



Considering the Role of Documentary Media in Environmental Education

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Abstract:

Environmental issues continue to be a growing global concern. Many curricular documents have added environment-related topics into a variety of grade levels and subjects with the hope of increasing student awareness at a time when environmental stewardship is a top priority. Traditional approaches to environmental education often include engaging students with the outdoors, and while this is an integral part of developing students' environmental awareness, much of what students learn about the environment is from the media, which includes visual imagery. As we contemplate how best to engage students in reflecting on what it means to live in a sustainable fashion, it is also important to consider the merits of visual rhetorical modes in environmental communication, such as documentary film. This paper draws upon findings from a study that explored how viewers react to particular visual imagery. The data revealed the most powerful rhetorical effect was observed when participants drew links between the visual content of the video clips and a personally significant outdoor place, demonstrating that a personal connection to place may make a direct impact on viewers' reactions to visual rhetoric in environmental documentaries, thus possibly causing the viewer to develop a deeper awareness of the issues.

Keywords: visual rhetoric; rhetorical modes; environmental documentary; place-based; place-responsive

Considérant le rôle des médias documentaires dans l'éducation de l'environnement

Résumé :

Les problèmes écologiques continuent d'être un souci croissant et mondial. Plusieurs documents qui se rapportent au cursus avaient inclu sujets concernant l'environnement dans une variété de niveaux de classes et de sujets, avec l'espoir d'augmenter le savoir des élèves, à une époque où la gérance de l'environnement est de la priorité absolue. Souvent, les approches traditionnelles à l'éducation de l'environnement incluent impliquer les élèves en plein air; et comme ceci est une partie intégrante du développement de la conscience environnementale des élèves, la majorité de ce que les élèves apprennent sur l'environnement vient des médias, qui incluent des images visuelles. Pendant que nous envisageons comment mieux impliquer les élèves de réfléchir à la pertinence de vivre d'une manière durable, il est aussi important d'envisager les mérites des modalités rhétoriques visuelles dans la communication environnementale. Une forme de la communication environnementale qui dépend beaucoup sur les images, et qui est croissant en popularité, est le film documentaire. Cet article fait usage des conclusions d'une étude qui a exploré comment les spectateurs et spectatrices réagissent aux images visuelles particulières. Les données, collectées et analysées, ont révélé que l'effet rhétorique le plus puissant était observé quand les participants ont établi des liens entre le contenu visuel des clips vidéos et un lieu à l'extérieur personnellement significatif, démontrant qu'un lien personnel à un lieu peut avoir un impact direct sur les réactions des spectateurs et spectatrices à la rhétorique visuelle des documentaires environnementaux, ainsi développant éventuellement une conscience plus profonde des problèmes.

Mots clés : rhétorique visuelle; modalités rhétoriques; documentaires environnementaux; écosystémique; éco-réactive

Environmental issues are an increasing concern, and environmental education has become the focus of many curricula. Part of environmental education includes engaging students with the natural environment, not only to appreciate nature but also to understand that the current “environmental crisis originates with the inability to think about ecological patterns, systems of causation, and the long-term effects of human actions” (Orr, 2004, p. 2). Orr (1990) also notes that “experience in the natural world is both an essential part of understanding the environment and conducive to good thinking” (p. 2). Students’ experience of a place, or place-based learning, is one of the central tenets of environmental education. According to Sobel (2004), place-based learning occurs when students are engaged within a local community and environment in ways that can help to “enhance students’ appreciation for the natural world, and create a heightened commitment to serving as active, contributing citizens” (p. 6). Examples include engaging students in outdoor programs, creating and nurturing community gardens, and learning about ecological systems. The hope is that through place-based instructional approaches, students will develop a strong affinity with a specific natural locale, will increase their understanding and awareness of environmental issues, and will practice and promote environmental stewardship.

A connection to a physical outdoor place can deepen students’ connections with environmental issues. Yet, at the same time, much of the information people receive about the environment comes from the media, and visual imagery, in particular, plays a powerful role in how viewers perceive and understand the environment (Cox, 2013). Traditional approaches, such as outdoor place-based learning in environmental education, are integral to developing and maintaining students’ awareness of a myriad of issues. But, as environmental communication is increasing rapidly, educators must also consider how visual media affect students’ understandings of environmental issues.

Environmental communication “helps construct or compose representations of nature and environmental problems as subjects for our understanding” (Cox, 2013, p. 19). Environmental issues are social-symbolic constructions, whereby the environment becomes “something we know, at least partly, through language and other symbols” (Cox, 2013, p. 62). Among these symbols, images can have a very powerful rhetorical effect because they can represent complex ideas that may otherwise be difficult to understand (Gold & Revill, 2004). The documentary form, in particular, is growing in popularity because of its historical association with educating the public and because it relies on visual images. The documentary genre seems to have endured and, in recent years, seems to have “increased its popularity, redefining itself as a type of connector or creative hub among vast fields of media activity” (Kara & Marcus, 2016, p. 1).

In recent years, the emergence of digital technologies as tools for knowledge mobilization has resulted in environments that are increasingly multimodal, giving rise to new and hybrid genres and calling for different ways of mediating information (Bolter, 2001). It is, in large part, the rise of such digital reading environments that encouraged the New London Group (1996) to promote a paradigm shift in literacy studies and pedagogy to favour “multiliteracies” over “literacy” as a descriptor for the complex task of making sense of and producing contemporary multimodal texts. The New London

Group observed that there is a “burgeoning variety of text forms associated with information” (p. 61), which can impact the ways in which people communicate and understand information. I do acknowledge that a multiliteracies approach does not (and should not) entail only technology and digital media, but also includes various multimodal forms, such as engaging with the outdoors. What deserves attention, however, is the fact that information about the environment is distributed across many different media platforms and that we must consider the inherent implications this may have when teaching and learning about the environment.

This paper will discuss the findings from a study that explored participants’ responses to various visual rhetorical modes in environmental documentaries. Participant annotations made to a video compilation and comments from subsequent interviews suggest that in order for the message of an environmental documentary to be effective, the viewers must make a personal connection. Within visual rhetoric, there are a number of possible rhetorical modes, or types of images, each with identifying characteristics. As is always the case with such classifications, these are not independent of each other. A number of visual rhetorical modes appear in different genres of environmental communication, including environmental documentary films. The modes are not independent of each other; also, most documentaries utilize more than one visual rhetorical mode. Table 1 outlines the most prominent visual rhetorical modes discussed in the literature and explored in my study.

Visual Rhetorical Mode	Definition
Apocalyptic	Images implying an impending ecological crisis and depicting catastrophic effects (Cox, 2013).
Jeremiad	Images attributing human behaviour as the cause of environmental crises (Cox, 2013; Rosteck & Frentz, 2009).
Hopeful	Positive images providing eco-friendly solutions.
Environmental nostalgia	Images of natural environments used to evoke an emotive response in relation to loss or potential loss of the same (Murray & Heumann, 2007).
Sublime	Images used to develop awareness of a particularly magnificent landscape, natural object or creature and, by extension, to aid the development of personal connection with the same (Cox, 2013).
Environmental melodrama	Sensationalizing social actors as a means to draw emotive responses (Schwarze, 2006).

Table 1: Visual Rhetorical Modes

Viewers may be able to develop a personal connection with any number of images; however, data from this study suggests viewers make a stronger personal connection with certain rhetorical modes, namely, those often categorized as sublime and as environmental nostalgia, which will be described and discussed in more detail below. This study sheds light on visual rhetoric generally and, more notably, explores viewer response to different visual rhetorical images. The results of this study may prompt educators to consider the role of media in developing awareness of the environment. As we contemplate how best to engage students in reflecting on what it means to live in a sustainable fashion, it is important that we consider the merits of the particular visual rhetorical modes used in

environmental documentaries, and how these approaches may engender concern or hopelessness, engagement or disengagement.

Methodology and Analysis

The study was introduced to students in a Bachelor of Education program in a western Canadian university. All were secondary (grades 10 to 12) teacher candidates, with various teaching foci, who were enrolled in a course that is a requirement for all secondary teacher candidates. This course challenged students to think about how knowledge is transferred across different modalities and how multimodal genres affect learning and meaning making. Students examined how to work with multiple literacies and how to create connections between particular genres and citizenship. Also, part of the focus of this course was on understanding the impact of multimodal genres, including how moving images affect viewer perception. In keeping with recruitment protocol, the instructor was not in the classroom when I introduced the study and conducted the workshop; the instructor did not know which students volunteered to participate, and students' grades in the course were not affected by the study. A total of 11 participants were recruited for this study. In accordance with the university's ethics policy, the study adhered in all respects to the guidelines of the Canadian *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (Government of Canada, 2014).¹ All participants freely volunteered for this study and provided consent to be included, via pseudonyms, in the reporting of the findings of this research.

Participants were asked to view and respond to a 60-minute video compilation created by the author, which included 11 clips from documentary films and shorts and represented a variety of visual rhetorical modes. The compilation was made available on an accessible video-annotation program. Participants were given no parameters as to how to respond or how long responses should be. I drew this approach from reader-response researchers Kuiken and Miall (2001), who asked participants to choose striking or evocative passages from literary selections, inviting them "to concurrently describe any and all aspects of their reading experience: thoughts, feelings, interpretations, evolutions, memories and so on" (p. 13). This approach allows for revelation of "the temporally unfolding experience of a text rather than its consummating interpretation" (Kuiken & Miall, 2001, p. 239). While the focus of this study was to explore viewer responses to visual images, part of the investigation was to also determine if viewers would be more persuaded by visual rhetoric versus other forms of rhetoric, such as verbal narrative or music. As such, I did not want to direct the participants to specifically focus on visual images, but encouraged a more instinctual response to what they were viewing. After all participants completed their annotations, semi-structured one-on-one interviews were conducted to allow participants to expand or clarify their responses. The data sources for this study were the participants' annotations on the video clips and the transcriptions of the semi-structured interviews. A thematic approach was implemented to analyze the data. My approach to thematic data analysis focused on the relationship between themes (Huberman & Miles, 1994). For this study, this approach helped to examine similarities and differences among

¹ The ethics review board study approval number for this research is H16-00408.

participants' responses to the same visual rhetorical mode. I also followed Wolcott (1994), who stresses the importance of developing a description that reveals connections between academic literature and the data and, as Huberman and Miles (1994) point out, helps identify potential gaps in the literature.

Using Creswell's (2007, 2014) phased approach to thematic analysis, I began by conducting two rounds of coding and analysis of the annotations, which was followed by an analysis of the transcripts. The themes I discovered through my examination of the annotations aided in the development of the coding scheme that I used for the transcribed interviews. Through the analysis process, I focused on how participants responded to what they were viewing and asked the following questions:

1. To what are the participants responding?
2. How are participants responding to what they are viewing?
3. Do participants refer to or specifically address an environmental issue?
4. Are participants' awareness and understanding of environmental issues evident?
5. What interesting or new thoughts and ideas have emerged?
6. What thoughts or ideas are consistent with current research?

After multiple stages of coding, the data clearly demonstrated that all participants made some personal connection to what they were viewing. The theme of personal connection was evident when participants made a connection to their life and/or personal experiences (e.g., work, education, personal preference). While there is evidence that some personal connections were made in reference to various visual rhetorical modes, participants most strongly demonstrated personal connections when responding to examples of sublime and environmental nostalgia visual rhetoric. The former focuses on images used to develop an awareness of a particularly magnificent landscape or object in nature (Cox, 2013). Environmental nostalgia evokes an emotive response through images of nature that conjure memories of one's past (Murray & Heumann, 2007). The data suggests that a strong affinity to a particular locale, coupled with their personal background and preferences, played a significant role in whether or not participants were motivated to act in more eco-conscious ways. That is, participants' comments suggest that the sublime and environmental nostalgia visual rhetorical modes did raise their awareness of human impact on the current state of the environment, as well as of the importance of working toward protecting landscapes.

I would like to take this opportunity to acknowledge that part of the aim of this work was to investigate the kinds of documentaries and types of visual rhetoric my participants would be likely to encounter through standard Internet searches. One limitation of my taxonomy of visual rhetorical modes is that they were produced based on a small sample of different modes and drew largely upon Western knowledge frameworks. Another limitation concerns the challenge of choosing and categorizing clips into specific documentary and visual rhetorical modes. All modes are fluid and complex. I recognize that the video compilation included a number of clips from different sources covering a number of different environmental issues. The purpose of this study was to demonstrate viewers' initial reactions to various types of moving images and to complement current research. Similar studies have focused on still images and on the analysis of images instead of exploring viewer

response. There is a need for research to investigate how viewers respond to moving images and visual rhetorical modes (O'Neill & Nicholson-Cole, 2009; Smith & Joffe, 2012).

Findings: Visual Rhetoric and the Personal Connection

It was evident that some of the images evoked strong, personal reactions. For example, Fran commented on the clip from *The Fisherman's Son* (Malloy, 2015), which tells the story of Ramón Navarro, who works to protect his hometown of Punta de Lobos, Chile—a coastal fishing village where he grew up surfing and where his family has fished for generations—from corporate development. Fran talked about how the clip reminded her of her childhood in Australia. She talked about how her father used to fish, and how the same values portrayed in the clip (family connections and protecting the natural landscape) were ones with which she had grown up and continued to value. Conversely, in response to fishermen killing dolphins in *The Cove* (DuPré Pesmen & Psihoyos, 2009), Fran was clearly revolted. In the film, director Louie Psihoyos examines the illegal fishing practices of a coastal village in Japan where workers lure, trap and kill dolphins. When asked during the interview, Fran spoke candidly about a time when she was a child and witnessed a porpoise being killed:

They had cut the head off and took the head and left the whole body on the beach of our local beach . . . it was so revolting, and it was super hot, so you can imagine the stench. But even then, as a kid I remember seeing it was just the head taken. I was like, "what the heck?" (Fran, personal communication [interview], July 11, 2016)

While most of my participants gave positive examples of personal connections, Fran's personal experiences influenced her negative reaction to *The Cove* (DuPré Pesmen & Psihoyos, 2009) in response to what might be categorized as apocalyptic and jeremiad visual rhetoric.

The documentary *Jumbo Wild* (Ramras & Waggoner, 2015) is focused on the proposed development of the Jumbo Glacier Resort in British Columbia. Director Nick Waggoner begins with the story of Oberto Oberti, an Italian-born architect residing in Vancouver who plans to build a ski resort in an area of spiritual significance to the local Indigenous people. The majority of the documentary focuses on those who reject the proposal.

In reference to the opening scene depicting vast mountain ranges in *Jumbo Wild*, Lori explained, "As an outdoor enthusiast, the message was sold as soon as the panorama came up at the start" (Lori, personal communication [video annotation], 20:31). Similarly, Calvin observed, "beautiful compelling footage" (Calvin, personal communication [video annotation], 18:20). During his interview, Calvin commented on the impact of "the shots, the aerial shots of the valley, of the snow, of people still enjoying it" (Calvin, personal communication [interview], July 19, 2016). Similarly, Betty observed, "This is [a] part of the world I feel personally connected to; I care, and the images feel like home" (Betty, personal communication [video annotation], 22:38). In her follow-up interview, Betty connected the images to a natural landscape she had recently visited in the interior of British Columbia. She described the area as follows: "It just felt like everywhere you looked, in every single direction, as far as the eye could see, was untouched land. . . . it was so beautiful [and] it felt like I was looking at natural Canada." Betty stated she felt "connected to that area of the country", and that

when she viewed images from *Jumbo Wild*, they reminded her of that place and made it “feel like home”, and she felt very “protective” of that place. (Betty, personal communication [interview], July 6, 2016).

Martin also reacted positively when he commented on the “beautiful views”. He said the clip “hit a nerve, because I like the outdoors and love to go to places like that in total isolation and seeing that this could possibly be taken away really doesn’t sit well with me” (Martin, personal communication [video annotation], 26:43). During his follow-up interview, Martin again noted how this clip “hits me at home pretty hard just because . . . if I see that being taken away, I’m going to be quite upset if I don’t get to share that with, like, the kids of the future generations . . . some things should just be left alone” (Martin, personal communication [interview], July 5, 2016). Martin’s personal experience of being outdoors influenced his desire to protect places that are important to him. This was further emphasized when he connected the topic of this clip to his experiences as a camp counsellor: “They were thinking of building a mine nearby, and if that were to happen, all that water, all of a sudden, would probably get polluted, because it takes one spill to destroy everything” (Martin, personal communication [interview], July 5, 2016).

Martin’s desire to be outdoors and his work experiences at an outdoor camp affected his response to the clip from *Jumbo Wild* apparently because he was able to make a personal connection. He understood that the development of a ski resort in a natural environment has potential risks. Martin was troubled by the fact that, if he does not work to protect natural landscapes, these natural areas will soon disappear. In the examples described above from *Jumbo Wild*, participants reacted much more strongly to sublime visual rhetoric and environmental nostalgia. The combination of these modes often focuses on images of vast landscapes, eliciting memories and encouraging reflection on natural environments, which often evokes an emotive response in relation to loss or potential loss of the same.

Discussion

My findings, which demonstrate that a personal connection to a memory, experience or event may better engage or persuade viewers, are supported by other studies, such as those conducted by Covi and Kain (2016) as well as O’Neill and Nicholson-Cole (2009). Similar ideas are also reflected in environmental theories, such as those proposed by Aldo Leopold (1949), Rachel Carson (1962) and David Sobel (1998; 2004), who note that to influence or enact some kind of change, people must make a personal connection to a place. People often need to “remember and be re-membered”, that is, “to ‘re-member’ participants who feel dismembered from the physical context of their immediate worlds and for them to ‘remember’ earlier positive contacts with nature” (Knapp, 2005, p. 278). This, in turn, allows people to recognize the importance of a local area, which then might extend to an awareness of larger, global issues. As Betty noted at the end of her annotations, “I think an environmentalist film’s message is more effective when the film is about a place where you live or a place you have a personal connection to” (Betty, personal communication [video annotation], 60:00). The data suggested that it was not just a local place that made a significant impact, but also personal experiences within a local place. Martin and Fran both had personal experiences that helped them

identify with the images and issues portrayed in the clips. In addition, Lori and Martin identified with issues in the clips in ways that suggested their personal experiences of the outdoors played a role in their response. Within the context of education, such experiences are often referred to as place-based education, which was discussed briefly in the introduction. Connecting students to the outdoors and to a particular local place does have an impact on developing their affinity with a particular natural place and on developing a pro-environment attitude (Ballantyne & Packer, 2002; Mannion, Fenwick, & Lynch, 2013). In addition to developing students' awareness of environmental issues, connecting students to a place can also help to develop their environmental literacy, or ecoliteracy, which is the way in which students can come to understand the principles of ecological communities and to incorporate these principles into creating sustainable human communities (Orr, 1992).

Most literature discusses the importance of cultivating students' appreciation of nature so they may become stewards of the environment, and that this appreciation requires engaging students with outdoor places. Nature walks, for example, play an instrumental role in teaching students about the environment and can help to develop students' "admiration for nature, opportunities to develop actions and a caring attitude towards nature" (Mannion et al., 2013, p. 793). There are, indeed, many benefits to engaging students in outdoor places and this is a central tenet of environmental education. However, as more and more people, and especially students, turn to documentary media to learn about environmental issues, it is also important to consider how different visual rhetorical approaches in media can impact their awareness and understanding.

The data from this study helps to demonstrate that one's affinity with a particular natural space, especially one that is familiar and/or local, can impact an audience's reactions to what they are viewing. Specifically, viewers may have a stronger, more emotional connection to an environmental issue because the moving images remind them of a particular place that is important to them. Scholars in the field of visual rhetoric note that the persuasiveness of an image is partly due to its "presence", that is, the way in which the idea or object is brought to the forefront of "the consciousness of the audience members" (Hill, 2004, p. 28). My study suggests that the images that most strongly reflect a place or an event that is familiar to the viewer will draw a more emotional response, which will make images more persuasive, with a more lasting effect, because the image "establishes the salience of what is portrayed" (Hill, 2004, p. 85). I would argue that while it is important to engage students in the outdoors to develop their awareness of the issues and their environmental literacy, it is equally important to consider the role of media.

I would encourage environmental educators to consider the role of media in relation to students' sense of place. Perhaps, instead of considering "place-based" learning, educators could consider the notion of "place-responsive pedagogy", which is described as teaching "by-means-of-an-environment with the aim of understanding and improving human-environment relations" (Mannion et al., 2013, p. 803). Place-responsive pedagogy is often explored in direct relation with nature excursions, but this approach could also include the exploration of environmental communication. Mannion, Fenwick and Lynch (2013) do note their approach to place-responsive pedagogy is "one element of a wider process of curriculum making" that includes the "learners'

dispositions and experiences of place” and “requires in educators a degree of flexibility, creativity [and] a recognition of differences found in the ecological and social domains” (p. 803). The term and use of the word “responsive” allow for a much broader approach for students to consider their connections or responses to outdoor environments, and how their connectedness to nature may impact the ways in which they respond to visual rhetoric mediated across a number of different platforms. Engaging students in the outdoors is just one part of environmental education. Students’ affinity with a particular locale can, as demonstrated by the discussions above, have a powerful impact on how they react to visual images. As such, place-responsive pedagogy may provide more opportunities for educators to combine a variety of different elements to develop students’ connections with nature and environmental literacy, while also considering the role of visual rhetoric in a variety of media forms.

Significance

In *A Sand County Almanac and Sketches Here and There*, Leopold (1949) reflects on a hunting excursion and vividly recounts a significant moment in his life:

I reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes—something known only to her and to the mountain. I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer, that no wolves would mean hunters’ paradise. But after seeing the green fire die, I sensed that neither the wolf nor the mountain agreed with such a view. (p. 130)

As noted earlier, people develop a deeper awareness of the environment through their experiences, which are a way to remember and re-member (Knapp, 2005). Environmental scholars and activists argue that to motivate people to protect the environment, they must be connected, or reconnected, to a specific locale. For Leopold, it was the event of witnessing the “fierce green fire” fading from the wolf’s eyes. Personal connections can, of course, be related to experiences in specific places. However, connections may also be made by responding to the rhetoric in different media forms. If we educators view developing awareness of environmental issues, working toward solutions and engendering a willingness to act as desirable goals, then it is also important that we understand how visual rhetoric might serve ends. The nuanced play of visuals in documentaries can be tremendously persuasive, even more so if the images make a personal connection.

As environmental communication increases, it has become critical for environmental educators to also turn their attention to the impact digital media can have on students. Environmental documentaries address a multitude of subjects, some supporting and others opposing particular issues. It is important for students to be able to skillfully exchange ideas, to explore different perspectives, and to effectively engage with digital media, which includes being able to analyze how visual information is mediated across different platforms. Students must be able to analyze and make sound judgments based on reading or viewing different media texts, which can contribute to their understanding and awareness about issues, both locally and globally. While it is important for students to develop their ecoliteracy skills through engagement in natural environments, it is likewise

important for students to link that ecoliteracy to media literacy, and to consider how technology has greatly changed and impacted the ways in which information is mediated. When students turn to documentary media to learn about environmental issues, it is important that they are informed about what visual rhetorical modes are, how to identify such modes, and how these modes may impact and shape their understanding of environmental issues.

James Balog notes in the documentary *Chasing Ice* (Aronson & Orlowski, 2012) that his previous photographs, which he describes as bloody and gory, were difficult for people to look at. As a result, he decided that, to bring more attention to the subjects of his photographs, he needed to focus on the beauty, to “show these things in a more seductive fashion. I had to look at it in ways that would engage people, pull them in” (Aronson & Orlowski, 2012, 5:27- 5:37). Similarly, SeaLegacy is a Canadian non-profit society devoted to promoting awareness of and protecting various natural environments and species, though it primarily focuses on protecting the sea. The main method of communication for SeaLegacy is through visual storytelling in which they often use visual images as a means to give people hope: “Hope is empowerment. Hope is a solution. Hope is a game changer” (SeaLegacy, n.d., para. 1). Both Balog and the founders of SeaLegacy suggest that one of the most effective ways to inform and persuade viewers is to focus on the beauty, or the sublime, or one’s past.

As more information about the environment is mediated through visual images, serious and specific attention must be paid in environmental education programs and classes to how visual rhetorical modes in environmental documentaries engender awareness of the environment and a willingness to act in sustainable ways—especially given that environmental stewardship has been identified as essential to human survival.

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