will begin.

The author input these parameters into IMDb's Advanced Title Search and sorted the resulting 34,428 films by U.S. box office descending. The first 50 environmental titles were selected and coded by premiere date, length, gross profit, awards, directors, producers, production company, distributors, and theme (See Appendix B for the complete list).

Six titles were randomly selected for sociolinguistic analysis. This analysis integrated the context of the quantitative data into a deeper examination of each film's significance, a comparison to the other films analyzed, and the contents of the film itself. The following questions outlined the analysis:

1. What is the primary theme, mode, and argument style, and how are they evident?
2. What rhetorical strategies are used to appeal to the audience, and how?
3. How is anthropocentric synergy presented?
4. How are solutions, conflict, and fear used, and what emphasis do they receive?
5. What is the content, and how are environmental subjects presented?

IV. Findings

The quantitative analysis examined the 50 highest-grossing environmental documentaries by profit, awards, theme, percentage of films per distributor and production company, and gender of producers and directors.

Quantitative Analysis

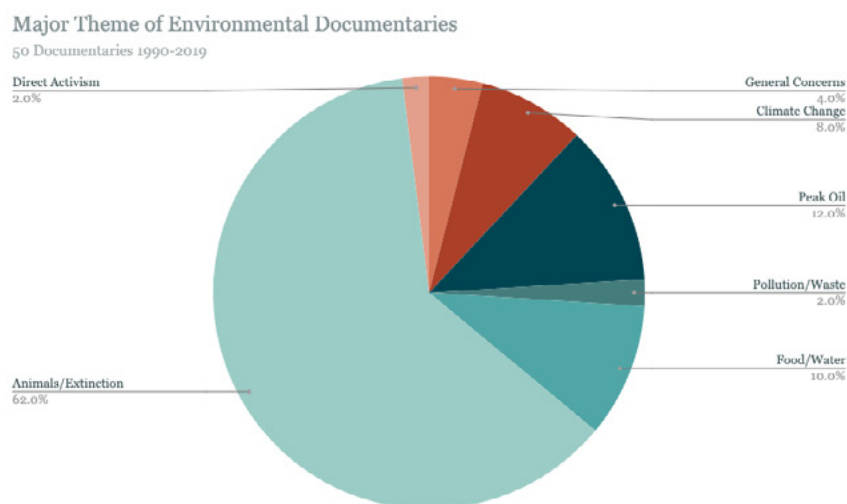


Figure 1. Primary Theme of Environmental Documentaries

Of the 50 films, 62% thematically focused on animals and extinction (Figure 1), followed by peak oil (12 percent) and food/water (10 percent).

Environmental Documentaries: Gross Profit 1990-2019

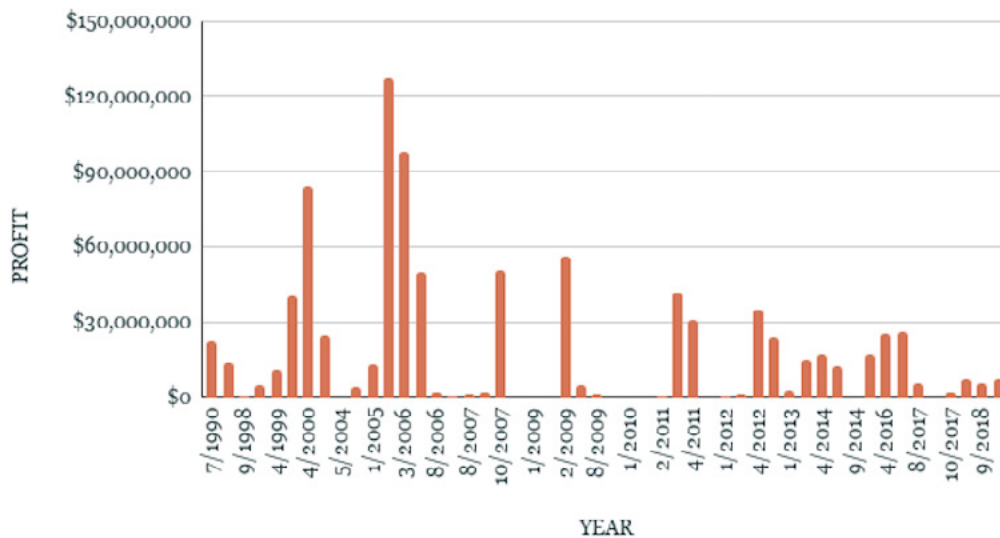


Figure 2. Environmental Documentaries: Gross Profit 1990-2019

Cumulative gross profit appears minimal in comparison to the multi-million amounts common in Hollywood blockbusters. It should be noted that profit is cumulative – films produced in the 1990s have had more time to accumulate sales. The number of films being produced is declining, yet the downtrend of profit is slowing. The years 2005 and 2006 proved to be the most profitable analyzed. “March of the Penguins,” released in July 2005, has amassed \$127,392,590, making it the most profitable environmental documentary in the sample. “Deep Sea” and “An Inconvenient Truth,” released in 2006, have earned \$98 million and \$49 million respectively.

Award nominations and wins grew steadily from 1990 to 2019. The sample included six films from the 1990s, with a total of four awards and nominations, 20 films from the 2000s with a total of 253, and 24 films from the 2010’s with a total of 255. The presence of celebrity cast members also increased, from five in the 1990s compared to 14 in the 2010s. These cast are primarily narrators, but some are producers or notable on-screen characters, such as Leonardo Di Caprio in “The 11th Hour” or Al Gore in “An Inconvenient Truth.”

Production companies and distributors are diverse, with many independent productions instead of large conglomerates. No singular company produced or distributed more than 14 percent of the 50 films in the sample. In addition, 8% of producers and directors identified are female; disparity is narrowing slowly.

Qualitative Analysis

Six randomly selected titles - “Blue Planet” (1990), “Wolves” (1999), “The 11th Hour” (2007) “The Cove” (2009), “The Last Mountain” (2011), and “The Biggest Little Farm” (2018) - were coded by theme, mode, argument style, and several forms of rhetorical expression in a sociolinguistic analysis.

Table 1. “Blue Planet” (1990)

Using footage from several Shuttle missions, “Blue Planet” (1990) reveals Earth from an all-encompassing, planetary perspective. The film inspires awe for our world, emphasizes the impact we have on it, and demonstrates the precarity of the ecosystem that hangs in the balance.

Primary Mode	<i>Expository</i> Voice of God narration. No interviews. A few other sound bites.
Primary Theme	<i>Climate Change</i>
Argument Style	<i>Neutral</i> No persuasive rhetoric - observational, factual tone.
Ethos	Subtle. No need to emphasize the credibility of scientific evidence.
Pathos	Scenes of destruction. Tied to the intrinsic value of the Earth as our home.
Logos:	Ties our ability to survive to the health of the Earth’s support systems:
Anthropocentric Synergy	<ul style="list-style-type: none"> • Intrinsic: The Earth is our only home. It’s vital to our continued existence. We are destroying it. • Instrumental: Value of resources we are taking for granted, such as clean air, limitless water supplies, continued bountiful harvests.
Solutions	No, but overall positive messaging: <i>“The Earth we inherited can again be a garden, beautiful and bountiful”</i> (Narrator 0:37:58)
Fear/Conflict	Humans are blamed for the destruction of Earth. Slash and burn agriculture, industrial pollution, electricity, and water usage.

Table 2. “Wolves” (1999)

The most elusive predator in North America is shown close-up in “Wolves” (1999). Following the re-introduction of a wolf pack into the mountains of Idaho, this film attempts to reshape misconceptions and hold humans responsible for their eradication.

Primary Mode	<i>Expository</i> Voice of God narration.
Primary Theme	<i>Animals and Extinction</i>
Argument Style	<i>Neutral</i> Based on the biology and science of the wolf species.
Ethos	Subtle. No need to affirm the credibility of scientific fact. Attempts to stay politically neutral.
Pathos	<ul style="list-style-type: none"> • Close-up shots of familial habits (puppies and mothers) anthropomorphize wolves, appealing to our romantic/idyllic view of nature. • This undermines the ecological view of wolves as creatures to respect and give a wide breadth. • Intertwines persecution and treatment of wolves with persecution and treatment of Native Americans.
Logos:	Tied to the instrumental value of wolves in a greater ecosystem.
Anthropocentric Synergy	<ul style="list-style-type: none"> • Intrinsic: Attempts to break down the myths about “the big bad wolf” - reform wolf as valuable intrinsically as a majestic and beautiful creature. Uses anthropomorphization to reshape American perception of the creature. • Instrumental: Wolves cause a trophic cascade in Yellowstone, balancing elk populations, and restoring ecosystem balance.
Solutions	Yes, but not the main emphasis. Focuses on the importance of education and educational programs on influencing public opinion towards conservation and away from old myths.
Fear/Conflict	No.

Table 3. “The 11th Hour” (2007)

Starring Leonardo DiCaprio, “The 11th Hour” (2007) visualizes the state of global environmental problems, including climate change, pollution, and waste. Interviews with over 50 activists, scientists, and politicians provide causes, impacts, and solutions to the imminent crisis.

Primary Mode	<i>Expository</i>
Primary Theme	<i>General Environmental History and Concerns</i> Attempts to cover too many things. Emphasizes that every ecosystem service used to support life is deteriorating and we are the cause.
Argument Style	<i>Explicit</i>
Ethos	<ul style="list-style-type: none"> • Credibility is essential. Over 50 scientists, activists, politicians, psychologists, and cultural leaders dictate the film. • Use of scientific jargon and technical language leads to a lack of connection. No personal stories.
Pathos	Culpability and shame. Attempts to connect to the audience by pointing out how things will impact them. Fossil fuels (causal connection editing) to acid rain and asthma rates.
Logos:	Presents a logical argument to multiple perspectives: people who care about money - nature’s externalities. Animals - extinction. Kids’ health - toxic chemicals are poisoning water, food, and soil. Politics - corruption of fossil fuel industries and public utilities.
Anthropocentric Synergy	<ul style="list-style-type: none"> • Intrinsic: Not emphasized • Instrumental: Heavy emphasis on how Earth’s destruction will negatively impact us.
Solutions	The last third is devoted to technological solutions, but few are presented as a way for audiences to immediately help.
Fear/Conflict	Blames corporate globalization, individual action, and greed.

Table 4. “The Cove” (2009)

Styled like an action film, “The Cove” (2009) follows former dolphin trainer Ric O’Barry, director Louie Psihoyos, and a team of filmmakers, and free divers on a mission to free dolphins from certain death in a hidden cove in Taiji, Japan. They face formidable obstacles and uncover corruption, greed, and disinformation that transcends far beyond the waters of the cove.

Primary Mode	<i>Participatory/Performative</i> The audience is watching the documentary being produced.
Primary Theme	<i>Animals and Extinction, Food and Water.</i>
Argument Style	<i>Explicit</i> Investigative - like a Hollywood action blockbuster.
Ethos	<ul style="list-style-type: none"> • Ric O’ Barry’s background builds credibility. • Surfers, scientists, scuba divers - production team introduced, and credibility explicitly stated. • “Save the Whales” movement - described as background, proves that past movements like this have been successful.
Pathos	<ul style="list-style-type: none"> • Dolphins saving humans. Anthropomorphizing dolphins - relating them to human intelligence, communication, and emotion. (the more you relate to something, the more you are likely to care about what happens to it). • The most vulnerable in human society (infants, pregnant mothers) are the most vulnerable to the mercury levels in dolphin meat. • Extreme use of graphic footage of dolphins being slaughtered.
Logos:	<ul style="list-style-type: none"> • While the major emphasis is on the intrinsic value of dolphins, the setup of blame against the Japanese government leads the audience to logical conclusions.
Anthropocentric Synergy	<ul style="list-style-type: none"> • Intrinsic: See Pathos - the dolphins are like humans. • Instrumental: Not emphasized.
Solutions	<ul style="list-style-type: none"> • Direct links to where you can donate/volunteer • Instant gratification at the end: a few people getting arrested, no more dolphin meat in school lunches. • <i>“Unless you stop it” in the end credits, followed by donation links.</i> • <i>“All social change comes from the passion of individuals” (Ric O’Barry 0:22:00)</i>
Fear/Conflict	<ul style="list-style-type: none"> • Blame and conflict are heavily emphasized. • -Major environmental NGOs have done nothing to stop the killings. • Government corruption - Japanese government pays for other countries to vote on their whaling proposals.

Table 5. “The Last Mountain” (2011)

The last standing mountain in the Appalachians is being blasted apart by a mining corporation, and the shockwaves are felt across the country in “The Last Mountain” (2011). With Bobby Kennedy Jr. at the forefront, a small mining town in West Virginia fights the destruction of the environment, and their lives.

Primary Mode	<i>Expository</i>
Primary Theme	<i>Direct Activism and Community, Pollution and Waste</i>
Argument Style	<i>Explicit</i>
Ethos	Ethos is established either in a person’s proximity to the problem (coal miners, activists who grew up in the towns) or in the credentials and positions of those interviewed
Pathos	Personal health implications - brain tumors, well water, coal dust, flooding.
Logos:	Micro-Macro structure: what is happening in this small town, followed by how it impacts a broader population (brain tumors in a small WV town vs. millions of people getting their water from the same place. <ul style="list-style-type: none"> • We all get electricity from coal.
Anthropocentric Synergy	<ul style="list-style-type: none"> • Intrinsic: The value of a home. • Instrumental: The entire country gets its energy from coal.
Solutions	<ul style="list-style-type: none"> • Only film among the six to mention eco-activism tactics such as civil disobedience. Tree sitting, nonviolent protests, disrupting coal’s ability to work. • Using public awareness and media to solve problems. • <i>“I called the school board. Didn’t get much reaction out of them. I called the health department. Didn’t get much reaction out of them. So, I called Channel 4 News.”</i> (Ed Wiley 0:34:05) • Windmill farm proposed as a viable solution. Shows evidence of success in other towns.
Fear/Conflict	<p>Heavy emphasis on blame and conflict.</p> <ul style="list-style-type: none"> • Against Massey Coal, Don Blankenship, Joe Manchin, the DEP • Uses immediate evidence to contradict claims from opposing interests.

Table 6. The Biggest Little Farm (2018)

“The Biggest Little Farm” (2018) follows John and Molly Chester through 8 years of their journey to create a farm in complete coexistence with nature. John, a wildlife documentarian, films their naivety, successes, and failures in the face of the daunting task, all in the context of a beautiful, natural ecosystem that appears from their new form of farming.

Primary Mode	<i>Performative</i> The journey itself is the focus.
Primary Theme	<i>Food and Water</i>
Argument Style	<i>Neutral/Explicit</i> – Minimal interviews. The narration is subjective in terms of their lives but interwoven with environmental facts. They are arguing for their form of farming as a sustainable solution.
Ethos	Establishes that John and Molly have no idea how to farm. General audience can connect to their successes and failures.
Pathos	Tied to John and Molly’s emotions. The stress of issues on the farm, the pain of Alan’s death, and the joy of watching baby animals and the blooming growth of nature.
Logos:	Regenerative and monoculture agriculture are compared to show the benefits of regenerative and negatives of monoculture. After a long drought, a massive rainfall wipes out the topsoil in surrounding farms - except theirs.
Anthropocentric Synergy	<ul style="list-style-type: none"> • Intrinsic and instrumental values are seamless. The film is centered around nature’s powerful cycles and our place among them. • <i>“We were never alone. Not for a second. And if the whole thing from the beginning was to live in harmony with nature. Well, we made it this far with a comfortable level of disharmony. The ecosystem of our entire planet works the same way. And when I look at it like that, it’s perfect.”</i> (John 1:28:00)
Solutions	A narrow, intimate story focuses on individual solutions and journeys toward sustainability.
Fear/Conflict	Veers away from blame and conflict. Conflict is framed around solutions.

V. Discussion

This research examined how environmental documentaries endeavor to influence audiences, and how the corresponding messaging strategies evolved in the past 30 years. Quantitative data provided insight into the genre's industry, which established context for a deeper assessment of rhetorical strategies. Industry data revealed several trends. As the environmental documentary genre amassed popularity and standing, films accrued more award nominations and wins, credited more celebrities in either cast or crew, and produced several blockbuster titles that reached wide audiences. In terms of gender disparity, the genre is making slow progress. Production and distribution are driven by small, individual companies. While IMAX and Disney are larger presences, no company is close to a majority. This may be a factor in the low cumulative profit, with an average of \$17,753,051.

The sociolinguistic analysis of six films uncovered four key trends. First, anthropocentric synergy emerged as the main rhetorical strategy. "Blue Planet" (portrayed humankind as dominating the Earth, and therefore responsible for it. "Wolves" and "The Biggest Little Farm" positioned humans as a single, yet integral and impactful, element of a larger ecosystem. This idea of anthropocentric synergy, that humans should care about the environment because the environment is intrinsically and instrumentally valuable to them (Collins, 2008; Duvall, 2017), dictated the way the films conveyed their overall message. Aristotle's ethos, pathos, logos were the driving rhetorical means filmmakers used to appeal to intrinsic and instrumental values (Aaltonen, 2014).

Second, each film used rhetorical and cinematic strategies to convey a "macro to micro" perspective. To relate environmental problems with a planet-wide impact to audiences, the six films visually and rhetorically connected individuals and their values to broader environmental problems, similar to metonymy (Collins, 2008). "The Last Mountain" connected the coal-induced health conditions in a small West Virginian town (micro) to the East Coast, and then to the entire country (macro), by emphasizing America's dependence on coal for energy. They include a computer-animated sequence, in which the water near a coal plant in West Virginia is visually traced across the country. The film connects the audience to the events in the film by demonstrating anthropocentric synergy in this micro-macro format. All of humanity is linked to this environmental problem in West Virginia.

Third, the films shifted from sanitized, idyllic perspectives of the environment in the 1990s to deeply intimate and realistic perspectives in the 2010s. This shift embodies the idea that everything must be bigger, better, more gruesome, or more unique than the last to be worth anything. In "Wolves," footage of wolves focuses on the puppies and mothers. While there are a few predator-prey scenes, they are not emphasized. This tame perspective is underscored by the fact that the wolves in the film are, in fact, tame. The producers contracted a wildlife casting agency to obtain the close-up imagery. In contrast, "The Cove" used graphic footage of dolphin murders to stress the cruelty and corruption by the Japanese government and inculcate emotions and action from the audience. This pattern parallels a transition from traditional expository formats with neutral argument, toward experimental modes with explicit argument.

Fourth, the scope of the films shifted from broad, Earth-wide stories to narrow, local stories. "Blue Planet" (1990) revealed a new perspective, with a spaceship acting as the camera. The content and cinematography encompassed the entire planet. "Wolves" centered on one species within one ecosystem. "The 11th Hour" reverted to a planetary scope. "The Cove" narrowed its view, with a specific location and population of a singular species. "The Last Mountain" told a story of one issue in one place, regarding one population. "The Biggest Little Farm" went even narrower, centering on one family using one farm to create an ecosystem.

VI. Conclusion

This study collected a sample of 50 films to conduct an examination of production data, with a subsequent sociolinguistic content analysis of six randomly selected films. This sample is only a fraction of environmental documentaries and is not representative of the genre. The author used IMDb to collect data, which is not a comprehensive resource especially with smaller productions. The process of selecting films undoubtedly missed titles with more subtle environmental themes not identified in plot synopses or trailers. The six films selected for sociolinguistic analysis revealed trends that, given a larger sample, could be unrepresentative.

This research used a broad scope to define environmental documentaries. Future research could narrow that scope, to a single theme, mode, or production size to contextualize the genre. As the thematic data conveyed, certain environmental topics are more popular than others – but why? Psychological research on audience response to environmental messaging is scant (Cooper, 2018). Understanding how and why viewers react to climate change communication strategies is equally crucial to increasing its effectiveness as understanding the strategies themselves.

Environmental documentaries are a vital tool in educating and motivating public audiences to recognize climate change and environmental destruction for what they are: a crisis of now.

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Appendix

1990s									
Release	Film	Profit	Wins	Nom	Director(s)	Producer(s)	Prod. Comp.	Distributor	Top Cast
7/13/1990	Blue Planet	\$22,800,000			Ben Burt	Graeme Ferguson	IMAX Space Ltd	IMAX	
5/8/1998	Africa's Elephant Kingdom	\$13,485,455		1	Michael Caulfield	Michael Caulfield	Discovery Channel Pictures	IMAX	Avery Brooks
9/3/1998	Alaska: Spirit of the Wild	\$553,541	2	1	George Casey	George Casey, Paul Novros	Alaska Film Partners Ltd	Houston Museum of Natural History	Charlton Heston
3/1/1999	Wolves	\$4,811,282			David Douglas	Goulan Amarsy, Pietro L. Serapiglia	West Eagle Productions	E-Realbiz.com	Robbie Robertson
4/30/1999	Island of the Sharks	\$10,658,505	2		Howard Hall	Michelle Hall	Howard Hall Productions	IMAX	Linda Hunt
10/27/1999	Galapagos	\$40,059,028			David Clark, Al Giddings	David Clark, Al Giddings	IMAX	Warner Home Video	Kenneth Branagh
	2000s								
Release	Film	Profit	Wins	Nom	Director(s)	Producer(s)	Prod. Comp.	Distributor	Top Cast
4/14/2000	Dolphins	\$84,400,000		3	Greg MacGillivray	Alec Lorraine, Greg MacGillivray	MacGillivray Freeman Films	MacGillivray Freeman Films	Pierce Brosnan
2/14/2003	Coral Reef Adventure	\$24,600,000	2	3	Greg MacGillivray	Alec Lorraine, Greg MacGillivray	Blake and Associates	Dreamscape Media	Liam Neeson
5/30/2004	The Future of Food	\$81,280	2		Deborah Koons Garcia	Catherine Lynn Butlet, Deborah Koons Garcia	Lily Films	Cinema Libre Studio	
1/24/2005	Grizzly Man	\$4,064,179	21	17	Werner Herzog	Erik Nelson	Lions Gate Films	Lions Gate Films	
1/28/2005	Aliens of the Deep	\$12,775,590			James Cameron, Steven Quale	James Cameron, Cary Granat, Andrew Wight	Buena Vista Pictures	Buena Vista Pictures	Martiza Brikslak
						Jean-Christophe Barret, Yves Darandeanu, Christophe Lloud, Emmanuel Prou	National Geographic Films		Romane Bohringer, Charles Berlin, Jules Sitruk
7/22/2005	March of the Penguins	\$127,392,693	22	15	Luc Jacquet		Geographic Films	Wild Bunch	

3/3/2006	Deep Sea	\$98,230,905	2	Howard Hall	Michelle Hall, Toni Myers	Warner Bros	Warner Bros	Johnny Depp, Kate Winslet
6/30/2006	An Inconvenient Truth	\$49,782,012	33	Davis Guggenheim	Laurie David, Lawrence Bender, Scott Burns	Lawrence Bender Productions	Paramount Vantage	Martin Sheen, Robert Goulet, Bart Gold
8/4/2006	Who Killed the Electric Car	\$1,764,304	4	Chris Paine	Jessie Deeter	Plinyminor	Traction Media	Martin Sheen, Robert Goulet, Bart Gold
3/30/2007	Dinosaurs Alive	\$638,461	1	David Clark, Bayley Silleck	David Clark	Giant Screen Films	Giant Screen Films	Michael Douglas
8/17/2007	The 11th Hour	\$985,207	3	Leila Conners, Peterson, Nadia Conners	Leonardo DiCaprio, Leila Conners, Peterson, Chuck Castleberry, Brian Gerber	Applian Way	Warner Independent Pictures	Billy West? Al Gore!
8/17/2007	Arctic Tale	\$1,864,636	1	Adam Ravetch, Sarah Robertson	Kattie Evans, Adam Leipzig, Chris Miller, Keenan Smart	Visionbox Pictures	Paramount Vantage	Queen Latifah, Katrina Agate, Zaine Ali
10/5/2007	Sea Monsters: A Prehistoric Adventure	\$50,652,463	3	Sean Macleod Phillips	Jini Durr, Lisa Truitt	National Geographic Films	Disneynature	
1/20/2008	Flow: For Love of Water	\$142,469	1	Irena Salina, Dan Berger	Steven Starr	Steven Starr Productions	Celluloid Dreams	
1/16/2009	No Impact Man: The Documentary	\$116,329	1	Laura Gabbert, Justin Schein	Eden Wurmfield	Eden Wurmfield Films	Oscilloscope	
1/18/2009	Crude: The Real Price of Oil	\$185,881	15	Joe Berlinger	Laura Gabbert, Eden Wurmfield	Entendre Films	First Run Features	
2/13/2009	Under the Sea 3D	\$55,902,624	2	Howard Hall	Joe Berlinger, Michael Bonfiglio	Warner Bros	IMAX	Jim Carrey
7/31/2009	Food Inc.	\$4,606,199	7	Robert Kenner	Robert Kenner, Elise Pearlstein	Magnolia Pictures	Magnolia Pictures	
8/7/2009	The Cove	\$1,187,434	39	Louie Psihoyos	Jim Clark, Fisher Stevens, Dala DuPre Pesman	Diamond Docs	The Works International	
11/18/2009	Fields of Fuel	\$32,265	1	Joshua Tickell	Daniel Assael, Darius Fisher, Laura Martorella, Gregory McClatchy	Blue Water Entertainment	Little Film Company	

2010s									
Release	Film	Profit	Wins	Nom	Director(s)	Producer(s)	Prod. Comp.	Distributor	Top Cast
1/2010	<i>GasLand</i>	\$49,428	9	7	Josh Fox	Trish Adlesic, Josh Fox, Molly Grandour, Don Guarnieri	International WOW Company	Cinema Management Group	Nellie McKay
1/2011	<i>The Last Mountain</i>	\$122,961	3	1	Bill Haney	Clara Bingham, Eric Grunebaum, Bill Haney, Laura Longsworth	Massachusetts Documentary Productions	Submarine Entertainment	
2/18/2011	<i>The Last Lions</i>	\$635,325	5		Dereck Joubert	Beverly Joubert, Dereck Joubert, Chris Miller, Lisa Truitt	National Geographic Films	Virgil Films & Entertainment	Morgan Freeman, Chris Fries
4/8/2011	<i>Born to Be Wild</i>	\$41,644,475	2		David Lickley	Drew Fellman	Imax Filmed Entertainment	Warner Bros	Samuel L. Jackson, Patrick Stewart
4/22/2011	<i>African Cats</i>	\$30,857,747		3	Alastair Fothergill, Keith Scholey	Keith Scholey, Alix Tidmarsh	Disneynature	Walt Disney Studios Motion Pictures	
4/22/2011	<i>Revenge of the Electric Car</i>	\$151,272	1	3	Chris Paine	Jessie Deeter, Michelle Kaffko, Dana Moreau, P.G. Morgan	Papercut Films	The Film Collaborative	
1/22/2012	<i>A Place at the Table</i>	\$231,378	1	2	Lori Silverbush, Kristi Jacobson	Julie Goldman, Ryan Harrington, Kristi Jacobson, Lori Silverbush	Motto Pictures	Submarine Entertainment	
1/23/2012	<i>Chasing Ice</i>	\$1,358,668	9	4	Jeff Orlowski	Jerry Aronson, Paula DuPre Pesman, Jeff Orlowski	Exposure	Submarine Deluxe	
4/30/2012	<i>Chimpanzee</i>	\$34,823,764		2	Alastair Fothergill, Mark Linfield	Alastair Fothergill, Mark Linfield, Alix Tidmarsh	Great Ape Productions	Disneynature	Tim Allen
4/30/2012	<i>To the Arctic 3D</i>	\$23,695,388	1	1	Greg MacGillivray	Greg MacGillivray, Shaun MacGillivray	IMAX	IMAX	Meryl Streep

1/19/2013	Blackfish	\$2,303,417	6	39	Gabriela Cowperthwaite Stephen Judson, Greg MacGillivray	Gabriela Cowperthwaite, Manny Oteyza	CNN Films	Magnolia Pictures	Robert Carradine
11/27/2013	Journey to the South Pacific	\$14,994,876		1	Mark Krenzien, Shaun MacGillivray	Mark Krenzien, Shaun MacGillivray	MacGillivray Freeman Films	IMAX	Cate Blanchett
4/4/2014	Island of Lemurs: Madagascar	\$16,860,855		2	David Douglas Alastair Fothergill, Keith Scholey, Adam Chapman	Drew Fellman, Diane Roberts	IMAX	IMAX	Morgan Freeman
4/18/2014	Bears	\$12,316,745		2	Adam Chapman, Keith Scholey	Adam Chapman, Keith Scholey	Disneynature	Disneynature	John C. Reilly
9/12/2014	Pumpi	\$89,787			Joshua Tickell, Rebecca Harrell Tickell	Eyal Aronoff , Darius Fisher, Yossie Hollander, Edu Sallouti	Big Picture Ranch	13 Films	
4/17/2015	Monkey Kingdom	\$16,839,663	2	1	Alastair Fothergill, Mark Linfield	Mark Linfield, Kristina Reed	Silverback Films	Disneynature	Tina Fey
4/21/2016	Born In China	\$25,081,168		3	Chuan Lu	Amy Bailey, Phil Chapman, Roy Conli, Brian Leith, Yongfeng Su	Disneynature	The Walt Disney Company	John Krasinski, Claire Keim, Xun Zhou
4/29/2016	A Beautiful Planet	\$25,730,120	1	1	Toni Myers	Judy Caroli, Toni Myers	IMAX	IMAX	Jennifer Lawrence
8/4/2017	An Inconvenient Sequel: Truth to Power	\$5,433,926	6	16	Bonni Cohen, Jon Shenk	Richard Berge, Sara Dosa, Jeff Skoll, Diane Weyermann	Actual Films	Paramount Pictures	Narendra Modi
9/2/2017	Eating Animals	\$153,993			Christopher Dillon Quin	Sandra Keats, Natalie Portman, Christopher Dillon Quin, Jonathon Safran Foer	Big Star Pictures	IFC Films	
10/5/2017	Jane	\$1,921,221	37	37	Brett Morgen	Bryan Burk, Tony Gerber, Brett Morgen, James Smith	National Geographic Studios	Cinetic Media	

4/6/2018	Pandas	\$7,635,778	1	1	David Douglas, Drew Fellman	Drew Fellman, Donald Kushner, Michael McDermott, Steve Ransohoff	IMAX	Warner Bros	
9/1/2018	The Biggest Little Farm	\$5,248,412	15	28	John Chester Alastair Fothergill, Jeff Wilson, Mark Linfield	John Chester, Sandra Keats, Ray Conli, Alastair Fothergill, Keith Scholey, Jeff Wilson	Diamond Docs	The Exchange	
4/17/2019	Penguins	\$7,699,452	1	1	Linfield	Wilson	Disneynature	Walt Disney Studios Motion Pictures	Ed Helms

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