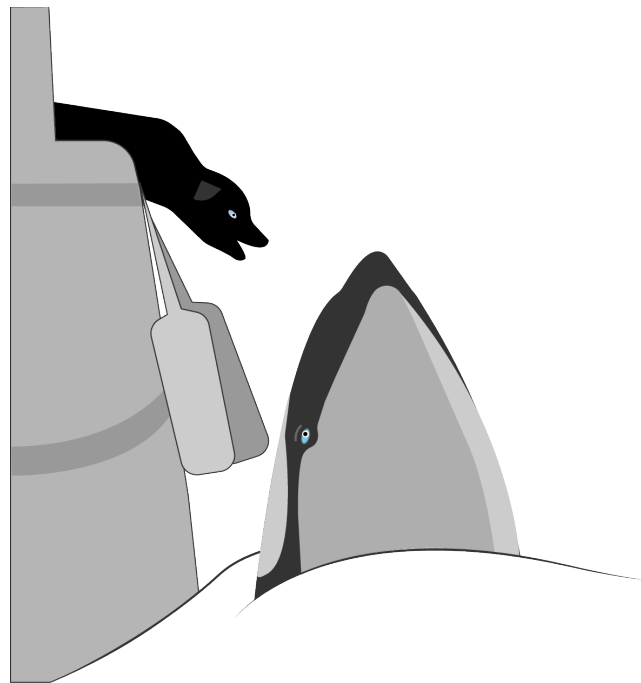


**Linking Luna: Implications of a Viral Video on
Conservation Awareness of Endangered Killer Whales**

By

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Ultimately, I must acknowledge Luna. Without him, I would not have applied to MACT or completed this research project. Although we crossed paths for just a short time, he changed my life forever. There is still much I want to say about him, but perhaps this was the push I needed to embark on that bigger goal.

For Luna / L98 / Tsu-xiit

“Not all those who wander, are lost”
- Tolkien, J. R. R



Figure 1. Peronino, M. C. (2005). Luna swims in Mooyah Bay.

Abstract

After a decade of observing a killer whale video that I filmed and uploaded to YouTube go viral on social media, I felt it was necessary to understand the viral video phenomenon. The aim of this research project was to analyze user comments on a video-streaming platform to find out what implications a viral video may have on conservation awareness of endangered killer whales. This broad research question was broken down into four sub-questions: (a) what did people say about the video; (b) what factors made the video go viral; (c) how was the video framed in user comments; and (d) what implications did the video have on conservation awareness of endangered killer whales.

Through an examination of this case study, I employed a qualitative and quantitative content analysis of one hundred YouTube user comments, replies and thumbs associated with my video. I used inductive analysis to categorize this data into eight categories. The frame theory lens was applied as a second level analysis of the media set-up, audience perceptions and media effects. Key findings revealed that the ‘love’ category was the highest ranking, while the ‘conservation’ category was second lowest ranking. This implies a low interest among users in commenting about conservation awareness for endangered killer whales – even though users commented most often about their warm feelings towards the animals. However, my findings did support those from other viral video studies, since it demonstrated that people were drawn to view and interact with positive and emotional video-streaming content. Therefore, my recommendations include suggestions for an outreach strategy to increase conservation awareness in a social media campaign that builds on my research. This study could also be used as a template for future research of other endangered wildlife viral videos.

Disclaimer: This study does not endorse orchestrated interactions between wild killer whales and dogs, or any other domestic animal.

Keywords: viral video, phenomenon, implications, killer whales, orca, Luna, endangered wildlife, YouTube, First Nations, content analysis, case study, category schemes, community and conservation, frame theory.

Background of Topic

During the summer of 2003, I monitored and documented a solitary killer whale named Luna / L98 / Tsu-xitt, on behalf of the *Luna Stewardship Project* (Figure 2).



Figure 2. Griffin, R. M. (2003). *Peronino filming Luna.*

My video clip of Luna, the media artifact at the centre of this research, depicts the killer whale following alongside a boat with a dog onboard. Luna and the dog interacted and came incredibly close on several instances causing strong emotional reactions online. A prevalent discussion and debate has continued to unfold within the comments of the video on social media; is Luna attacking or socializing with the dog? YouTube launched in 2005 and I uploaded my video to the platform in 2006, but since it was a less heavily used platform back then, the video

did not receive the kind of viral hits as some videos do when they are uploaded today. However, it was not long after being uploaded, that my video caught the attention of Ellen DeGeneres and was aired on global television in 2006.



Figure 3. Peronino, M. C. (2006). *Luna on the Ellen DeGeneres show*.

Although the show brought attention to Luna on TV, disappointingly it did not further educate viewers about conservation issues on behalf of Luna or his species (even though I requested it). Today, Luna has become world famous and YouTube statistics indicated that the video is increasing in views, but killer whales still face a number of significant threats to their long-term viability as a species.

To date, the original video on YouTube has surpassed two million views and contains thousands of comments and likes. The Luna and dog video on YouTube attracted attention from other big media and was aired on the Discovery Channel in 2007, and in feature films *Saving Luna* in 2007 and *The Whale* in 2011. I continue to receive inquiries about the clip today. Conversations about Luna's behaviour has been unfolding on social media ever since and due to the sensitive nature of the endangered killer whale population on the West Coast, the conversation has been a passionate - however not always accurate - one.

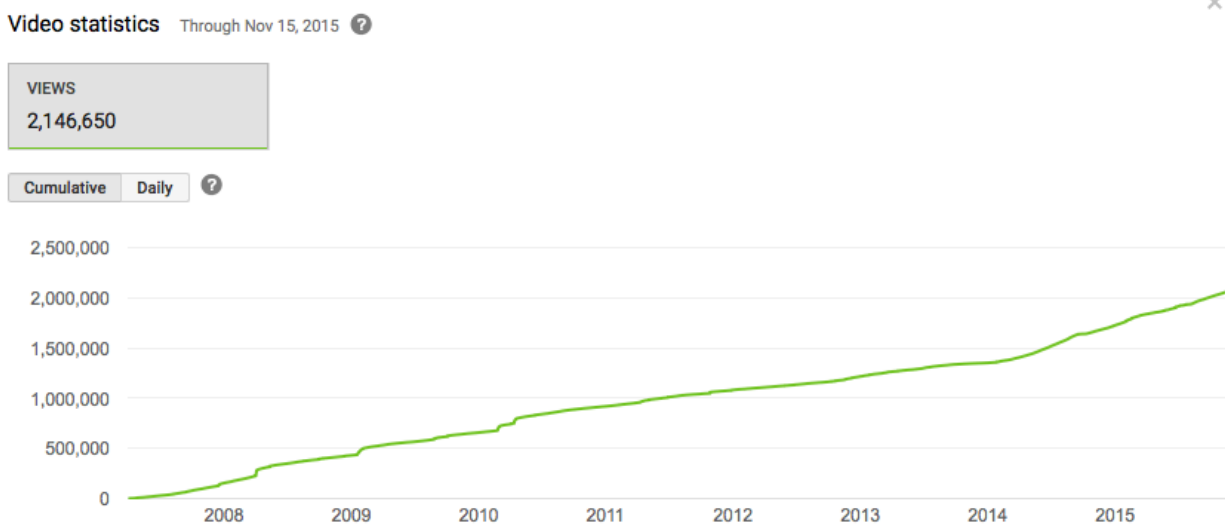


Figure 4. Screenshot of YouTube video statistics of Luna and Dog video.

Back in 2003, Web 2.0 was still in its infancy, and the only tool I had at my disposal for publishing my content was a blog I set up through blogger.com (now owned by Google). Videos and photos had to be first uploaded to a host server and then linked within the blog post. To accommodate this, I built a website to host the media and the blog that I could easily access from a remote camp, through a dial-up connection, located at the docks of Gold River, B.C.

Out of personal and professional interests, I went on to document the northern resident killer whales of northern Vancouver Island, and the southern resident killer whales of southern Vancouver Island and the United States. As Web 2.0 grew to include the social media platforms we are familiar with today (Facebook, YouTube, Twitter), I was contracted to work with various ecotourism companies where I built websites, documented and blogged about killer whales and marine life.

Prior to documenting killer whales, I was an experimental filmmaker between 1995 and 2000, where I focused on abstract and symbolic narratives. My films were showcased in film festivals (nominee at the Hot Docs International Film Festival) and on television. In late 2002, I

experienced a synchronicity; I had a dream about seeing a killer whale living near a boat dock, and soon after I found out about Luna's predicament in Gold River. I relentlessly pursued my dream with the hopes of making another experimental documentary about this situation, ultimately bringing me to this research project. My interest in killer whales began as a child after seeing them in captivity at Sealand of the Pacific in Victoria, British Columbia, Canada.

In 2014, five copies of the video were uploaded (without my permission) to Facebook and under each video were thousands of likes, shares, and comments. In the comments, people wrote that they felt it was important for Luna's story to be known, as it brings attention to his endangered southern resident killer whale species - even if the video post provided no leads of information. Because of this, I decided not to report my video to Facebook for copyright infringement even though the Page owner did not give credit to the videographer or lead back to the source video, even after requests were made from myself and other commenters. I am no longer documenting killer whales at this time, but instead have decided to redirect my energy at understanding what my work and work like mine is having on the public perception of killer whales, and more importantly, conservation awareness.

Introduction

Online comments reflecting on digital media such as videos or news stories are a popular way for people to interact on the Internet today. However, online comments have also been a major source of contention; for instance, CBC has indefinitely disabled their comments due to the volume of unmanageable hateful and racist comments on articles discussing First Nations themes (McGuire, 2015). Either positive or negative in tone, it is through the perspectives of others that people gain access to information and misinformation through online comments. This newer phenomenon leaves me wondering: how do we understand the implications of social

media, viral videos and online social discourse, especially on sensitive topics such as the perceptions of conservation awareness of endangered wildlife?

The aim of this research project is to understand what people are saying about a video and what implications that has on conservation awareness of endangered killer whales. There is a gap in the literature in regards to how viral videos impact the awareness of conservation in regards to endangered killer whales. The following four research questions guided my investigation into my viral video of Luna:

RQ1: What do people say about the video?

RQ2: What factors make the video go viral?

RQ3: How is the video framed in user comments?

RQ4: What implications does the video have on conservation awareness of endangered killer whales?

This research builds upon the body of literature that has examined viral video implications on culture and wildlife.

The literature review begins by explaining the eligibility criteria of the literature search, followed by two major sections; that of killer whales and that of viral videos with each section breaking down into subsections. The first major section of the literature reviews the Pacific-Northwest ecotypes of killer whales such as residents who are fish-eating (southern and northern) killer whales and transients (Biggs) who are mammal-eating killer whales. This section also covers the captivity of killer whales and the correlation of how that negatively impacted current populations. The purpose of describing the species is to better illustrate one famously known individual, Luna a young southern resident killer whale at the centre of the viral video, and his unique story as a solitary cetacean. He had relocated from his home waters of the Salish

Sea to the territory of the Mowachaht/Muchalaht First Nations of Nootka Sound. Cultural, media and interspecies perspectives are reviewed in order to paint a more thorough picture of the specific case of Luna.

The second major section of the literature, reviews the phenomenon of viral videos, and what implications viral videos have on culture and wildlife. The literature review points out one key article by Nekaris, Campbell, Coggins, Rode and Nijman (2013) about the illegal wildlife trade of the slow loris (an endangered primate); this study has become an inspiration and guide for my research project. In addition to the impacts on endangered wildlife, the literature also reviews the implications of viral videos on Native American and African American cultures, addressing issues of racism and stereotypes. Although the literature review did not go heavily into methodologies, one key article by Madden, Ruthven and McMenemy (2013) is noted for suggesting category schemes for analysis of YouTube comments. In addition to this, reoccurring methodologies such as content analysis were also noted in the summary, however the literature review does not heavily examine any theoretical frameworks, as my research project is inductive, with the explanatory framework manifested from analysis of the data.

My research design is an inductive case study that employs a methodology of qualitative and quantitative content analysis of YouTube user comments, replies and thumbs and includes two levels of analysis: descriptive and theoretical. The qualitative content analysis involves examining one hundred most recent user YouTube comments (not including replies) from March 17, 2016 to one year prior (YouTube does not date stamp older comments), where comments are then classified into eight categories for analysis: conservation, scientific, political, cultural, love, fear, troll, and other. An additional qualitative analysis was done of the replies, by cross-comparing their category themes. The comments were scraped manually by a copy and paste

method from my browser to a Word table. In addition to this, I conduct a quantitative content analysis of the number of replies and thumbs found on those one hundred comments. The total number of replies and thumbs per each category are entered into a data chart. Microsoft Word was used to create three tables; one for the category names and descriptions, one for the comment captures and numbers of categories pertaining to comments, replies and thumbs; and one chart for all the final data. Frame theory provides a second level analysis of the video set-up and audience perception framing.

The chapter on findings and discussion of comments, replies and thumbs, use bar graphs to visually compare the findings. Comments, replies and thumbs all reveal different results but there are a couple that remain the same such as the category of ‘love’ being highest ranking and ‘conservation’ being very low in rankings. This makes the overall findings clear; just because people love Luna or love the video, does not mean they are informed about endangered killer whales and conserving them. These findings are reminiscent of the slow loris (Nekaris et al., 2013) study, which found the ‘cute’ category to be highest ranking but that celebrity endorsements did not amount to educating the public on behalf of illegal wildlife trade, as I also saw with my televised clip.

Each category is broken down into more detail where my discussion investigates and compares comments, replies, thumbs and their categories. Interestingly, the categories with the smallest numbers of comments, such as ‘cultural’, had the longest comments from users and the most comprehensive discussion of examples. Another significant finding was the rampant level of misinformation about Luna and killer whales. Some users made it obvious how they framed their opinions, either from other media, while others seemed to come up with their own

perceptions. Findings of factors aligned with other researchers in that positivity and emotional content made the video go viral.

The theoretical framework of frame theory is the lens used to more deeply analyze how the video is framed through the media set up and perceived by individuals. This theory is broken down into media frames and individual frames followed by Scheufele's (1999) process model of framing research, used to unpack my research. The frame theory helps us to realize how the video clip was set up (by me) and how the audience interprets that media, through an analysis of user comments. An abstract chart is included to help explain in my discovery of the media effects and any implications found.

My recommendations were informed from both the descriptive and theoretical analysis and outlines how to improve the video framing through storytelling and the implementation of a public outreach strategy, that includes an infographic, a website, modifications to the YouTube video and a Vine clip.

Finally, limitations of the study include the methodology of a content analysis involving subjective comment categorization. My study only includes one sample video and one hundred most recent comments of thousands more. Future studies could include expanding the methodology into interviews, comparing more than one video, and sample different comments such as a random sample or top comments.

In sum, there is a gap in the literature in regards to viral videos and endangered killer whales and conservation. The aim of this research is to understand how a viral video impacts the users' awareness of conservation of endangered killer whales. In setting out to investigate this, a methodology consisting of a content analysis of one hundred YouTube user comments is employed to categorize posts into eight themes. Frame theory is used to understand media and

individual frames, how the audience perceives the video and what media effects occur. Key research by Nekaris et al., (2013) examines the implications of a viral video on an endangered primate, and helps to guide my research, as seen in the literature review.

Literature Review

Introduction

The aim of this study is to analyze the implications of a viral video on the awareness of endangered killer whale conservation. The research problem statement is broken down into four questions:

RQ1: What do people say about the video?

RQ2: What factors make the video go viral?

RQ3: How is the video framed in user comments?

RQ4: What implications does the video have on conservation awareness of endangered killer whales?

No peer-reviewed articles were found that specifically identified the implications of viral videos on killer whale conservation. However, one peer-reviewed article by Nekaris et al., (2013) titled “Tickled to Death: Analysing Public Perceptions of ‘Cute’ Videos of Threatened Species (Slow Lorises – *Nycticebus* spp.) on Web 2.0 Sites” evaluated a viral video’s implications on the illegal wildlife trade of the slow loris (primate) and cautioned that “media can have damaging effects if viewers do not know the context” (p. 2). Given this gap and emphasis on content clarity, the following three themes that aligned with the research questions were identified for the literature review: 1) killer whales; 2) viral video phenomenon; and 3) implications with an emphasis on wildlife conservation. Finally, a summary will identify strong themes, gaps, methodology, limitations, and discuss how the literature will guide the research.

Eligibility Criteria

Sources were imported to RefWorks from the University of Alberta online library, Google Scholar, ResearchGate and included eighteen databases with multiple sources from Business Source Complete, ScienceDirect, Communication & Mass Media Complete and Biology Letters. Out of fifty-eight sources, forty-eight were considered for the literature review of which forty-one sources were discussed. Peer-reviewed articles were found through keywords: orcinus orca; killer whales following boolean terms of predation, behaviour, ecotype and Luna/L98; viral video following boolean terms of phenomenon, implications, wildlife, education and conservation; YouTube, following boolean terms of content analysis and comments. Articles were inputted into Google sheets for tabular synthesis and theme organization. At the beginning of each major theme section, a more detailed breakdown of the eligibility criteria is discussed.

Killer Whales

For this section on killer whales, twelve sources were selected for the review. Amongst hundreds of scientific articles to choose from, four peer-reviewed articles, three government documents, and five grey articles were selected: one news article, two films, one book, and one dissertation. Multiple sources were found from databases: Biology Letters and Science Direct, Government and periodical websites, Netflix, a DVD and a bookstore. I selected sources that specifically aligned with the research questions in regards to what people were saying in the comments about the video: a persistent social media discussion about killer whale predation and behaviour. Peer-reviewed literature was selected based on supporting topics of Pacific Northwest killer whale ecotypes (including conservation and captivity) and on the solitary cetacean, Luna.

Between 1998 and 2010, I documented killer whales (filmmaker, videographer, photographer), designed websites, print material, blogs, strategies, and fundraising campaigns for

killer whale themes. Throughout that time I acquainted myself with scientists, researchers, photographers, writers and artists who worked with killer whales first hand. This has been helpful for identifying themes and what literature to research; in fact, I requested a couple of articles directly from an author at the *Department of Oceans and Fisheries* (DFO).

Ecotypes. “The killer whale (*Orcinus orca*) is the largest member of the family Delphinidae and one of the most widely distributed mammals. It occurs in all the world’s oceans and most seas, but is most commonly found in productive coastal waters in high latitude regions” (Ford, Stredulinsky, Towers & Ellis, 2012, p. 1). Possibly the most famous killer whales are those found along the Pacific Northwest Coast of Canada and the United States. They are divided into two ecotypes: fish-eating, known as northern and southern resident killer whales, and mammal-eating, known as transient (Bigg’s) killer whales. Within my literature collection, three leading peer-reviewed scientific articles (Ford, Ellis, Olesiuk & Balcomb, 2010; Parsons, Balcomb, Ford & Durban, 2009; Ford et al., 1998) addressed predation and social structures of both forms of West Coast killer whales. Ford et al. (1998) stated that the: “two forms of killer whales, resident and transient, occur sympatrically in coastal waters off British Columbia, Washington State, and southeastern Alaska. The two forms do not mix, and differ in seasonal distribution, social structure, and behaviour” (p. 1456).

This finding was established due to the results of their quantitative methodology which was executed over a long period of time from 1973-1996, within six regions of the coast, and consisted of live observations and documentation of predation behaviours and extraction of stomach content from fourteen beached killer whale carcasses. Results showed that resident killer whales consumed fish, 96% of salmon, while transients only consumed mammals and seabirds (p. 1456). Although the two communities of residents are similar, they too do not

intermingle with each other or transients. Although there have been some rare accounts of southern resident killer whales harassing and killing harbour porpoise, they did not eat them (Dunagan, n.d.).

Conservation. It is imperative to educate the public about killer whales due to the fact that southern resident killer whales are endangered; northern resident killer whales are threatened (Towers, Ellis & Ford, 2015, p. 2) in addition to transient (Bigg's) killer whales (Ford et al., 2012, p. 1). A ground-breaking study by leading Canadian toxicologists found that the "southern resident killer whales (*Orcinus orca*) have recently been described as among the most contaminated marine mammals in the world" (Grant & Ross, 2002, p. x). Due to the contamination of "PCBs, dioxins, furans and dichlorodiphenyltrichloroethane (DDT)" in addition to "declining prey (salmon) abundance and heavy vessel traffic", the southern residents have been listed as "endangered" (Grant & Ross, 2002, p. x). Preventing further prey and habitat destruction of marine life are critical for killer whale survival.

Captivity. A theme that has gained incredible momentum in recent years through social media is that of orca captivity. Cowperthwaite's (2013) feature length documentary film *Blackfish* recounted the story of one captive killer whale named Tilikum, who was responsible for three human deaths in marine parks. The film reviewed the history of the captive industry including how the southern resident orca population is now endangered partly because many were removed from the population for marine parks. Following the story of the death of SeaWorld's senior trainer Dawn Brancheau, the documentary aimed at educating the public about why captivity is unethical and must end. *Blackfish* has been paramount in bringing awareness of killer whales not only in captivity but of those populations that were devastated by marine park captures such as the southern residents who scientists indicated linger at eighty-one

members (Center for Whale Research, 2015, para. 2). *Blackfish* linked together the important thread of captivity implications on the current state of endangered wild killer whales, and brought necessary attention of this matter on a global scale.

Luna (L98/Tsu-xiit). With there being only one peer-reviewed article that included Luna, four grey literature were added: one dissertation (case study) from Evergreen State College, one Smithsonian periodical, one book, and one feature film.

The Whale. Parfit and Chisholm's (2013) feature length documentary *The Whale* recalled the story of the solitary southern resident killer whale named Luna (L98/Tsu-xiit born 1999) and of his unique predicament of living in Nootka Sound, BC from 2002 to 2006. In the absence of his pod, Luna became precariously social with people and dogs, and was known for playfully yet dangerously interacting with boats and floatplanes. Various wildlife management strategies were tried by different parties, but failed. The film explored the Mowachaht/Muchalaht First Nations perspective of Luna (Tsu-xitt), who they believed to be the reincarnated Muchalaht chief, as well as the dramatic thwarted capture and relocation of Luna. Luna remained in Nootka Sound until 2006 when he was tragically killed, believed to be by a large tugboat.



Figure 5. Peronino, M. C. (2003). *Luna interacts with a floatplane in Nootka Sound.*

Prior to this film, Parfit (2011) discussed the making of *The Whale* in his *Smithsonian* article “Luna: A Whale to Watch”. The article reviewed the previous work of the writer and his wife, Chisholm, and provided insights on the recent task of making their acclaimed feature length documentary called *Saving Luna*. With the addition of celebrity executive producers Ryan Reynolds and Scarlett Johansson, *Saving Luna* was reworked into the award-winning film, *The Whale*. When describing Luna, Parfit (2011) recalled “the many ways he tried to communicate, from whistles and squeaks to imitations of boat motors to slapping the water and looking in people’s eyes; and how he would often roll on his back and wave one pectoral flipper in the air for no reason we could detect” (p. 3).



Figure 6. Peronino, M. C. (2005). *At the Tsu-xiit guardian camp in Mooyah Bay.*

Mimicry. Marine mammal researchers Foote et al. (2006) detected vocal learning in killer whales. Their quantitative research captured hydrophone recordings of Luna mimicking sea lion barks when only L98 and no sea lions were observed in the area. A total of eight of the sixteen barks recorded were within vocalization bouts consisting of recognizable killer whale calls or echolocation clicks (p. 510).

In his newly released book *Of Orcas and Men: What Killer Whales can Teach us*, journalist Neiwert (2015) covered a wide span of topics pertaining to killer whales: First Nations culture, myths, captivity, politics, ethics, and conservation. Neiwert (2015) noted Luna's mimicry capabilities as realized through researchers Foote et al. (2006), along with an account by filmmaker Parfit, of Luna imitating a boat engine:

One day Parfit filmed Luna playing with a small aluminum outboard boat at the dock, placing his rostrum next to the hull at the boat's rear, near the little motor, and imitating it loudly, using his blowhole like a pair of lips: 'Brrrrrr-r-r-r-rrrr!' Funny thing: it really did sound just like an outboard boat engine. (Neiwert, 2015, p. 58).

Cultural Differences. Although touched upon by others (Neiwert, 2015; Parfit, 2013), Norman's (n.d.) dissertation (case study) "Luna/Tsu-xiit the 'Whale': Governance Across (Political and Cultural) Borders", intensively examined the background of both Luna and the Mowachaht/Muchalaht First Nations, whose territory the killer whale resided in. She also reviewed the case from both the Native and the non-Native perspectives, and analyzed significant events and challenges experienced between these parties.



Figure 7. Peronino, M. C. (2006). *Ed Thorburn (DFO) and Chief Mike Maquinna.*

Norman (n.d.) emphasized how “despite Luna’s tragic and untimely death, his story and the issues surrounding its public unfolding, remain very much alive” (p. 4).

Viral Video

For the viral video section of the literature review, twenty-nine sources were considered: twenty-three peer-reviewed articles, and six grey sources consisting of five news articles and one dissertation from John Hopkins University. Multiple sources were collected from Business Source Complete and Communication & Mass Media Complete databases. All of the sources were checked for their validity and citations. There have been a number of articles published on the topic of viral videos. For the review, this theme has been broken down into two main sub-themes with subsequent sub-themes that were found in the literature: phenomenon with sub-themes of categorization, factors, forecasting, what people say, why people share; and implications on wildlife conservation, human rights education and marketing strategy. In a nutshell, “a viral video is a video that becomes popular through a viral process of Internet sharing, typically through video sharing websites, social media and email” (Viral Video-Wikipedia, 2015, para. 1).

Phenomenon. Stepping back nearly a decade, Wesch’s (2007) article “What is web 2.0? What Does it Mean for Anthropology” reviewed the effects of technologies such as blogs, bookmarking sites, and email, had on the sharing phenomenon. Wesch (2007) acknowledged the approaching shift in media technologies that is today social media, and predicted paramount changes for our culture and consequences of the technical landscape. Wesch (2007) stated that “it is not just the mediascape that is transforming, it is human relationships, and anthropologists are increasingly being called upon to explain this” (p. 31). His own viral video about Web 2.0

provided much momentum at the time and his article offered perspective of the impacts of Web 2.0 back in 2007 making a contrast to today's technologies that have rapidly evolved.

Returning to the present, Yang and Wang (2015) suggested in their article "Social Sharing of Online Videos: Examining American Consumers' Video Sharing Attitudes, Intent, and Behavior" that "the rising trend of online video viewing and sharing has presented online marketers enormous opportunities to engage their stakeholders and expand their offline advertising campaigns" (p. 907). Web 2.0 has evolved greatly since Wesch's (2007) article and from the time that I uploaded my video to YouTube back in 2006.

Viral Video Factors. The literature review revealed a range of factors that have been said to drive the success of a viral video. For instance, West's (2011) article "Going Viral: Factors That Lead Videos to Become Internet Phenomena" discussed a content analysis of the top 20 viral videos as determined by *Time Magazine*. The study found common categories of what made a video go viral such as title, length, irony, surprise, laughter, minority presence, musical quality, youth and talent (West, 2011, p. 76). West (2011) also mentioned limitations, in that some of the factors are relative; "although parameters were set for each of these elements, they were subject to the coder's own perceptions" (p. 83). In their article "Emotion and Virality: What Makes Online Content go Viral?" Berger and Milkman (2013) suggested that certain benefits drive sharing: useful information, saving money, health, self-image, as well as emotional impacts (p. 19). Their data findings of approximately 7000 *New York Times* articles with 7630 negative and positive keywords extracted, Berger and Milkman (2013) concluded that positive news was more viral than negative news (p. 20). Mohr's (2014) "Going Viral: An Analysis of YouTube Videos" examined Boyle's *I Dreamed a Dream* viral video and employed a "content analysis study that explored the relationship between the social media influencer on YouTube

video popularity” (p. 45). The study found that seeding influencing factors such as celebrities (although not true with my video), media vehicles, or huge followings of people, contributed to the success of viral videos (p. 46). Similarly, Nekaris et al. (2013) also suggested in their research of a viral video that celebrity endorsement brought about more views (p. 8). However, in contrast to Mohr’s (2014) findings of influential factors, Wallsten’s (2010) analysis of the YouTube viral video *Yes We Can* used in the presidential elections, found that “bloggers and members of the Obama campaign played crucial roles in convincing people to watch the video and in attracting media coverage while journalists had little influence on the levels of blog discussion, online viewership, or campaign statement” (p. 174).

Forecasting Viral Videos. Several studies analyzed patterns of viral videos. Based on the type of study, different results were expected. For instance, in their article “Viral Video Style: A Closer Look at Viral Videos on YouTube” researchers Jiang, Miao, Yang, Lan and Hauptmann (2014) categorized a dataset of 20,000 viral videos with keywords: viral, quality or background. The study produced the largest dataset of viral videos, and observed characteristics of viral videos such as measuring socialness, evolution of lifespan and correlation within the metadata. Jiang et al. (2014) suggested that their data forecasted the peak day of a viral video and succeeded beyond previous state-of-the-art methods (p. 1). However, in their study of “Predicting the Popularity of Online Content”, Szabo and Huberman (2010) suggested that YouTube videos attracted attention over time, arguing that predicting popularity is possible due to regular patterns of attention, and that there are early indicators as to whether or not content will become popular (p. 83). This might inform why my video continues to increase in views (Figure 4) and not peak as suggested by Jiang et al. (2014). In contrast to Szabo and Huberman (2010), Khan and Vong (2015) stated in their article “Why do Things go Viral on YouTube?”

Strategic Direction” through a correlation analysis, that the publication date of a video did not correlate to favourite and view counts, and the older a video got, the more its viral chances decrease (p. 22). Again, this seems to suggest the opposite of my video of Luna on YouTube (Figure 4).

What People Say. With the capability to capture and categorize comments through either a qualitative or quantitative content analysis, researchers can get a better glimpse into how people perceived content, what they said and what that might mean for implications.

In their peer-reviewed article of a threatened species, Nekaris et al. (2013) analyzed user perceptions of the slow loris through a YouTube viral video. Nekaris et al.’s (2013) data revealed the top number (22.7 %) of comment types pertaining to the category of ‘cute, adorable, funny’:

As far as I can see, as long as the animal is loved and happy, it doesn’t matter. Providing they’re treated right. I mean, obviously having wild animals isn’t really right, but let’s be honest... that animal would’ve already been shot or something for meat by now if it was in the wild... I think it’s better off being tickled! (Nekaris et al., 2013, p. 3).

Through their content analysis of thirteen comment categories, Nekaris et al. (2013) captured how people's perceptions of the illegal wildlife trade changed over time. The data results brought attention to the “naïve public learning” (Nekaris et al., 2013, p. 8) that occurred by those who might have been otherwise oblivious to the plight of the slow loris.

Kopacz and Lawton’s (2013) article “Talking About the YouTube Indians: Images of Native Americans and Viewer Comments on a Viral Video Site” used a quantitative content analysis of variables to classify user video comments in regards to perceptions of Native American culture, which they stated is underrepresented and misrepresented in traditional media. Rather than capturing and categorizing comments as demonstrated by Nekaris et al. (2013),

Kopacz and Lawton's (2013) aim was to examine the "relationship between audience comments about user-generated videos (UGVs) and the characteristics of NA portrayals presented in the videos" (p. 18). In doing so, the study "findings show that viewers were sensitive and responsive to various aspects of Native portrayals in YouTube videos" (p. 33). Kopacz and Lawton (2013) additionally suggested that a study of viewer comments would be beneficial for "understanding the nature of users' racial discourse on YouTube" (p. 34).

Why People Share. Unlike the majority of studies which employed a content analysis, Yang and Wang (2015) found through their two mixed-method surveys that online video sharing attitudes, intent, and behaviour were influenced by pleasure and expressiveness for the most part, as their data suggested that "perceived pleasure stands out as the most important predictor of U.S. consumers' online video sharing attitudes and intent" (p. 916). Similarly, Nelson-Field, Riebe and Newstead (2013) claimed in their article "The Emotions That Drive Viral Video" that people are more likely to share content when they are emotionally aroused and that valence played a role. Chen and Lee's (2014) article "Why Do We Share? The Impact of Viral Videos Dramatized to Sell" revealed that the message of the story and the enjoyment of the video were effective factors in sharing videos. Berger and Milkman (2013) suggested that certain benefits drive sharing: useful information, saving money, health, self-image, emotional impacts, and that positive news is more viral than negative news. Botha and Reyneke (2013) indicated in their article "To Share or not to Share: The Role of Content and Emotion in Viral Marketing" that people felt more emotional to the video content if they were familiar with the subject resulting in higher sharing reactions, and that people were more likely to share positive videos over negative ones. In their article "Spreading the virus: Emotional Tone of Viral Advertising and its Effect on Forwarding Intentions and Attitudes" Eckler and Bolls (2011) found that pleasant emotional tone

evoked the strongest attitude towards the ad or brand and resulted in video sharing. Finally, Izawa's (2010) dissertation "What Makes Viral Videos Viral?: Roles of Emotion, Impression, Utility, and Social Ties in Online Sharing Behavior" argued that video sharing is influenced by how users are impacted by emotion, impressions and utilities. This synthesis revealed that researchers found a variety of reasons, but all agreed that positive and emotional content are more likely to be shared.

Implications

DeCesare's (2012) published article "Review: ARKive—An Intersection of Conservation, Multimedia and Usability" described ARKive (partnered with Google Earth), which is an interactive digital repository that is committed to providing videos that promote the conservation and education of threatened wildlife and habitat. DeCesare (2012) acknowledged the viral nature of animal videos and how quickly they are shared but then forgotten. DeCesare (2012) stated "the nature of these videos proposes a challenge: How do you move beyond the popular and viral videos and find high quality, vetted, yet accessible material?" (p. 193). The files are linked between video, map, and taxonomy, creating a powerful collective on any endangered theme. This tool brings attention to the nature of wildlife viral videos and their collective implications for educators, teachers, students, academics, conservationists, animal lovers, scientists and is influential for communications experts in creating a digital strategy.

Wildlife Conservation. This section of the literature review provided guiding factors for my research of viral video implications on endangered killer whale conservation. Sub-themes were organized based on their evidential weight of findings, with the most relevant findings first.

Nekaris et al. (2013) analyzed user perceptions of a YouTube viral video depicting a slow loris, that are amongst the top twenty-five most endangered primates. Their data results showed

that viral media played a role in the public awareness of the slow loris, a species unfortunately subjected to illegal wildlife trade and abuse. Data also revealed that celebrity endorsement brought about more video views but surprisingly did not result in educational awareness. The study argued that YouTube should better moderate uploaded wildlife trafficking videos (as was done with cigarette advertising), however the video was eventually removed. Nekaris et al. (2013) also stated that YouTube is the most powerful media platform for increasing awareness of conservation (p. 2).

Although not directly about viral videos, Waters and El-Harrad's (2013) article "A Note on the Effective Use of Social Media to Raise Awareness Against the Illegal Trade in Barbary Macaques" discussed raising awareness of the illegal trade of the Barbary macaque primate, who is a depleted population. The article described the lack of conservation awareness and welfare issues within Morocco. Social media sites are discussed as both a concern and an advantage of sharing information, and cross-referenced the research of Nekaris et al. (2013) in regards to the slow loris video posted on YouTube.

In contrast to those articles discussing primates, Mehta's (2013) news article "Viral Video Brings Alberta Bears Global Game, Sparks Conservation Discussions" reported on an Alberta Parks officer's experience making an accidental viral video about wild bears. The video consisted of edited footage extracted from one hundred cameras of wild bear activity and was uploaded to YouTube where it generated millions of views and interest from broadcast media. Parks officer Naylor stated how "it's giving exposure to bear behaviour. It's giving huge exposure to Alberta Parks all over the world... It's also given a lot of awareness to our bear research or wildlife research and wildlife conservation programs we are involved in here, because a lot of people ask about that" (Mehta, 2013, para. 15).

Several news articles illustrated the popularity of killer whale viral videos in mainstream media. Journalists (McCluskey, 2015; Mukhopadhyay, 2014; Dawson, 2012; and Dennis, 2012) published stories about killer whale predatory behaviour, a captivity attack on a trainer, and a rare albino killer whale sighting. Predation/attack stories were common themes in regards to killer whale behaviour being viewed in mainstream media. My video of Luna interacting with a dog aligns with these themes, as seen through the user discussion on YouTube.

Human Rights Education. This literature is crucial as it provided information of implications of online perceptions in regards to polarizing topics such as cultural stereotyping, racism, and slavery. This is relevant as my content analysis of comments revealed findings of racism, misinformation as well as counter-stereotypical arguments in regards to First Nations culture.

Kopacz and Lawton's (2013) research contributed to the literature on user reactions to depictions of Native Americans as seen through YouTube. The study found that counter-stereotypical arguments within the comments were received positively. In their earlier study of "Rating the YouTube Indian: Viewer Ratings of Native American Portrayals on a Viral Video Site", Kopacz and Lawton's (2011) content analysis of YouTube ratings found that depictions of Natives influenced audience ratings especially of romanticized images of Native stereotypes but more so of the counter-stereotypical depictions. Unlike Nekaris et al. (2013), Kopacz and Lawton's (2013) research was not about behavioural changes within the YouTube comments but was "the first to demonstrate that counter-stereotypical depictions register with users of UG content and receive favorable responses" (Kopacz & Lawton, 2013, p. 34).

Hoover's (2015) article "A Young man of Words: A Viral Video About Race Helped one Student Find a Voice" accounted for one man's (Stokes) cultural frustrations of feeling under

represented and unsupported in a predominantly white privileged society. Stokes turned to spoken word to reveal statistics of black males within the higher educational realm and recorded facts and feelings poetically to a video, which went viral on YouTube. “An undergraduate at UCLA, Sy Stokes found the campus unwelcoming to him and other black men. When he put his experience to verse on YouTube, his life changed” (Hoover, 2015).

In contrast to these positive outcomes, Andacht (2014) examined three points of the failed Kony 2012 viral video campaign that featured African child atrocities: narrative, strategy of story, and generated effects of the video. Andacht (2014) argued that the structured campaign exploited upon audience emotions for profits, in return bringing about suspicion from critics for its misrepresentation of facts, ultimately leading to a failed educational outcome. The video representation “is a grossly oversimplified and intentionally distorted account of the actual situation in that part of Africa” (Andacht, 2014, p. 216).

Marketing Strategy. A large chunk of the peer-reviewed articles found in the literature (Yang & Wang, 2015; Chen & Lee, 2014; Botha, Reyneke & KTH, 2013; Nelson-Field, Rieve & Newstead, 2013; Eckler & Bolls, 2011; Miller & Lammas, 2010; Szabo & Huberman, 2010) were conducted to benefit marketing strategies. For instance, in Chen and Lee’s (2014) research that employed a content analysis and a survey of fifty undergraduate students, examined viral short advertising films or microfilms advertising, and found that the message of the story along with the enjoyment of the video were effective factors in sharing videos. They stated, “no matter what the brand message is (or how it is placed into the film), an interesting storyline or plot that can evoke strong affective responses from consumers is of primary importance” (Chen & Lee, 2014, p. 301). Although my research is not about marketing strategies, it is useful to ascertain

what attributes of viral videos have contributed to my own video and how to improve my strategies in the future.

Summary

This review provided a road map of the themes that corresponded to the research questions. Through a careful review of the literature, reoccurring findings were identified, such as viral videos that contained positive and emotional content were most often shared (Yang & Wang, 2015; Chen & Lee, 2014; Berger & Milkman, 2013; Botha & Reyneke, 2013; Nelson-field, Riebe & Newstead, 2013; Eckler & Bolls, 2011; Izawa, 2010). Furthermore, celebrity endorsements brought about more views to viral videos (Mohr, 2014; Nekaris et al., 2013). Content analysis methodologies were most commonly used as seventeen articles within the viral video peer-reviewed literature were identified. There was a significant pool of literature that analyzed viral video implications for marketing and less literature of viral video implications on wildlife concerns. Nekaris et al. (2013) reinforced that “there is an urgent need to quantify the impacts the role the Internet has on wildlife trade by recording user behaviour and related attitudes that may lead to such behaviours” (p. 3).

A gap in the peer-reviewed literature was identified in connection with viral videos and the topic of killer whales. With such evidence of killer whale stories in the media, as seen in the literature review, there appeared to be ample room for research about how viral videos might be impacting the awareness of killer whale conservation. As with most research projects, there are limitations and biases to be expected, as stated by researchers (Nekaris et al., 2013; Madden et al., 2013; West, 2011) in regards to coding perceptions. I considered similar pitfalls for my research that employed a content analysis methodology. From the forty-one sources discussed in

the review, approximately seven employed at least one theoretical framework, of which two showed up twice: parasocial contact hypothesis and social-capital theory.

This literature review focused on the themes of killer whales, viral video phenomenon and implications as inspired by the research questions. This review informed my next steps in the research as it has identified themes that both aligned and contrasted with my research, illuminated a methodology direction and categorization scheme, warned of limitations and biases, and reinforced the importance of the aim of the research, which is to find out what implications a viral video has on endangered the awareness of killer whale conservation. As this was an inductive research project, the theoretical framework emerged after the literature review, methodology and findings.

Research Design

My video has circulated for over a decade now, yet it is unknown what implications it has in regards to the subject of the video; endangered killer whales. This chapter reviews my research questions, describes my research project, and discusses my methodology of qualitative and quantitative content analysis. The aim of this study was to analyze the implications of a viral video on endangered killer whale conservation awareness. The research problem statement was broken down into four questions:

RQ1: What did people say about the video?

RQ2: What factors made the video go viral?

RQ3: How was the video framed in user comments?

RQ4: What implications did the video have on conservation awareness of endangered killer whales?

This case study was reflexive in nature, as I built off of my own experience and the observations I have made over the years of documenting killer whales on the West Coast of Canada. My research design includes two levels of analysis: descriptive and theoretical, and took an inductive (bottom up) approach as the theoretical lens manifested after the findings. I then employed the frame theory as a secondary lens to more deeply analyze my research data. This two-level analysis provided a depth of insight as to what was going on with the video, and helped to inform how I could later recommend and design a strategy, for endangered killer whale conservation.

I implemented charts, tables, and screen-capture visuals to illustrate the data obtained throughout the methodology. Since my study did not involve human research subjects but rather analyzed publicly available YouTube comments, an ethics application was not required in order to proceed with the proposed content analysis methodology.

Methodology

Nekaris et al. (2013) described YouTube in particular as being the most popular online video sharing site and the third most accessed site on the Internet (p. 2). The challenge of analyzing the thousands of comments that accumulate on YouTube today can be a daunting task. Fortunately, one key peer-reviewed article by Madden et al., (2013) discussed their categorization “scheme that covers impressions, advice, opinions, and comments based on the use of YouTube” (p. 711). This study revealed benefits for executing both qualitative and quantitative content analysis of comments and guidance for more explorative categorization dilemmas.

The benefit of a classification schema is that it allows researchers and practitioners to identify particular types or uses of comments and separate these out for analysis. These analyses can be qualitative, to investigate language use or communication, or

quantitative, as in areas such as online advertising and sentiment analysis (Madden et al, 2013, p. 711).

They did however caution about coding perceptions and what that means for bias. Several of the articles within the literature employed a content analysis followed by additional methodologies such as surveys and interviews to arrive at their findings. Most of the viral video literature also included an analysis of YouTube in addition to other Web 2.0 platforms.

The methodologies used in my study consisted of a qualitative content analysis of user comments that were made on one of my YouTube videos, and a quantitative content analysis of user replies and thumbs of the comments. As cited by Madden et al. (2013), “content analysis is a research methodology that involves making the content of messages manifest through identification of characteristics in as objective a way as possible (Bryman, 2008, p. 273)” (p. 669). This methodology is a good match because it allowed me to view the information as is, without interfering with the participants; instead I am analyzing comments as they have been made without involving myself by influencing the content. My methodological choices were inspired from the studies of Madden et al. (2013) and Nekaris et al. (2013), who used a categorization scheme (and descriptions) for use in a qualitative content analysis. This methodology, although subjective in nature, was approached with as much validity and with as little bias as possible. My final discussion was guided by my research questions while employing a second level of analysis, the frame theory, to help discuss any outcomes to my research questions.

Participants and Setting

There were a total of six duplicate videos (posted to Facebook) considered for this study. One of the Facebook videos numbers reached as high as (since February 19, 2016) 19,798 likes,

133,172 shares and 1,700 comments (Appendix A). Interestingly, one of the videos on Facebook circulated again and surpassed far beyond the statistics observed since I started writing this report. However only the original YouTube video was used as a sample along with the comments that were made on the video post. Since March 17, 2016, the YouTube video (uploaded April 16, 2006) has over 2,187,607 views, 3,345 likes, 191 dislikes and 1,264 comments (Appendix B). For simplicity purposes, a shorter snapshot of the comments was captured and sampled for this study. YouTube offered two ways to view comments, either by top or by most recent comments. The timeframe for collecting one hundred comments from YouTube was from the most recent comments at the starting date (March 17, 2016) of the data collection dating back a year, in order to get a sense of people's perception as recent as possible.

Instruments and Analysis

In this study, a qualitative content analysis of comments and quantitative content analysis of replies and thumbs, were conducted.

Qualitative: YouTube Comments. This method was employed to get a sense of what the users were thinking / perceiving through the comments made most recently on the YouTube video post. First, eight categories were generated and then comments were gathered and counted in Table 1 followed by the total numbers being entered into Table 2. The categories were numbered in accordance to the importance of my research question: conservation, scientific, political, culture, love, fear, troll and other.

Collection. This was a manual extraction and included copying and pasting every comment and user name and time frame into Table 1.

Coding. Microsoft Word / Excel was used to sort data into a structured table and care was be taken to ensure clarity for this process. The following table illustrates an example.

Table 1

Table for Manual Coding the 100 YouTube Comments

#	YouTube Comments from March 17/16	Thumbs	Replies	Category	Notes
31	Super muscle 5 months ago They should of found a local Orca pod for Luna. So Luna would not be so solitary. Orca’s usually travel in pods. Luna look’s lonely for friendship here.	3+	2	2	Replies refer to political issues of category 3

Once captured, the comments were coded as per a scheme recommended by Madden et al. (2013) and implemented similarly by Nekarlis et al. (2013) in their study of how YouTube user comments impacted the perception of illegal wildlife trade of an endangered primate, the slow loris. There was some coding perception to be considered here, as statements were subjective to the reader. I attempted to be as non-biased as possible when I coded the following data, reviewing the comments several times.

Table 2

Categories of YouTube Comments, Along With an Example and Total Number

#	Theme / Category	Description of Comment Type	Example of Comment	%
1.	Conservation	Definition: The action of conserving something, in particular (Oxford Dictionaries, n.d., def. 1). Clearly or strongly demonstrates awareness of Luna or species welfare.	Chris Kavanagh 6 months ago It's a shame Luna couldn't have been saved and reintegrated with his Pod, like Springer	4
2.	Scientific	Definition: Based on or characterized by the methods and principles of science (Oxford Dictionaries, n.d., def. 1). Knows about Luna, L98 / Refers to movies: <i>Saving Luna, The Whale</i> / Factually or scientifically somewhat	Justin Hopkins 1 week ago People don't understand that orcas are intelligent. They can easily differentiate food from a dog. People seem strangely obsessed with the idea that this dog	17

		accurate / Understands or demonstrates species ecotype knowledge (southern resident killer whale).	would have been food in complete disregard that orcas in this region only eat fish. If the dog died it would have been an accident, not intentional.	
3.	Political	<p>Definition: Relating to the ideas or strategies of a particular party or group in politics (Oxford Dictionaries, n.d., def. 1.1).</p> <p>Government, NGO / Reaction of Luna's death reflecting sadness or anger. Refers to Captivity: SeaWorld, <i>Blackfish</i>.</p>	<p>Maria Del rio 1 year ago Has anyone seen the remains of this beautiful and friendly animal? No... Wonder why? Watch the movie <i>Blackfish</i>. I guarantee they captured this whale and most likely his sibling and mother, who also apparently vanished.</p>	14
4.	Cultural	<p>Definition: Relating to the ideas, customs, and social behavior of a society (Oxford Dictionaries, n.d., def. 1.1).</p> <p>Refers to First Nations, Mowachaht/Muchalaht or refers to Tsu-xiit (Luna's Mowachaht/Muchalaht name).</p>	<p>Megalodon 4 months ago Ugh! Usually I'm all for indigenous rights, but they had no right to interfere with DFO's plan to save that whale. I don't care what they thought that whale was, its rights came first!</p>	1
5.	Love	<p>Definition: An intense feeling of deep affection (Oxford Dictionaries, n.d., def. 1).</p> <p>Thinks orca is playing or socializing with dog, or thinks video is adorable.</p>	<p>Sam Seton 4 months ago AWWW!! Luna just wanted to play bless him :)</p>	37
6.	Fear	<p>Definition: An unpleasant emotion caused by the belief that someone or something is dangerous, likely to cause pain, or a threat (Oxford Dictionaries, n.d., def. 1).</p> <p>Thinks orca is preying, attacking or attempting to eat the dog / User shows fear towards killer whales. (Assumes all killer whales are the same).</p>	<p>Mark Zarraonandia 7 months ago That dog goes into the water and it's lunch for the orca.</p>	15
7.	Troll	<p>Definition: A person who makes a deliberately offensive or provocative online post (Oxford Dictionaries, n.d.,</p>	<p>Duke Ofhesse 1 year ago I have an orca in my swimming pool. I feed</p>	10

		def. 1). Trolling, baiting, or attention seeking.	him puppies.	
8.	Other	Definition: Those remaining in a group; those not already mentioned (Oxford Dictionaries, n.d., def. 1.2). Comments not listed above / Emerging themes such as anthropomorphize.	Bill Kelly 4 months ago You had to learn to swim cause my ancestors were better hunters than yours! [said the dog to the whale]	25

Table 3

Data Results Total Numbers

Category	Comments	Thumbs	Replies
1. Conservation	4	(4, 3, 1, 1, 3) = 12	3

Analysis. This analysis was carried out by human observation (myself) and Microsoft Word/Excel was the tool used where I synthesized comments and input those results into Table 3. Although only the top-level comments were categorized and counted, the replies were also analyzed as a second layer of interpretation of the comments. I used the Word table of comments (Table 1) to sift and scan interesting comment blocks and made notes. I then returned to the original YouTube comment structure and used the find feature in my browser where I would paste the user name or a phrase, as carried over from my Table 1, to screen capture a comment or reply thread for my findings and discussion chapter.

For a second level of analysis, frame theory was the lens used to analyze how the video was framed: both through media but more so through the audience. Scheufele’s (1999) process model of framing was used to determine the ways in which the video was framed by me, and the different ways in which the audience perceived the content, through their individual frames. This

model was additionally helpful in identifying if there were any implications of the comments on conservation awareness of endangered killer whales. Frame theory follows after the next chapter of findings and discussions as it made the most sense to me to reflect back on the findings.

Quantitative: YouTube Replies. This method determined a number value for replies made to the comments per each category.

Collection. Reply numbers were manually counted and entered into the YouTube coding sheet (Table 1).

Analysis. I executed this manually by examining the final results in the data chart (Table 3) and created a bar graph through Excel to see the differences between categories. The categories were different in the reply results than those of the comment results. In order to glean information, I once again used the find feature in my Internet browser to seek out user names or keywords to find relevant content to captivity for example, when scanning the YouTube comments. For instance, I found fifteen ‘captivity’, five ‘captive’, and nine ‘SeaWorld’ terms within the one hundred comments.

Quantitative: YouTube Thumbs. Thumb numbers were manually counted and entered into the YouTube coding sheet, Table 1.

Collection. Reply numbers were manually counted in the YouTube coding sheet, Table 1.

Analysis. I executed this manually by counting all of the thumbs and entered those results into the data chart where I totalled them up into one number per category as seen in Table 3. I converted this data into a bar graph also, where it was once again evident that the results were different between the comments and the reply findings. I go into this in more details in the next chapter of findings and discussion.

Procedures

The following steps were taken in order to conduct the study. After exploring the possible comment extraction tools such as NVivo, Facebook Graph API Explorer, Facepager, ScrapeBox and GitHub, it was less convoluted for me to design the following manual system, as seen below.

1. Table 1 was created with six columns (#, comments, thumbs, replies, category, notes) where I later manually copied and pasted one hundred comments and user names into a cell.
2. I selected YouTube comments from the most recent date of the study of March 17, 2016 to a year prior.
3. I quickly scanned over comments to get an idea of the themes and made any changes to my categories.
4. Once categories were solidified, I created Table 2 with category titles assigned to numbers one to eight, a dictionary reference, a description of how the category was used and an example comment for reference.
5. Beside each comment that was copied and pasted into Table 1, I placed number(s) corresponding to a category, some had more than one comment, as there was overlap.
6. I added any notes or observations in the final column of Table 1.
7. Each comment was analyzed several times with category numbers placed. This was repeated one hundred times.
8. For the replies, I went back over the YouTube comments and counted the number of replies under each comment and placed the number into the column in Table 1. This was repeated one hundred times.
9. I scanned the reply threads and made notes about any emergent or shifting themes.

10. For thumbs I returned to the YouTube comments where I counted the number of thumbs for each comment and entered that into Table 1. This was repeated one hundred times.
11. I totaled up the comment categories and entered those into Table 3 along with replies and thumb totals.
12. From there I totaled the amount of thumbs and replies but not the comments as they were out of one hundred and had overlapping categories (equaling 124).

Summary

My research design consisted of a qualitative and quantitative content analysis of one hundred YouTube comments pertaining to my viral video of Luna. My methodology was designed especially for answering my research question: What implications did this video's comments have on the user's awareness of endangered killer whales? Frame theory was the lens used as a second level analysis of the media and individual "frames" in order to get a better sense of the implications of media effects. In the next chapter of findings and discussion, we will see in greater detail, the findings that were discovered through this methodological approach along with a descriptive analysis of each category.

Findings and Discussion

This study analyzed comments, replies and thumbs of a sample of YouTube users' responses to the video, in other words, what they said about the video. Once coded, these sections were displayed in a visual format, making it easier to compare with other categories for similarities and differences. Through inductive content analysis, eight categories were extrapolated, with the aim to uncover any obvious signs of conservation awareness and or initiatives, from these comments.

The extracted comments were taken from the most recent posts dating from March 17, 2016. This sample of one hundred comments was to represent the larger body of 1,331 comments, 3,363 thumbs up, 193 thumbs down, and 2,195,305 views. The following chart does not display total comments as those comments contained overlapping categories that would not amount to an equal 100/100 comments. The thumbs and replies on the other hand were not out of any total number and include total values.

Table 4

Total data of each category

Category	Comments	Thumbs	Replies
1. Conservation	4	(4, 3, 1, 1, 3) = 12	3
2. Scientific	17	(7, 3, 1, 3, 1, 1, 6, 3, 3, 7, 61) = 96	(2, 1, 3, 1, 14) = 21
3. Political	14	(4, 1, 10, 1, 1, 3, 6, 3, 7) = 36	(3, 6, 9, 5) = 23
4. Cultural	1	1	0
5. Love	37	(5, 1, 2, 7, 1, 2, 9, 3, 1, 71, 3, 2, 1, 2) = 110	(1, 14, 4) = 19
6. Fear	15	(1, 1, 1, 3, 1, 1, 3) = 11	(2, 1, 3, 4) = 10
7. Troll	10	(14, 2, 3) = 19	(1, 4) = 5
8. Other	25	(3, 1, 5, 1, 3, 1, 2) = 16	(2, 1, 1, 5, 4, 8) = 21
TOTAL	NA	301	102

The following sections look in more detail at the findings of comments, thumbs and replies followed by a breakdown of each category in order of importance in relation to my research questions: conservation, scientific, political, cultural, love, fear, troll and other, with specific findings and discussion of each.

Comments Findings – Analysis of Qualitative Content Analysis

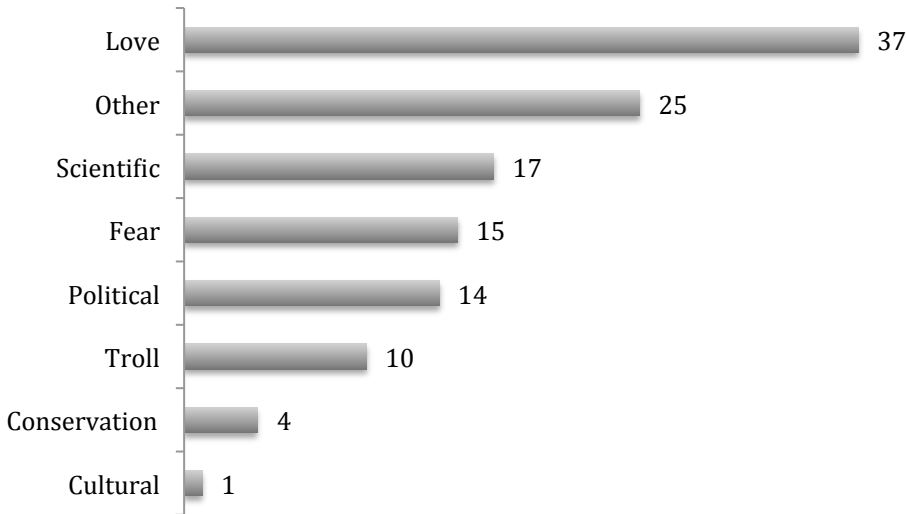


Figure 8. Results of comment categories (out of one hundred comments).

The qualitative content analysis of the most one hundred recent comments revealed that the highest number of people loved Luna but only a lower number of people were making the connection to conservation. Another interesting observation were themes such as anthropomorphic that emerged from subsequent analysis of the data originally placed in the ‘other’ category. Out of the one hundred comments, twenty-four included overlapping of two or more categories. Although comments within the reply threads were not counted here, they were analyzed for the purpose of discussion, and helped to build overall perspective of the discourse.

The three most similarly weighted categories in the comments findings were that of ‘scientific’, ‘fear’ and ‘political’ all just a few numbers apart. The ‘cultural’ category predominantly covered conversations that pertained to the Mowachaht/Muchalaht First Nations community as Luna resided in their territory of Nootka Sound.

Replies Findings - Analysis of Quantitative Content Analysis

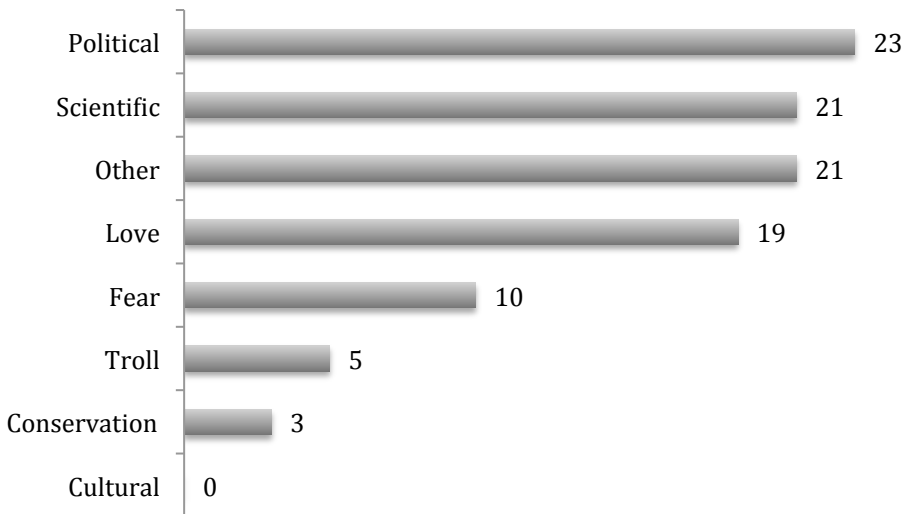


Figure 9. Results of total category replies made on comments.

The replies that were nested under the most recent top-level one hundred comments were not included in the comment count above. Instead, reply numbers were gathered under a quantitative analysis to gain perspective of how users responded to the comments. A total of 102 replies spawned from the one hundred comments.

Through the thumbs analysis, ‘politics’, ‘scientific’ and ‘other’ were found to be the most popular categories. An interesting observation is that the theme of ‘conservation’ would sometimes emerge in the replies from a different top-level comment category, for instance, what started out as a ‘fear’ category, changed into a ‘political’ category, within the reply thread.

The data numbers versus the reply analysis both contributed to my perception in regards to what people were saying about the video. In other words, without doing the reply analysis, and had I just concluded with the data numbers, I would not have arrived to the same understanding of what the users were saying.

Thumbs Findings - Analysis of Quantitative Content Analysis

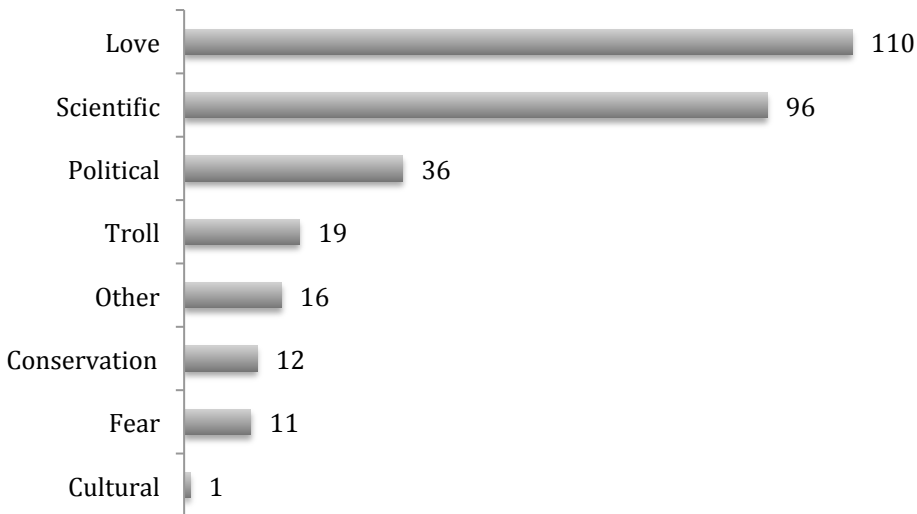


Figure 10. Results of total category thumbs (likes) made on comments.

Through a quantitative content analysis of YouTube’s thumbs (which represents both positive and negative), 301 positive thumbs and zero negative thumbs were counted from the one hundred top-level comments. Aside from the most popular ‘love’ category, the ‘scientific’ category was the second most popular. The thumbs findings were different from both the replies and the comments findings, making all three data sets different from one another.

What the thumbs data revealed was that the users had a preference of what topics or categories of comments were most important to them. The top three categories are understandable choices as users work through their own knowledge and the knowledge of others. It’s also interesting to notice that the ‘fear’ category is much lower here than in the previous comments and replies data findings. Aside from the ‘love’ category, the ‘scientific’ category was very active based on the variety of conversations that took place about Luna’s species and unique predicament as a solitary killer whale living amongst humans.

Category Analysis

Eight category themes were extrapolated from the comments. These categories consist of; conservation, scientific, political, cultural, love, fear, troll, and other. These categories were decided upon based on both the research questions and a preliminary scan of the comments. As already observed earlier, category data emerged differently depending on the qualitative or quantitative study.

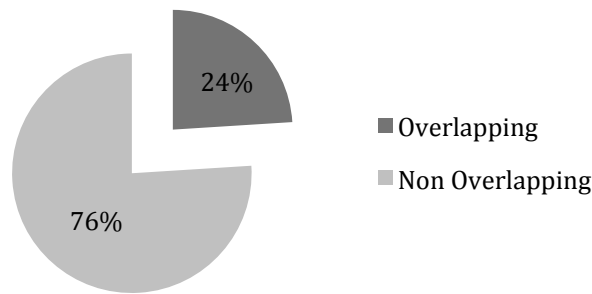


Figure 11. Total percentage of overlapping category comments.

Out of the one hundred comments, twenty-four of those comments overlapped into two or more categories. At times, selecting the category or categories was difficult and required several comment reviews. The comment count was a subjective study while the thumbs and replies were strictly statistical. I appointed comments to categories that I felt contained dominant along with subdominant themes.

The following sections cover eight category data findings and discussions are heavily based on the comments, but also include replies and thumbs observations. Each section begins with a definition of that category followed by the criteria I used and examples of comments that

help to illustrate each category. A discussion follows within each category, providing much insight into the minds or “frames” of how people perceived Luna’s life.

Conservation. Definition: The action of conserving something, in particular (Oxford Dictionaries, n.d., def. 1).

Comments. The conservation category made up four percent of the total comments.

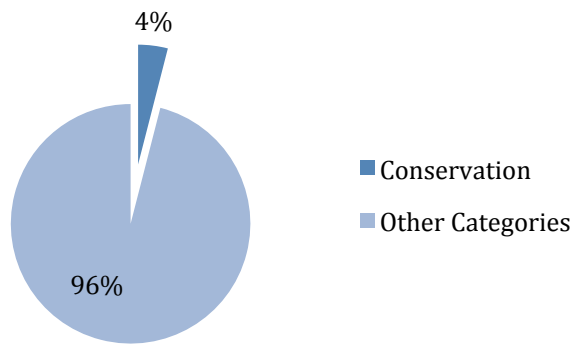


Figure 12. Total percentage of conservation category comments.

When deciding upon what constitutes a ‘conservation’ comment within that category, I looked for an understanding or awareness of Luna or of his species welfare, such as the following comment:

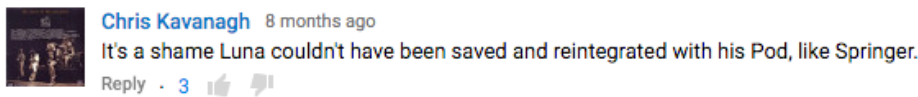


Figure 13. Screenshot of comment from “Orca and Dog” video published on YouTube.

From this example, it is clear that the user understood who Luna was, showed awareness of his predicament, and demonstrated knowledge of his species, as they compare him to another case of a solitary northern resident killer whale, Springer. This comment also overlaps into the ‘scientific’ category.

Replies. There were three replies to comments within the ‘conservation’ category.

Thumbs. There were a total of twelve (positive) thumbs counted on comments within the ‘conservation’ category.

Discussion. This section focuses on conservation themed comments or lack thereof, in addition to conservation themed replies that appeared within other categorized top-level comments. The examples discussed here spanned two or more categories. After reviewing the comments in this category, it was evident that most people were not making the connection to conservation. In other-words, at first glance, conservation awareness almost appeared to be a lost cause. However, with closer attention to the reply threads, there was actually more conservation awareness than I originally assumed.

Within the small pool of data to analyze, the most dominant comments that was included in this category (that overlapped into the political category) was by user Magalodon, whose long-winded post (too long to include here) touched on various topics such as animal activism and orca captivity. The user appeared to know about the plight of various well-known captive killer whales (Corky, Keiko, Tilikum) and had opinions against releasing captive orcas. The tone of the comment, regardless of opinion, displayed awareness and welfare of both captive and wild killer whales.

Another interesting observation was that replies would align within the ‘conservation’ category, even if the original comment did not relate to conservation. For instance, one comment revealed in the reply thread the user’s knowledge and awareness of the critical issues that Luna’s species, the southern resident killer whales, face in regards to their food source depletion.

Reviewing the replies provided evidence that although many users were not making top-level comments related to conservation, users took the time to help educate other users about

their assumptions in regards to the video content. For instance, user Rebekah Reads, outlined critical details about the plight of the southern resident killer whale population, making her post both conservation and scientific in nature:



Figure 14. Screenshot of comments from “Orca and Dog” video published on YouTube.

I hoped to find more comments like Rebekah’s that leaned towards conservation awareness, for instance where users exhibited an understanding of the endangered killer whale population, threats to their survival and possible strategies for protection and recovery. I scanned for an awareness of the declining salmon populations (resident killer whale prey), pollution, and supporting an NGO that actively works to protect and educate about endangered killer whales and habitat.

Scientific. Definition: Based on or characterized by the methods and principles of science (Oxford Dictionaries, n.d., def. 1).

Comments. The ‘scientific’ category made up seventeen percent of the total comments.

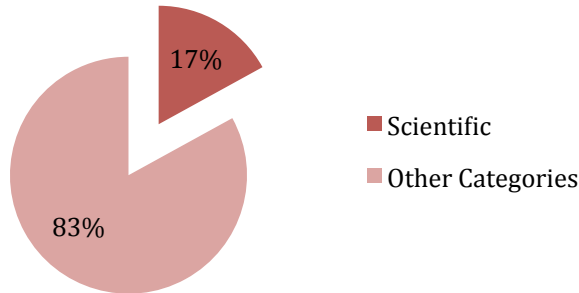


Figure 15. Total percentage of scientific category comments.

Comments were categorized as scientific, if they made reference to fact or to partial fact that was scientific in nature. It’s important to know that although some users meant to be factual, their comments were not one hundred percent scientifically accurate, as seen below.

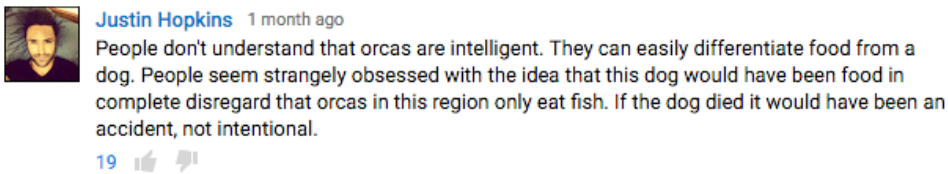


Figure 16. Screenshot of comment from “Orca and Dog” video published on YouTube.

Although the user is correct about Luna being a fish-eater, there are also “transients” that feed exclusively on mammals and who also live in the region, so the comment is only partially correct. Posts that mentioned the films *Saving Luna* or *The Whale* were included as they provided accurate information about Luna.

Replies. There were twenty-one replies to comments made in the ‘scientific’ category.

Thumbs. There were ninety-six thumbs counted on comments in the ‘scientific’ category.

Discussion. In addition to ‘scientific’ comments, I classified comments that referenced the feature films *The Whale* and *Saving Luna*, within the ‘scientific’ category, since the documentaries were thorough in educating the public about Luna and his species. A couple of reoccurring concerns identified in this category were the misunderstandings of killer whale ecotypes and Luna’s gender, although understandable given his feminine sounding name. Users often assumed that all killer whales were the same in that they ate anything, and if users did know about Luna’s ecotype (resident versus. transient), their response was only partially accurate. Such comments were classified under this category because the comments aligned with the idea of clarifying scientific information.

One user in particular, Justin Hopkins, attempted to help other users on several occasions to understand about Luna and his species even within the replies of other categorized comments. His effort is appreciated, however he also lacked knowledge about killer whales, in that there are two ecotypes (residents who feed on fish and transients who feed on mammals) of killer whales thriving in the region. For example:

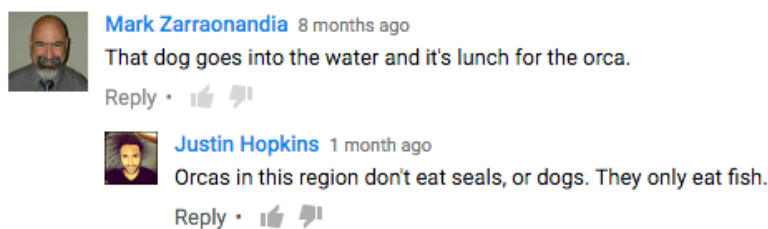


Figure 17. Screenshot of comments from “Orca and Dog” video published on YouTube.

The following comment represented knowledge of facts as the user recounted Luna’s solitary experience and how he perished.

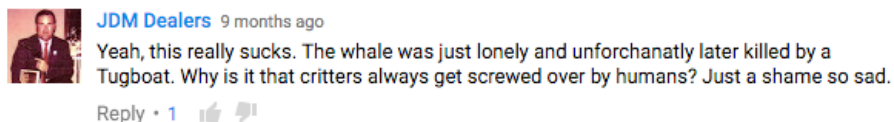


Figure 18. Screenshot of comment from “Orca and Dog” video published on YouTube.

The above comment revealed sadness or regret, which brings us to the next category where some users within this study sample, shifted their frustration to blame within the political landscape, that surrounded Luna’s management.

Political. Definition: Relating to the ideas or strategies of a particular party or group in politics (Oxford Dictionaries, n.d., def. 1.1).

Comments The ‘political’ category made up fourteen percent of the total comments.

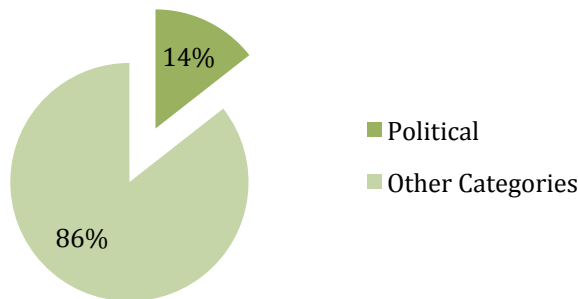


Figure 19. Total percentage of political category comments.

Comments that were included in this category made reference to government such as DFO, NGOs and or reaction of Luna’s death including sad or angry emotions. The following post is an example of that emotion.

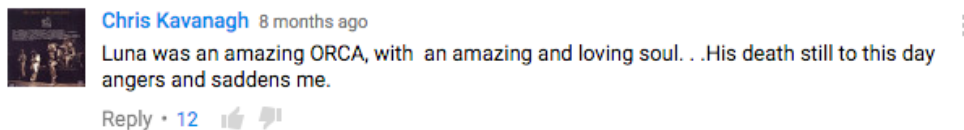


Figure 20. Screenshot of comment from “Orca and Dog” video published on YouTube.

This category also included posts that commented about captivity, and or made mention of SeaWorld, and or the film *Blackfish*, a documentary about orcas in captivity.

Replies. There were twenty-three replies to comments made in the ‘political’ category.

Thumbs. There were thirty-six thumbs counted on comments in the ‘political’ category.

Discussion. The strongest theme that I observed in this category had to do with captivity, a heated and very current topic even more so in the present day. Users connected the concept of captivity to Luna because there had been a capture attempt and it was suggested that an aquarium would house Luna should there be any failures with his relocation. The feature film *Blackfish* had paramount effects on the general public’s perception of orcas in captivity, and recently SeaWorld’s attendance has dropped significantly, which caused the theme park to announce its plan to phase out orcas in captivity by stopping their breeding programs (Reuters, 2016). There are currently two resident killer whales still in captivity at this time: Lolita from the southern resident killer whale community and Corky from the northern resident killer whale community, and activists are hoping to have them retired to sea pens for the remainder of their years.

In order to glean information, I used the find feature in my Internet browser to seek out user names or keywords to find relevant content to captivity, when scanning the YouTube comments. I found fifteen ‘captivity’, five ‘captive’, and nine ‘SeaWorld’ within the one hundred comments with the majority of these terms pertaining to one post by user Megalodon. In addition to this I also found eight DFO (government) keywords, also mainly pertaining to the same user. The comment found in Appendix C contained a conversation of varying perspectives on the captivity theme. Another interesting theory that emerged within this category was a post that proposed that Luna’s disappearance was due to captivity:

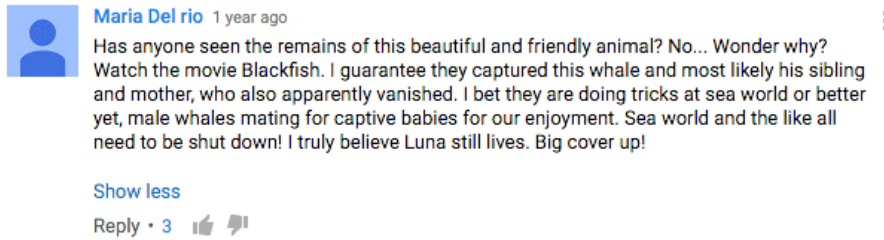


Figure 21. Screenshot of comment from “Orca and Dog” video published on YouTube.

Although I am certain that Luna was not captured by an aquarium and is being used to breed other killer whales, I still found it interesting that someone came up with this explanation for his death. Aside from this dominant theme of captivity, quite a few posters expressed their remorse for Luna’s tragic death, expressing emotions of both sadness and anger, often blaming government (DFO) or the First Nations.

Cultural. Definition: Relating to the ideas, customs, and social behavior of a society (Oxford Dictionaries, n.d., def. 1.1).

Comments. The ‘cultural’ category made up one percent of the total comments.

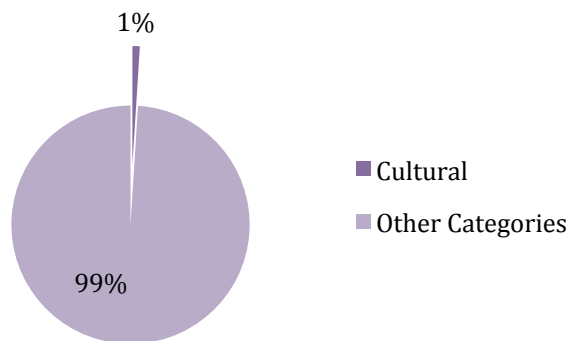


Figure 22. Total percentage of cultural category comments.

The ‘cultural’ category was comprised of comments that referred to First Nations, Mowachaht/Muchalaht or to Tsu-xiit (Luna). For instance, one user posted this comment, which is a portion of the longer comment from Appendix D:

canoes didn't help matters! So thanks a lot, Mowachaht/Muchalaht First Nations! There is just as much blood on your hands as there is on the DFO's. I hope it was worth it to see your precious "reincarnated chief" torn to shreds by the propeller of a boat! Thanks a lot, assholes!

Figure 23. Screenshot of partial comment from “Orca and Dog” video published on YouTube.

This is a snippet of a much longer post that used profanity and inflammatory language. Themes within this comment also overlapped into the ‘political’ category, as the user expressed anger towards the DFO (government).

Replies. There were zero replies to comments made in the ‘cultural’ category. Due to the very low comments in this category, no replies were counted.

Thumbs. There were one thumbs counted on comments in the ‘cultural’ category. As mentioned earlier, there were very few posts about culture in the top-level comments.

Discussion. Within the ‘cultural category’, I scanned for any top-level comments that made reference to cultural aspects. The First Nations were the only group that emerged within this category and often by one user, Megalodon, who made several large top-level posts and several replies to other comments. Although their comment was densely written and demonstrated much knowledge of Luna’s situation, their comments exhibited a negative tone that instigated other users (Figure 24). That became evident within the replies of comments that emerged from other categories. While this user instigated other users into similar behaviour, there were also supportive comments for First Nations found within the replies, where an entirely different point of view was posted, such as the post below:

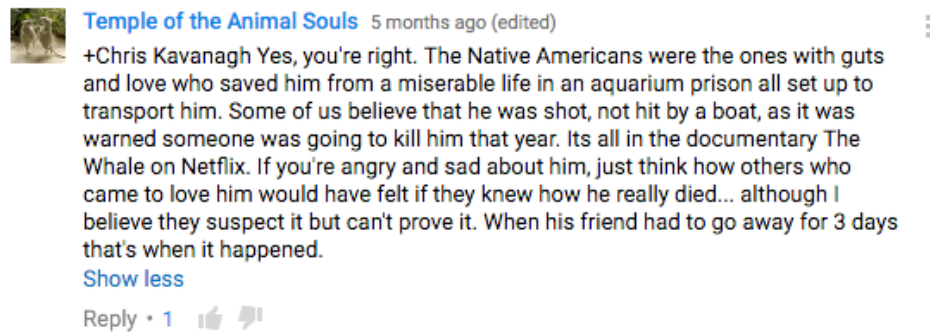


Figure 24. Screenshot of comment from “Orca and Dog” video published on YouTube.

From my personal experience of stewarding Luna, the Mowachaht/Muchalaht First Nations told me first hand that it was best to “let nature take its course”. They were well aware of the consequences that Luna faced both by remaining in their territory, and being relocated. Managing Luna was by no means an easy endeavour even though from a distance and after the fact, many people thought they had the right solution. Everything was tried from restricting his interactions with people to befriending him.

Although only a tiny percent of comments made it into this category, the topic is large and complex, as there are historical and spiritual beliefs, such as Luna being a reincarnated Chief (Appendix E), that outsiders did not understand or agree with. However, it is also necessary to identify that inflammatory and racist remarks do not serve in the best interest of educating people, nor does it solve any problems. I understand that frustration manifested by the public and their blaming others allows them temporary relief. However, the First Nations stood up for what they believed was a non-invasive strategy. Luna was a wild orca who made his own decisions; ultimately he lived freely, even if he didn’t survive.

The following two comments were made directly underneath the comment above (Figure 24), which demonstrated the polarities in regards to how people perceived the topic of First Nations and Luna’s predicament. I believe the users to be well intended, however while one user

already had a preconceived idea, the other user showed they were influenced by the comment above it (Figure 25).

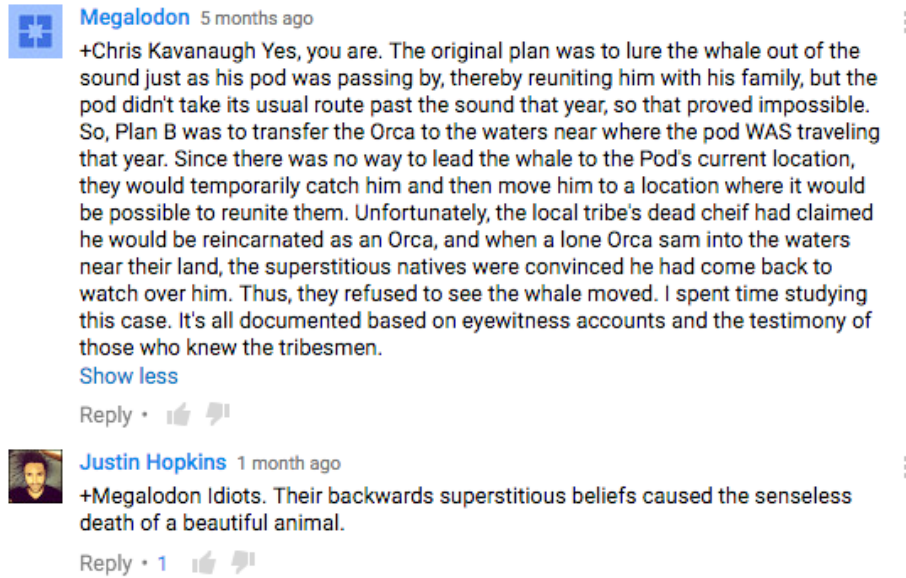


Figure 25. Screenshot of comments from “Orca and Dog” video published on YouTube.

Regardless of the negativity in such posts, it is important to point out that one user commented in defense of the First Nations and even associated their love for Luna.

Love. Definition: An intense feeling of deep affection (Oxford Dictionaries, n.d., def. 1).

Comments. The ‘love’ category made up thirty-seven percent of the total comments.

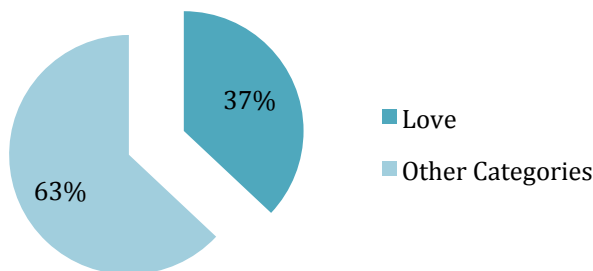


Figure 26. Total percentage of love category comments.

Comments included in the ‘love’ category were posts that asserted the orca was playing or socializing with the dog, users who loved the video, thought the video was adorable or that killer whales were benevolent beings. It’s also interesting to note that Luna is often described as a female when in fact he is a male.

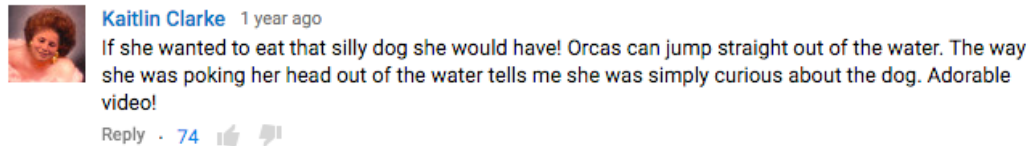


Figure 27. Screenshot of comment from “Orca and Dog” video published on YouTube.

Replies. There were nineteen replies to comments made in the ‘love’ category. The comment above spawned a lengthy reply thread of fourteen posts in regards to confusion over Luna’s gender and then clarification over Luna’s predicament. One user even described being in water with wild orcas.

Thumbs. There were 110 thumbs counted on comments in the ‘love’ category. The comment above yielded seventy-one thumbs alone, making it the most popular comment. (*Note that the screen capture was taken after the sample was collected hence higher in thumbs.*)

Discussion. It is clear, based on the findings of comments, thumbs and replies, that the ‘love’ category was the most popular. Many of the immediate reactions were emotional and users related to feelings of joy, friendship, loneliness, and affection. Many users seemed to think that killer whales were harmless, and that Luna most certainly wouldn’t hurt another being, even though Luna was a predator who fed on fish, not mammals. The following comments represented a larger number of posts of this nature; notice the number of thumbs and replies it received as well:

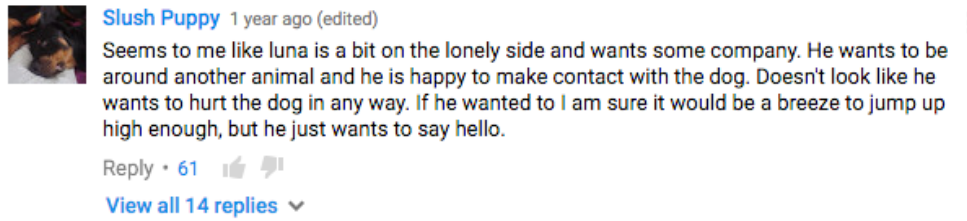


Figure 28. Screenshot of comment from “Orca and Dog” video published on YouTube.

Another example comment, there were many comments like this.



Figure 29. Screenshot of comment from “Orca and Dog” video published on YouTube.

Fear. Definition: An unpleasant emotion caused by the belief that someone or something is dangerous, likely to cause pain, or a threat (Oxford Dictionaries, n.d., def. 1).

Comments The ‘fear’ category made up fifteen percent of the total comments.

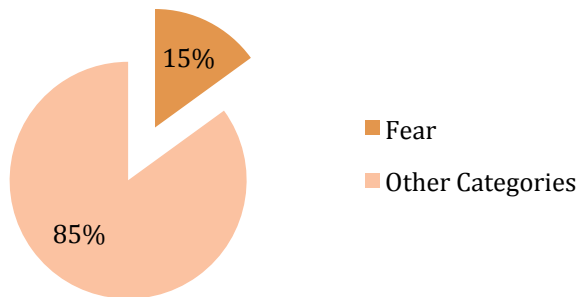


Figure 30. Total percentage of fear category comments.

Comments included in this category were posts that revealed perceptions that the orca was preying on, attacking or attempting to eat the dog, that the user showed fear towards killer whales or that killer whales were malignant beings. Often commenters assumed that all killer

whales were the same, in that they all prey on mammals. The following is an example of a comment that overlapped both the ‘love’ and the ‘fear’ categories:

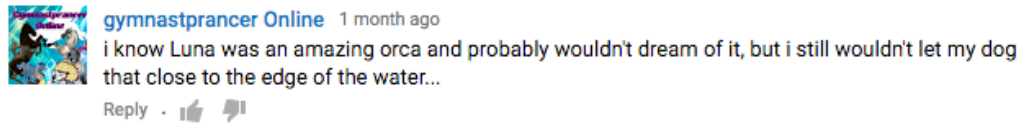


Figure 31. Screenshot of comment from “Orca and Dog” video published on YouTube.

Replies. There were ten replies to comments made in the ‘fear’ category.

Thumbs. There were eleven thumbs counted on comments in the ‘fear’ category

Discussion. This is the flip side of the ‘love’ category, in that users often asserted that all killer whales attacked or ate anything. Just as some users said that orcas in the region only eat fish, other users insisted that orcas generally eat sea lions, both were unaware that there are two different types of killer whales, therefor making the assumption that Luna is preying on the dog, as seen in the comment below (Figure 32). In the expanded reply view, we see another user who provided accurate information with a number of thumbs up:

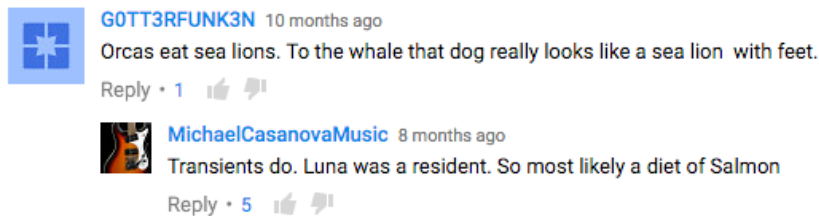


Figure 32. Screenshot of comment from “Orca and Dog” video published on YouTube.

Another example is seen below:

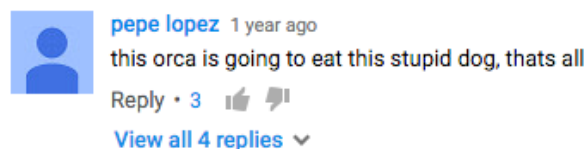


Figure 33. Screenshot of comment from “Orca and Dog” video published on YouTube.

At times, some of the comments based in the ‘fear’ category seemed almost sarcastic or troll like in nature.

Troll. Definition: A person who makes a deliberately offensive or provocative online post (Oxford Dictionaries, n.d., def. 1).

Comments. The ‘troll’ category made up ten percent of the total comments.

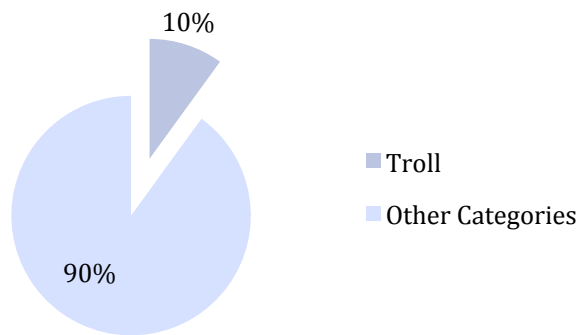


Figure 34. Total percentage of troll category comments.

Trolling, baiting, soliciting, attacking and attention seeking posts were included in the ‘troll’ category. These comments added no value to the discussion. An example of such comment included the following:

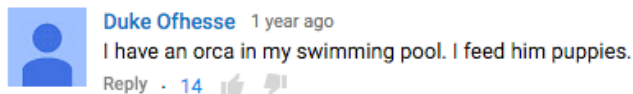


Figure 35. Screenshot of comment from “Orca and Dog” video published on YouTube.

Some users simply posted one word, gibberish, symbols, profanities, or were rude towards other people. These posts were intended to derail other users from the conversation.

Replies. There were five replies to comments made in the ‘troll’ category.

Thumbs. There were nineteen thumbs counted on comments in the ‘troll’ category.

Discussion. There will be no extended discussion about this category based on the lack of contribution it made to the overall conversation. However, there were replies made by returning users who addressed the trolls, such as seen in the following comment:



Figure 36. Screenshot of comments from “Orca and Dog” video published on YouTube.

Other. Definition: Those remaining in a group; those not already mentioned (Oxford Dictionaries, n.d., def. 1.2).

Comments. The ‘other’ category made up twenty-five percent of the total comments.

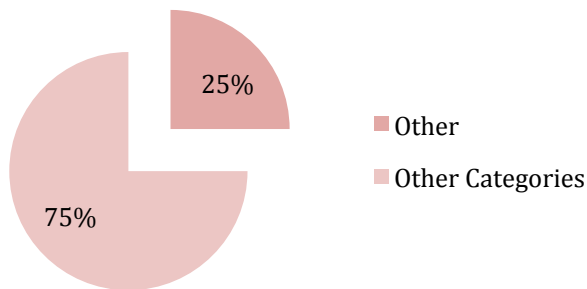


Figure 37. Total percentage of other category comments.

Uncategorized comments and emergent themes were included in this category. Anthropomorphism, which means “the attribution of human characteristics or behaviour to a god, animal, or object” (Oxford Dictionaries, n.d.) were noted as an emergent theme in this category. The following is an example of an anthropomorphic comment:

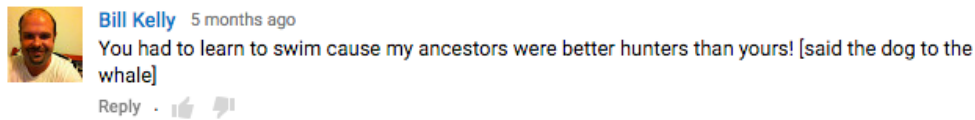


Figure 38. Screenshot of comment from “Orca and Dog” video published on YouTube.

Legitimate questions about how Luna found himself alone hundreds of miles away from his usual hunting grounds and a media inquiry about utilizing the video in a TV show, were also included in this category.

Replies. There were twenty-one replies to comments made in the ‘other’ category.

Thumbs. There were sixteen thumbs counted on comments in the ‘other’ category.

Discussion. The most dominant emergent themes in the ‘other’ category were anthropomorphic and misinformation. Additional themes that fell into the ‘other’ category included religion, legitimate questions and media inquiries. The following two comments by reoccurring users provided perfect examples of both anthropomorphic and misinformed themes:

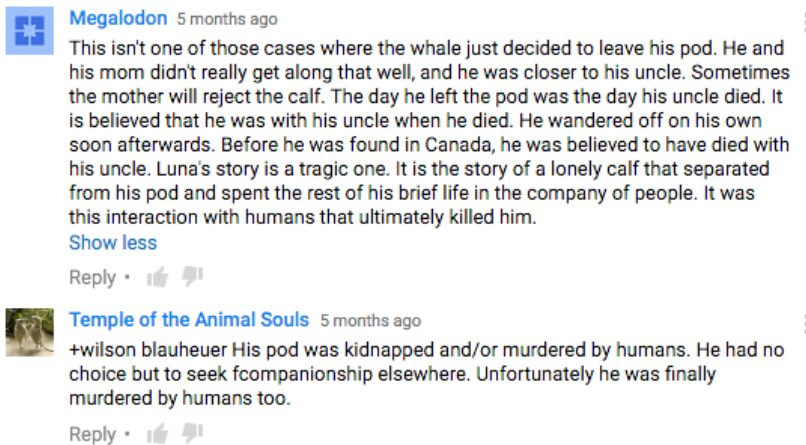


Figure 39. Screenshot of comments from “Orca and Dog” video published on YouTube.

The first comment was anthropomorphic in nature; it was not unusual to find these types of comments, and in fact they were quite common. The user projected human relations on Luna and the members of his pod. There were sightings of Luna’s unusual behaviour during his early

days as seen from the whale watching community as they observed Luna traveling with another pod. It was thought that Luna had disappeared with his uncle (Luna/L98/Tsuux-iit, n.d.).

However, we cannot say that it was the “day he left the pod was the day his uncle died” as none of us were actually there to witness the death of his uncle, and his body was never found.

We also cannot ascertain that Luna’s “pod was kidnapped or murdered by humans” leaving him “no choice but to seek companionship elsewhere” however we do know that the southern resident killer whales population was decimated back in the late 60’s and early 70’s when they were captured for aquariums; several individuals perished in the process, this information is covered in the film *Blackfish*. We also know that this decimation made a significant long-term impact on the species inability to recover in numbers today. We cannot really say for certain that Luna was “murdered” however based on what we know from the feature film *The Whale*, we assumed that he was killed accidentally, although some suspected his death was premeditated.

Finally, I noted that one user made reference to my description of the video, and that more people should read it as it would give them more information about the video. However, it was interesting to observe that users came up with their own interpretation of the video contents. This is key to my study as the comments help reveal these interpretations (and the biases/values/assumptions/etc. embedded in them).

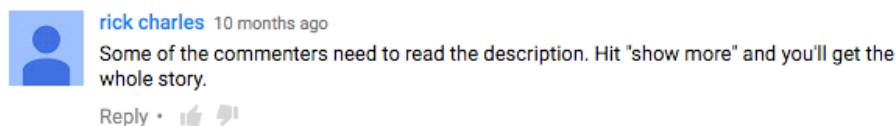


Figure 40. Screenshot of comment from “Orca and Dog” video published on YouTube.

Summary

These findings explained what the users were saying about the video and what implications that had on conservation awareness of endangered killer whales. The most popular top-level comments were found within the ‘love’ category and did not make noticeable connections to conservation awareness of endangered killer whales. This is comparable to the findings of Nekaris et al. (2013) in that their ‘cute, adorable, funny’ category had the highest ranks but that celebrity endorsements were not effective in bringing attention to the wildlife trafficking of the threatened primate, the slow loris, as seen in the literature review. “Celebrity endorsement of videos showing protected wildlife increases visits to such sites, but does not educate about conservation issues” (Nekaris et al., 2013, p. 1). In both cases, what seemed like positive findings didn’t lead to conservation and education on behalf of the wildlife. Therefore, recommendations are later presented in this report as to how to remedy some of the misinformation while linking the categories of love to conservation, as a central motivator.

It turned out that categories with smaller data sets/numbers of comments, such as ‘conservation’ and ‘cultural’, yielded much denser and complex discussions than the more popular categories such as ‘love’ and ‘fear’. The ‘cultural’ category became much larger than I first anticipated, as the few but lengthy comments were attributed to the First Nations and I felt those comments were important to address, as they mostly perpetuated racism, misinformation, and negativity. The most-dense discussions were those categories with the smallest percentage of comments. Just the data alone could not reflect on what the users were saying, as people took the time to engage in discussion throughout the replies. Not surprisingly, many comments contained references to anthropomorphic behaviors, this being the largest non-categorized theme to have emerged in the ‘other’ category.

In comparing these findings to those discussed in the literature review, it is now easier to understand why the video attracted attention, in other words to identify what factors made the video go viral. Much of the research on this topic overlapped in its findings with those in the literature review, in that viral videos that contained positive and emotional content were most often shared (Yang & Wang, 2015; Chen & Lee, 2014; Berger & Milkman, 2013; Botha & Reyneke, 2013; Nelson-field, Riebe & Newstead, 2013; Eckler & Bolls, 2011; Izawa, 2010). Findings from my study suggested that commenters found the video predominantly positive, as revealed through the ‘love’ category, and that there were a range of emotions as uncovered throughout the discussion categories: love, joy, gratitude, surprise, sadness, fear, anger, and frustration. Overall, although my findings revealed weak implications for conservation awareness of endangered killer whales, however my study does contribute to the literature on the viral video phenomenon. In the next chapter, a second level analysis employing frame theory is the lens used to explain how the media was set up (framed) and how the audience perceived (framed) the video, with observations made about media effects, or implications of the video.

Theoretical Framework

Introduction

After careful consideration of several theories and models, including several that were discussed in the literature review, frame theory was selected as the lens for my research project. Through a theoretical analysis, frame theory helped explain how the video was framed through media set-up and audience perceptions. Characteristics of frame theory became evident through the comments, as themes emerged in regards to how the audience interpreted the video clip. These themes were identified and broken down into eight categories, which were then coded for analysis. Spanish communication researcher Ardèvol-Abreu (2015) described that an inductive

approach to using frame theory in research “requires an open approach to the sample of analysis in order to detect the frames it contains” (p. 433). Through frame theory, I used the process model of framing research to situate media but more so individual framing, and the effects those frames had on the conservation of endangered killer whales.

Frame Theory

Canadian-American sociologist Goffman (1974) proposed that there are two types of primary frames: natural and social. He explained how “primary frameworks vary in degree of organization. Some are neatly presentable as systems of entities, postulates, and rules; others – indeed, most others – appear to have no apparent articulated shape, providing only a lore of understanding, an approach, a perspective” (Goffman, 1974, p. 21). “Natural frameworks identify occurrences seen as undirected, unoriented, unanimated, unguided, ‘purely physical’ ... Social frameworks, on the other hand, provide background understanding of events that incorporate the will, aim, and controlling effort of an intelligence” (Goffman, 1974, p. 22), situating frames as a topic of study.

According to Ardèvol-Abreu (2015), Goffman predicted how “frames help the audiences to locate, perceive, identify, and label the flow of information that surrounds them. Through this process, frames determine the social environment, by influencing the thoughts, ideas, and attitudes of individuals and the public” (p. 435). Ardèvol-Abreu (2015) explained that “the theory of framing are located in interpretive sociology, which considers that people’s interpretation of reality and everyday life depends fundamentally on interaction and the definition of situations” (p. 427). Very simply put, “frame is an invitation and an incentive to read a story in a certain way” (Ardèvol-Abreu, 2015, p. 430).

Applying Frame Theory

In their article about how journalism represents Aboriginal issues to a non-Aboriginal majority audience, Canadian communications researchers McMahon and Chow-White (2011) combined elements of agenda-setting and framing theory into a peace journalism model to analyze ‘racial’ representation in news coverage. They emphasized how “a framing approach focuses on the qualitative meanings attached to issues and the values embedded in media representations” (McMahon & Chow-White, 2011, p. 994). They suggested that the model they developed can be used by researchers as a lens or tool to identify ‘hidden’ frames in media coverage that reveal both ‘old’ (i.e. obvious) and ‘new’ (i.e. indirect, hidden) forms of racism. This application of frame theory has been helpful with my own research in the analysis of comments made about First Nations.

Media and Individual Frames

Scheufele (1999) stated the “two concepts of framing can be specified: media frames and individual frames” p. 106). Ardèvol-Abreu (2015) described the difference between media and individual frames; he wrote “media frames are attributes of the news themselves, while individual frames are information and cognitive schemas” (p. 431). As cited by Scheufele (1999), “Gamson and Modigliani (1987) conceptually defined a media frame as ‘a central organizing idea or story line that provides meaning to an unfolding strip of events . . . The frame suggests what the controversy is about, the essence of the issue’” (p. 106). Scheufele (1999) also cited Entman (1993) in that “individual frames are defined as ‘mentally stored clusters of ideas that guide individuals’ processing of information’” (p. 106).

My analysis included the media frame (the way I documented and tried to set up my clip) however my focus is more on the individual frame, in how the YouTube commenters understood

and interpreted the clip, as revealed in their comments. By looking at one hundred comments and drawing out common themes, my research helps us to understand what the key individual frames were.

Process Model of Framing Research

Scheufele’s (1999) process model of framing is broken down into three categories; inputs, processes and outcomes (p. 114) and is comprised of four processes; frame building, frame setting, individual-level effects of framing, and journalists as audiences. I applied this process model to my research in order to determine how the frames are situated through media (my clip on YouTube) and received through the audience (comments from users). I referred to Scheufele’s (1999) process model of framing research to work through my analysis.

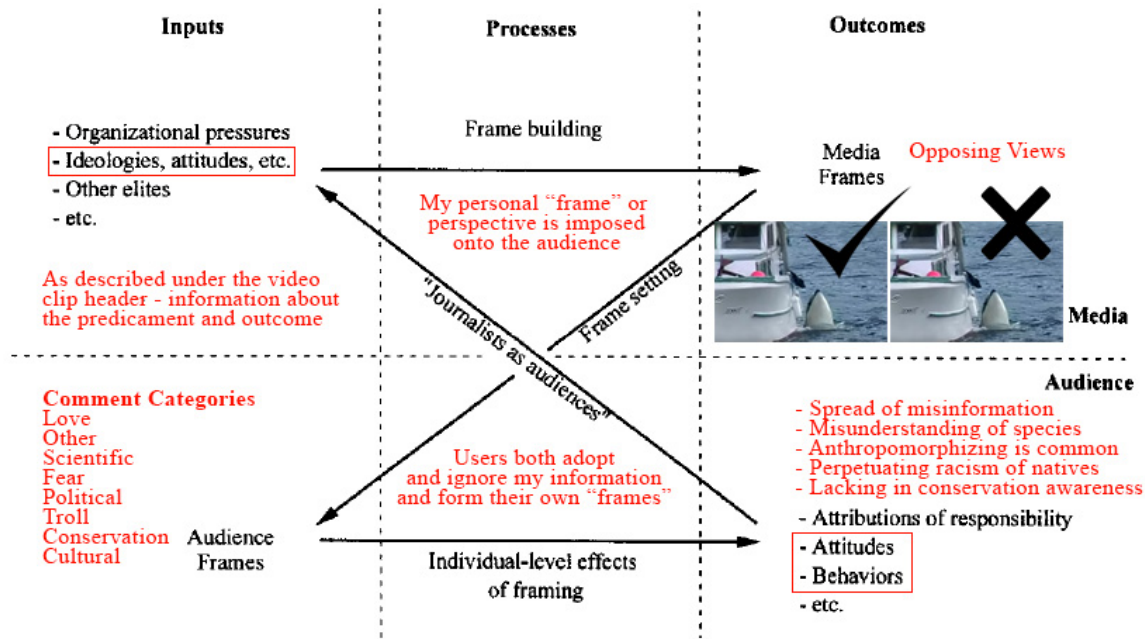


Figure 41. A process model of framing research.

Although this might not seem straightforward to all viewers, I used this graphic of the process model of framing research by Scheufele (1999) to work through the inputs, processes

and outcomes in regards to the framing of my video: media framing and individual framing. I have included this so that readers can understand how I came to my conclusions.

Inputs. This section dealt with the organizational pressures, ideologies, attitudes and any elites that might be influencing power over how media is framed. In the case of my research, it is particularly true of ideologies and attitudes that were relative to the framing of the clip. When referring to Scheufele's (1999) model (Figure 41), inputs also revealed the audience frames, derived from the user comments under the video clip, which in my case were broken down into eight categories from highest to lowest rank; love, other, scientific, fear, political, troll, conservation and cultural.

Processes. The following four processes dove deeper into how frames were situated within the media (clip) and more importantly, how individual frames manifested from the audience.

Frame building. Scheufele (1999) explained how "individual characteristics of journalists, can impact the framing of news content" (p. 115). "The first source of influence is journalist-centered influences. Journalists actively construct frames to structure and make sense of incoming information. The formation of frames is moderated by variables such as ideology, attitudes, and professional norms" (Scheufele, 1999, p. 115). When I uploaded my clip to YouTube, I gave it the following title "Orca (killer whale) and dog – READ THE DETAILS!" and encouraged viewers to read the details below the title as seen in Figure 42.

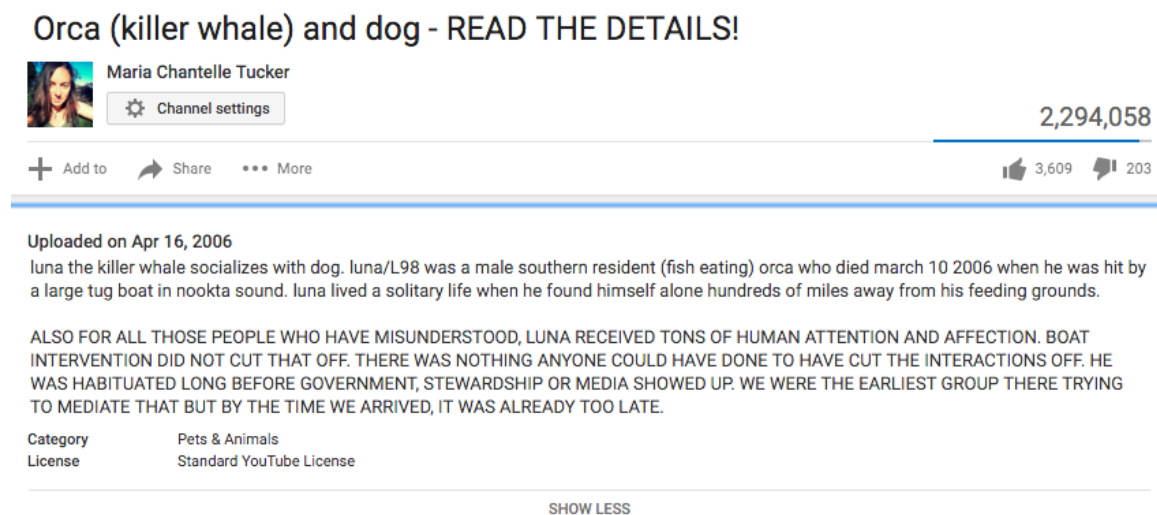


Figure 42. Screenshot of YouTube video title and description.

In the details section, I provided information about the species of killer whale and the predicament of a social mammal living a solitary life. In situating the clip on YouTube, I did my best not to mislead or impose my own frames onto the platform’s users, although my own bias may have been unavoidable. For instance, I emphasized in capital letters, information to help clarify earlier misunderstandings about Luna. People had different ideas about how Luna lived in those early years therefore I felt I needed to share my personal observations to help better steer people’s understanding of the overall situation.

However, once the clip was posted and people started watching it, I added more details, hence creating a second framing stage. There were two initial framing phrases of the clip; the ambiguous and then my emphasis for guiding the audience based on their previous reactions to the video. This video has continued to generate conversation after ten years, and this is what initially peaked my interest to study the phenomenon.

Frame setting. Scheufele (1999) explained how “frame setting, or second level agenda setting, as McCombs and his colleagues have labeled it, is concerned with the salience of issue

attributes” (p. 116), in other words, important issues. “Frames influence opinions by stressing specific values, facts, and other considerations, endowing them with greater apparent relevance to the issue than they might appear to have under an alternative frame” (Scheufele, 1999, p. 116).

When reviewing my description in Figure 42, as I discussed in frame building, the capital letters were used to emphasize a reframing of the information that was easily overlooked or unknown. It might be difficult for the audience to have perceived a situation such as this, and it is easy to see how misinformation can occur. In the video description, I stated the ecotype of killer whale and suggested that this is a social - not predatory interaction. Because the clip is candid in nature and void of any narrative, users were left up to their own perceptions or frames to decide the nature of the content.

Individual-level effects of framing. “Although making important contributions in *describing* effects of media framing on behavioral, attitudinal, or cognitive outcomes, these studies provide no *explanation* as to why and how these two variables are linked to one another” (Scheufele, 1999, p. 117). In my research study, I have not claimed any linkages between variables in regards to media framing, I did however acknowledge the presence of media frames of the audience and my assumption of what that means for conservation awareness of endangered killer whales. Several users indicated where they developed their perspectives from, for instance varying types of media, be it a feature film or online resources (Figure 21). While other users seemed to almost adopt another users’ frame, as seen in Figure 25. With the regurgitation of wrong information, some users who were affected by the comments will be susceptible to adopting those frames as their own. But this was not the case for all users, as some commenters clearly presented alternative frames to an opposition within a reply thread for instance, as seen in the ‘cultural’ category discussion of First Nations (Figure 24).

Journalists as audiences. Scheufele (1999) described how “journalists, like their audiences, are cognitive misers. Consequently, they are equally susceptible to the very frames that they use to describe events and issues” (p. 117). Researchers Cacciatore, Scheufele and Iyengar (2006) suggested "is it possible to increase the effectiveness of a message by changing the way the information is presented and - therefore - which cognitive schema audiences use when making sense of the information" (p. 20).

My own knowledge and personal experience with the video subject, Luna, influenced how I framed the clip. After the fact, I could have described the clip as “Luna the killer whale interacts with dog” to refrain from imposing my own social interpretive frame onto the audience. In the case of the Facebook clip however (discussed earlier), there were no video details so my own frame was not prevalent there, as it was with the original YouTube clip; this would make an interesting comparison of framing. Obviously I was not able to ask the orca directly therefor it was not really known the intentions of his behaviour. However, based on previous scientific evidence of the southern resident killer whales species (as seen in the literature review) it was safe to suggest that Luna’s interspecies behaviour, with humans and also on occasion, with dogs and sea lions, was social in nature. Hence my frame has been also adopted (but to what degree I do not know) by the audience as their frame, as reflected in the comments and data.

Outcomes. There were a number of media frames detected which influenced the audience frames revealed some concerning findings such as; the spread of misinformation and anthropomorphizing (‘other’ category), misunderstanding of the species (‘science’ category), perpetuating negativity of First Nations culture (‘cultural’ category), and is lacking in conservation awareness (‘conservation’ category). The love-themed comments although positive on the surface, did not amount to anything directly for the awareness of the endangered southern

resident killer whale population. Although I imposed my own frame onto the audience to help guide them, they arrived at varying conclusions based on their own frames of media or preferences as seen in Figure 21, that demonstrated lots of praise for Luna as a social individual, but provided little proactive evidence for his species.

My research analyzed both the frames I created and shared via YouTube, but more importantly the frames inside the minds of the audience who observed the clip. The audience frames were revealed through the comments depicting their understanding of the clip, independent of my own framing in capital letters, as seen in Figure 42. Therefore my inductive analysis of these comments draws out the particular interpretive frames of the viewers, as expressed by their comments. The implications of these frames are an important consideration for communication activities aimed to increase conservation awareness of endangered killer whales.

Summary

Through the lens of the frame theory: the process model of framing research, my research strived to understand what the audience said about the media, through their comments (revealed as frames), independently of how an initial media producer (myself) aimed to frame their interpretation. This is important since communicators (like myself) tried to frame an understanding of the issue – but the commenters came to their own conclusions (as identified in my analysis). American communication researcher Scheufele (1999) summarized that “audiences rely on a version of reality built from personal experience, interaction with peers, and interpreted selections from the mass media” (p. 105). I postulate that the individual framing manifests both through media frames of the topic of killer whales and through independent interpretation (or preference) of the situation, based on social frames. Moreover, we see through the outcomes,

how those user “frames” do or do not affect the awareness of endangered killer whale conservation. The frame theory provided a deeper sense of the description analysis and this helped to strengthen my recommendations.

Recommendations

In their study of a viral video of a slow loris, Nekaris et al. (2013) showed “the need for better regulations on media sharing websites such as YouTube” and “better educational information is needed on websites that show protected species in illegal situations such as wildlife trade” (p. 9). Once word got out to the public about the truth of the inhuman trafficking and treatment of the slow loris, a campaign was started to encourage people to:

pledge not to support and encourage the illegal pet trade in slow lorises. To not ‘share’ or ‘like’ any video or photo that shows a slow loris being kept as a pet and, where possible, to ‘comment’ directing people to the International Animal Rescue slow loris rescue information page to help expose the truth and end the suffering (Tickling is Torture, 2015, para. 1).

For the next steps in this project, I plan to turn my research into an opportunity to communicate conservation-related information about endangered killer whales. This does not mean removing the video, but is rather about integrating additional information gained through this research project into a multimedia / social media strategy associated with the video. The goal is to make this strategy go viral and includes several integrated media components. To make use of the marketing implications learned through the literature review, and as suggested by Chen and Lee (2014), I will employ “an interesting storyline or plot that can evoke strong affective responses” from viewers (p. 301). The story of Luna and a dog will be presented in a multimedia strategy that include the following steps:

- 1) An eye-catching infographic (Appendix F) addressing the key finding of 'love' being the most popular category of YouTube comments, and highlighting facts about Luna while stressing the need for conservation (and pointing viewers to further resources);
- 2) A WordPress.com (Appendix G) website including information for the public such as the infographic, a short description of the study along with a link to this paper, and educational links to websites with information about killer whales;
- 3) A link to the WordPress site will be posted at the top of the YouTube video description and possibly superimposed over the video using YouTube's editing tools; and
- 4) A short six-second looping clip of Luna & Dog added to the Vine social media platform (Appendix H), that includes the web address on the image.

This strategy addresses copyright issues while giving viewers a lead back to further information about Luna and endangered killer whales. Vine is a social media application for mobile devices that I recently experimented with, and after observing another one of my videos go viral on Vine and Twitter, I realized it was the perfect platform to integrate into my outreach strategy. The clip will be added to Vine upon completion of this research project, where my accumulating followers (thanks to another recent viral clip) and I will then re-Vine it within the Vine ecosystem, and repost it directly to Twitter and Facebook at the same time. Given what I know now about viral video phenomenon and framing, it is my hope that this strategy will contribute to increased public awareness of endangered killer whales and the threats upon their survival, as well as to resources to support their conservation. Now is a critical time to raise awareness of this issue; recent research has found the southern resident killer whales are starving to death. Leading scientist "Ken Balcomb is blunt about what he is seeing for the Southern

Residents long-term: ‘These whales are starving,’ he says. ‘There simply aren’t enough salmon out there for them to eat’” (Neiwert, 2016, para. 3).

Limitations & Future directions

There were several limitations to this research design. Only one video was sampled, future studies could compare more than one or a chunk of videos based on a theme or compare them to other themes. Comments from one social media platform (YouTube) was analyzed out of several others (Facebook); further research could include a comparative study between the online comments of multiple social media platforms. The types of categories I created were based on my subjective point of view (bias) of the comments and my particular research questions. One hundred of the most recent comments of thousands were sampled, other studies could do an analysis of the top comments or random comments. The methodology included qualitative and quantitative content analysis; future research might include interviews and surveys.

Conclusion

After ten years of observing one of my videos continue to attract attention on YouTube, and quickly go viral on Facebook in 2014, I felt it was important to probe the viral video phenomenon. The aim of this research project was to understand a viral video’s implications on the public’s awareness of conservation issues associated with endangered killer whales. My findings revealed in conjunction to my research questions that: (a) the ‘love’ category was highest ranking overall, that ‘culture’ was the lowest ranking and ‘conservation’ was the second lowest; (b) factors of positivity and emotion made the video go viral; (c) audience perceptions were guided through both media and individual frames, and there needs to be clarification made

in regards to killer whale ecotypes in order for (d) implications to benefit the awareness of endangered southern resident killer whales.

The literature summarized how viral videos that contained positive and emotional content were most often shared on social media (Yang & Wang, 2015; Chen & Lee, 2014; Berger & Milkman, 2013; Botha & Reyneke, 2013; Nelson-field, Riebe & Newstead, 2013; Eckler & Bolls, 2011; Izawa, 2010). My findings echoed similarities with that of Nekaris et al.'s (2013) in that both our 'love' and 'cute' categories were the highest ranking, and that celebrity endorsements did not amount to further education on behalf of the wildlife. Therefore my study aligned with those of other viral video findings and contributes to the pool of literature on viral video phenomenon.

Frame theory was the theoretical lens used to more deeply analyze the audience's perception of the video and detect media effects or implications of misunderstood content. This second-level of analysis contributed to uncovering the implications of this study and thus contributed knowledge of viral video effects on the conservation awareness of endangered killer whales. Through the findings, descriptive and theoretical analysis, I was able to manufacture a post-research project media strategy for assisting in the goal of educating about the conservation of endangered killer whales.

This research paper can be used as a template for assisting clients in understanding the implications of their digital media strategies, and for their research endeavours that investigate viral media phenomenon and developing strategies for those outcomes. I am capable of communicating those findings in a multitude of ways: reports, branding, content design, web facilitation, and social media implementation. This study can also extend for comment discourse analysis found within a wide range of sectors and issues.

When I first embarked on this research project, I was not sure what to expect from the findings but I knew that I wanted to better understand what was being said in regards to my video. Before deciding to approach this topic as my research project, I experienced some anxiety related to reading the video comments. However, much of that stress has subsided, since I've worked through my findings and employed frame theory to examine both media and individual frames, providing clearer insights about my work. Many people who worked with Luna's situation endured varying levels of stress; ultimately, we carry the grief of loss with us throughout our lives today. This analysis of comments forced me to investigate any preconceived ideas I had about what people were saying about Luna, and break down those myths to myself, ultimately providing a kind of exposure therapy in facing those anxieties. It is my hope that this research project will contribute awareness to Luna's endangered family by using the "Orca and Dog" video as a beacon to shine a light on a very concerning and timely issue: the survival of the southern resident killer whale population.

“Moonlight drowns out all but the brightest stars”

- J.R.R. Tolkien



Figure 43. Peronino, M. C. (2005). Collage of L98's lunar reflection.

References

- Andacht, F. (2014). A critical and semiotic approach to the wonderful, horrible life cycle of the Kony 2012 viral video. *Triplec (Cognition, Communication, Co-Operation): Open Access Journal For A Global Sustainable Information Society*, 12(1), 214-237.
- Anthropomorphism. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/definition/english/anthropomorphism?q=anthropomorphize#anthropomorphism__4
- Ardèvol-Abreu, A. (2015). Framing theory in communication research. Origins, development and current situation in Spain. *Revista Latina De Comunicación Social*, (70), 423-450. doi:10.4185/RLCS-2015-1053en
- Berger, J., & Milkman, K. L. (2013). Emotion and virality: What makes online content go viral? *Gfk-Marketing Intelligence Review*, 5(1), 18-23.
- Botha, E., & Reyneke, M. (2013). To share or not to share: The role of content and emotion in viral marketing. *Journal of Public Affairs*, 13(2), 160-171.
- Cacciatore, M. A., Scheufele, D. A., & Iyengar, S. (2016). The end of framing as we know it ... and the future of media effects. *Mass Communication & Society*, 19(1), 7-23. doi:10.1080/15205436.2015.1068811
- Center for Whale Research - Study of Southern Resident Killer Whales. (2015, July 1). Retrieved from <http://www.whaleresearch.com/#!orca-population/cto2>
- Chen, T., & Lee, H. (2014). Why do we share? The impact of viral videos dramatized to sell how microfilm advertising works. *Journal Of Advertising Research*, 54(3), 292-303.
- Chisholm, S. (Producer), & Parfit, M. (Director). (2013). *The whale* [Motion picture]. Canada: Telefilm Canada.
- Conservation [Def 1]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/conservation
- Cowperthwaite, G. (Producer), & Cowperthwaite, G. (Director). (2013). *Blackfish* [Motion picture]. United States: Dogwoof.
- Cultural [Def 1]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/cultural
- Dawson, J. (2012, April 25). 'White Orca' Video Goes Viral. Long Island Press (NY).

- DeCesare, J. A. (2012). Review: ARKive—An intersection of conservation, multimedia and usability. *Journal of Media Literacy Education* 4:2 193-195.
- Dennis, R. (2012, July 25). Video of Shamu killer whale attack at Socal Seaworld goes viral. *LA Weekly (CA)*. Retrieved from <http://www.laweekly.com/news/video-of-shamu-killer-whale-attack-at-socal-seaworld-goes-viral-2394942>
- Dunagan, C. (n.d.). Resident killer whales sometimes attack porpoises but never eat them. Retrieved July 04, 2016, from <https://www.eopugetsound.org/magazine/ssec16-attack>
- Eckler, P., & Bolls, P. (2011). Spreading the virus: Emotional tone of viral advertising and its effect on forwarding intentions and attitudes. *Journal Of Interactive Advertising*, 11(2), 1-11.
- Fear [Def 1]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/fear
- Foote, A. D., Griffin, R. M., Howitt, D., Larsson, L., Miller, P. O., & Hoelzel, A. R. (2006). Killer whales are capable of vocal learning. *Biology Letters*, 2(4), 509-512.
- Ford, J. K. B., Stredulinsky, E. H., Towers, J. R., & Ellis, G. (2012). Information in support of the identification of critical habitat for transient killer whales (*orcinus orca*) off the west coast of Canada. *Canadian Science Advisory Secretariat*. Fisheries and Oceans Canada. Retrieved from <http://www.dfo-mpo.gc.ca/Library/349373.pdf>
- Ford, J. B., Ellis, G. M., Olesiuk, P. F., & Balcomb, K. C. (2010). Linking killer whale survival and prey abundance: Food limitation in the oceans' apex predator? *Biology Letters*, 6(1), 139-142. doi:10.1098/rsbl.2009.0468
- Ford, J. K. B., Ellis, G. M., Barrett-Lennard, L. G., Morton, A. B., Palm, R. S., & Balcomb, K. C. (1998). Dietary specialization in two sympatric populations of killer whales (*Orcinus orca*) in coastal British Columbia and adjacent waters. *Canadian Journal Of Zoology*, 76(8), 1456-1471
- Goffman, E. 1974. *Frame Analysis: An Essay on the Organization of Experience*. New York, NY et al.: Harper & Row. Retrieved from <http://is.muni.cz/el/1423/podzim2013/SOC571E/um/E.Goffman-FrameAnalysis.pdf>
- Grant, S.C.H & Ross, P.S. (2002). Southern resident killer whales at risk: Toxic Chemicals in the British Columbia and Washington environment. *Canadian Technical Report of Fisheries*

- and Aquatic Sciences 2412*. Fisheries and Oceans Canada. Retrieved from <http://www.dfo-mpo.gc.ca/Library/266178.pdf>
- Hoover, E. (2015). A young man of words: A viral video about race helped one student find a voice. *The Chronicle Of Higher Education*, (41), 22.
- Izawa, M. (2010). *What makes viral videos viral?: Roles of emotions, impression, utility, and social ties in online sharing behaviour* (Unpublished masters dissertation). John Hopkins University, Baltimore, MD.
- Jiang, L., Miao, Y., Yang, Y., Lan, Z., & Hauptmann, A. G. (2014, April). Viral video style: A closer look at viral videos on YouTube. In *Proceedings of International Conference on Multimedia Retrieval* (p. 193). ACM.
- Khan, F. G., & Vong, S. (2015). Why do things go viral on YouTube?. *Strategic Direction*, 31(3), 21-23. doi:10.1108/SD-01-2015-0005
- Kopacz, M. A., & Lawton, B. L. (2013). Talking about the YouTube Indians: Images of Native Americans and viewer comments on a viral video site. *Howard Journal of Communications*, 24(1), 17-37. doi:10.1080/10646175.2013.748406
- Kopacz, M. A., & Lawton, B. L. (2011). Rating the YouTube Indian: Viewer ratings of Native American portrayals on a viral video site. *The American Indian Quarterly*, (2), 241.
- Love [Def 1]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/love
- Madden, A., Ruthven, I., & McMenemy, D. (2013). A classification scheme for content analyses of YouTube video comments. *Journal of documentation*, 69(5), 693-714.
- McCluskey, M. (2015, October 27). Watch an orca punt a seal 80 feet into the air. *Time*. Retrieved October 29, 2015, from <http://time.com/4089231/orca-punts-seal-80-feet-into-the-air/>
- McGuire, J. (2016). Uncivil dialogue: Commenting and stories about indigenous people - Editor's Blog. *CBC*. Retrieved June 25, 2016, from <http://www.cbc.ca/newsblogs/community/editorsblog/2015/11/uncivil-dialogue-commenting-and-stories-about-indigenous-people.html>

- McMahon, R., & Chow-White, P. A. (2011). News media encoding of racial reconciliation: Developing a peace journalism model for the analysis of 'cold' conflict. *Media, Culture & Society*, 33(7), 989. doi:10.1177/0163443711415742
- Mehta, D. (2013). Viral video brings Alberta bears global fame, sparks conservation discussions. *The Canadian Press*. Retrieved from <http://www.ctvnews.ca/canada/viral-video-draws-international-attention-to-alberta-bear-conservation-1.1610005>
- Miller, R., & Lammas, N. (2010). Social media and its implications for viral marketing. *Asia Pacific Public Relations Journal*, 11(1), 1-9.
- Mohr, I. (2014). Going viral: An analysis of YouTube videos. *Journal Of Marketing Development & Competitiveness*, 8(3), 43-48.
- Mukhopadhyay, S. (2014). Killer whales hunting sea lions captured in Canada, YouTube video goes viral. *International Business Times - US ed.* Retrieved from <http://www.ibtimes.com.au/killer-whales-hunting-sea-lions-captured-canada-youtube-video-goes-viral-1335868>
- Neiwert, D. (2016). The orcas are starving. *Crosscut*. Retrieved June 27, 2016, from <http://crosscut.com/2016/06/the-orcas-are-starving/>
- Neiwert, D. (2015). *Of orcas and men: What killer whales can teach us*. New York City, NY: The Overlook Press.
- Nekaris, K. A-I., Campbell, N., Coggins, T. G., Rode, E. J., Nijman, V. (2013). Tickled to death: Analysing public perceptions of 'cute' videos of threatened species (slow lorises – *nycticebus* spp.) on web 2.0 sites. *PLoS ONE* 8(8): doi:10.1371/annotation/7afd7924-ca2b-4b9c-ac1b-2cc656b3bf42
- Nelson-Field, K., Riebe, E., & Newstead, K. (2013). The emotions that drive viral video. *Australasian Marketing Journal (AMJ)*, 21205-211. doi:10.1016/j.ausmj.2013.07.003
- Norman, E. S. (n.d.). *Luna/Tsu-xiit the "whale": Governance across (political and cultural) borders*. Retrieved from <http://www.evergreen.edu/tribal/docs/normanluna.pdf>
- Orca Network - Luna Fact Sheet. (n.d.). Retrieved May 05, 2016, from <http://www.orcanetwork.org/news/lunafacts.html>

- Other [Def 1.2]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/other
doi:10.1371/annotation/7afd7924-ca2b-4b9c-ac1b-2cc656b3bf42
- Parfit, M. (2011, August 1). Luna: A whale to watch; the true story of a lonely orca leaps from printed page to silver screen, with a boost from new technology. *Smithsonian*. Retrieved from <http://www.smithsonianmag.com/ist/?next=/science-nature/luna-a-whale-to-watch-12434931/>
- Parsons, K., Balcomb, I. K., Ford, J., & Durban, J. (2009). The social dynamics of southern resident killer whales and conservation implications for this endangered population. *Animal Behaviour*, 77963-971. doi:10.1016/j.anbehav.2009.01.018
- Political [Def 1.1]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/political
- Reuters, T. (2016). SeaWorld to end controversial orca-breeding program - Technology & Science - CBC News. Retrieved May 04, 2016, from <http://www.cbc.ca/news/technology/seaworld-orca-breeding-program-1.3495252>
- Scheufele, D. A. (1999). Framing as a theory of media effects. *Journal Of Communication*, 49(1), 103-22.
- Scientific [Def 1]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/scientific
- Szabo, G., & Huberman, B. A. (2010). Predicting the popularity of online content. *Communications Of The ACM*, 53(8), 80-88. doi:10.1145/1787234.1787254
- Towers, J. R., Ellis, G. M., & Ford, J. K. B. (2015). Photo-identification Catalogue and Status of the Northern Resident Killer Whale Population in 2014. *Canadian Technical Report of Fisheries and Aquatic Sciences*. Retrieved from <http://www.dfo-mpo.gc.ca/Library/343923.pdf>
- Troll [Def 1]. (n.d.). In *Oxford Dictionaries*, Retrieved May 04, 2016, from http://www.oxforddictionaries.com/us/definition/american_english/troll
- Viral Video - Wikipedia. (2015, December 7). Retrieved December 11, 2015, from https://en.wikipedia.org/wiki/Viral_video

- Wallsten, K. (2010). "Yes we can": How online viewership, blog discussion, campaign statements, and mainstream media coverage produced a viral video phenomenon. *Journal Of Information Technology & Politics*, 7(2/3), 163-181. doi: 10.1080/19331681003749030
- Waters, S., & El-Harrad, A. (2013). A note on the effective use of social media to raise awareness against the illegal trade in Barbary macaques. *African Primates*, 8, 67-68.
- Wesch, M. (2007). What is web 2.0? What does it mean for anthropology? Lessons from an accidental viral video. *Anthropology News*, 48(5), 30-31.
- West, T. (2011). Going viral: Factors that lead videos to become Internet phenomena. *Elon Journal of Undergraduate Research*, 76-84.
- Yang, H. C., & Wang, Y. (2015). Social sharing of online videos: Examining American consumers' video sharing attitudes, intent, and behavior. *Psychology & Marketing*, (9), 907. doi:10.1002/mar.20826/abstract

Appendix A

Facebook Video of Luna and Dog

More Videos by שבתאי



שבתאי
Like · Comment · Share · July 19, 2014

Shared with: Public

19,798 people like this. [Top Comments](#)

133,172 shares 1.7K comments

Write a comment...

Press Enter to post.

Diane Schneider Lol, Please dont eat the dog, please dont eat the dog...,
Like · Reply · 108 · February 6, 2015 at 7:34am

[↪](#) 14 Replies

Shelley Simons It's a beautiful thing this was caught on video before Luna passed. Poor lost whale needed a friend. Thank you for sharing. At least Luna wasn't being held captive at some random zoo and out in the open sea. No matter how you look at everyone just NEEDS a friend.
Like · Reply · 208 · February 7, 2015 at 1:02pm

[↪](#) 8 Replies

Charlotte Madison Animals get nicer as humans become more vicious.
Like · Reply · 128 · February 5, 2015 at 4:24pm

[↪](#) 11 Replies


Krystal Ludeman The orca is a fish eater, the dog was not in danger. This is L98 Luna. A southern resident killer whale who's mother had passed away when he was very young and who's uncle passed away also. Luna stayed with his uncles body rather than following his pod and became lost. He was struck in the bay by a tug boat and died after a couple years of living close to people.
Like · Reply · 91 · February 7, 2015 at 7:22am · Edited

[↪](#) 64 Replies · 6 hours ago

- Embed Video
- Embed Post
- Report video

Appendix B

YouTube Video of Luna and Dog



The screenshot shows a YouTube video player with a video of a boat on a body of water. The video player includes standard controls like play, volume, and a progress bar showing 0:00 / 2:38. Below the video player, the video title is "Orca (killer whale) and dog - READ THE DETAILS!". The channel name is "Maria Chantelle Tucker" with a subscriber count of 2,195,305. The video was uploaded on Apr 16, 2006. The description reads: "luna the killer whale socializes with dog. luna/L98 was a male southern resident (fish eating) orca who died march 10 2006 when he was hit by a large tug boat in nookta sound. luna lived a solitary life when he found himself alone hundreds of miles away from his feeding grounds." There are 3,363 likes and 193 dislikes. The comments section shows 1,267 comments, with the newest first. Three comments are visible: "That dog is yelling 'Wait, what is you!'", "its seems like he didnt has friend to play with the dog was dead in 2 sec orca faster then boat", and "listen he is not wanna kill ya fucking dog".

Orca (killer whale) and dog - READ THE DETAILS!

Maria Chantelle Tucker
Channel settings
2,195,305

+ Add to Share More 3,363 193

Uploaded on Apr 16, 2006
luna the killer whale socializes with dog. luna/L98 was a male southern resident (fish eating) orca who died march 10 2006 when he was hit by a large tug boat in nookta sound. luna lived a solitary life when he found himself alone hundreds of miles away from his feeding grounds.

SHOW MORE

COMMENTS · 1,267

Add a public comment...

Newest first

Travmunger 3 days ago
That dog is yelling "Wait, what is you!"
Reply · Like · Retweet

Jdhh Dhdej 4 days ago
its seems like he didnt has friend to play with the dog was dead in 2 sec orca faster then boat
Reply · Like · Retweet

Jdhh Dhdej 4 days ago
listen he is not wanna kill ya fucking dog

Appendix C

Long Political Comment Focusing on Captivity



Megalodon 5 months ago

Fascinating animals, Orcas. A lot of animal rights activist keep demanding that all whales in captivity be freed, but I don't think that's such a good idea. Unlike during the sixties and seventies, the vast majority of Orcas in captivity today were born in captivity. There are still some that were born in the wild, but even most of them have spent the majority of their lives in captivity. Because of this, the animals have become accustomed to being around people, and some have even formed a sort of bond with trainers. If we were dealing with a less intelligent animal, things would be far simpler, but Orcas are extremely intelligent, social animals. Many of their behaviors, including hunting strategies and other habits, are learned. The Orcas born in captivity have never been hunting before, and they haven't learned how to behave in wild pod. To make matters even more complicated, these captive Orcas now look to humans for companionship. They are less cautious around humans than their wild relatives, and may even be attracted to human activity. Consider the case of Keiko. You may know him as the star of Free Willy. He was captured in 1979, when he was just four years old. He ended up in some cheap, sleazy Mexican amusement park (there are far worse places an Orca can be than Seaworld). When he was selected to play Willy, both Warner Brothers and the public fell in love with him. Warner Brothers ended up founding a charity group to raise enough money to find him a better home. They eventually raised enough money to find him a home at the Oregon Coast Aquarium, which was a far better home than some cheap amusement park in Mexico. They aquarium quickly made plans to prepare him for a return to the wild. Unfortunately, he had developed horrible lesions on his skin while still in Mexico, and he needed medical treatment. He was still recovering when the sequels to Free Willy were filmed, so the majority of the scenes for those films made use of robots to portray him. Finally, in 1998, Keiko had made a full recovery, and he was shipped back to his native Iceland to be released to the wild. I immediately, preparations were made for his release, and trainers began to prepare him for release back into the wild. He was even taken on supervised swims in the open ocean. Finally, on August 2002, he was finally deemed ready, and he left Iceland with a pod of wild Orcas. Unfortunately, it turned out that Willy didn't like his freedom. Three weeks later, he was found alone in Skálvík Fjord, Norway, swimming with kids and entertaining them by letting them ride on his back. He had apparently fed while with the pod, so their didn't appear to be anything wrong with him. He just left the pod. His trainers moved to Norway and tried to make him join up with other whale pods, but he never would. He would just swim near them before returning to the Fjord. A year later, he contracted pneumonia and died, having rejected life with wild Orcas in favor of life with people. Keiko was a whale born in the wild that spent most of his life in captivity. All attempts to release him failed, and he never joined another Orca pod. If a whale born in the wild did so poorly when returned to the wild, what chance do you think these Orcas born in captivity will have. I hate to say it, but it might be crueler to release them that it would be to keep them in captivity. Besides, not all Orcas do poorly in captivity. Corky at Seaworld San Diego is fifty years old, and she is extremely friendly. She has never been involved in an attack on a trainer. Despite the fact that she hasn't had much luck giving birth, she ended up adopting the calves of whales who died or that were rejected by their mothers. Also of note about Corky is the fact that her dorsal fin is still straight and rigid, unlike some of the other whales. Based on the life of Corky and some of the other captive whales, it seems to me like some individuals do better in captivity than others. Corky is one of the better cases, while whales involved in fatal incidents like Tilikum are some of the worst. Because these whales are so intelligent and have personalities of their own, individuals respond differently when put in the same situation. Just how well they do in captivity ultimately depends on the individual.

[Show less](#)

Reply · 4

[Hide replies](#)



Temple of the Animal Souls 5 months ago

+Megalodon Let's put you in a bathtub and teach you to do tricks. Like STFU.

Reply · 1



Curtis Foy 1 month ago

+Temple of the Animal Souls ignorant comment. S/he makes valid points. Perhaps if u understood anything about animal sociology you might actually have some understanding.

Reply ·



jan sladkowski 1 month ago

+Curtis Foy you should check out the Documentary Blackfish, Orcas don't belong in small Pools. I get his Point of View and it makes sense. But it's a cruel thing to keep Animals wich have a larger emotinal Brainpart than humans in captivity.

Reply · 1

Appendix D

Long Cultural Comment Focusing on First Nations



Megalodon 5 months ago

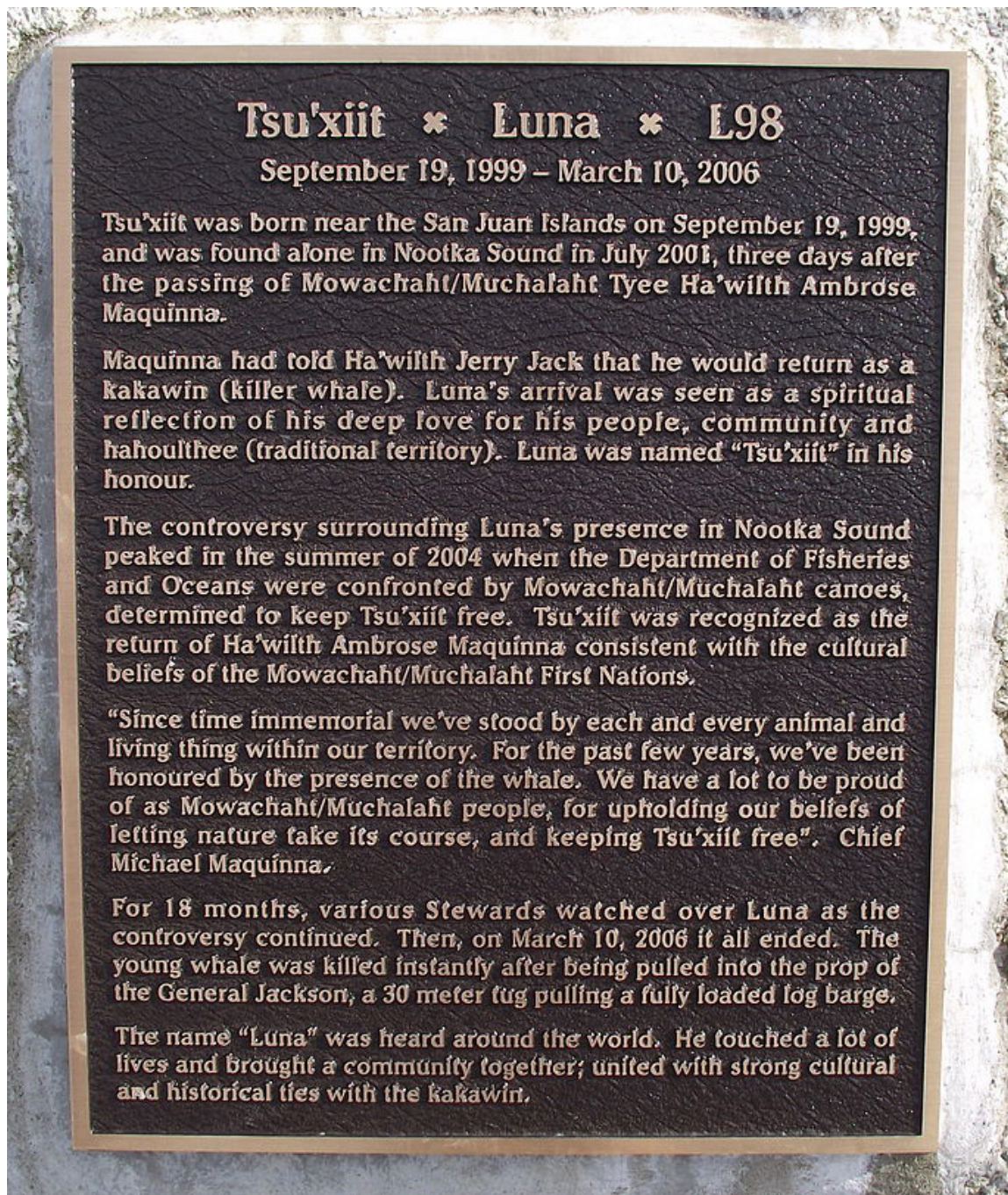
It wasn't the accumulation that prevented his rescue in the end. It was the interference of the Mowachaht/Muchalaht people who preventing his capture. Back in June 2004 they tried to move him into a pin by using boats to lure him in. Because he was attracted to boats and had been trained to follow the DFO boat, the plan had a possibility of success. Once he was in the pin, he would be transferred to a location where he could be reunited with his family. But the stubborn natives refused to let that happen. As he was following the boat towards the pin, they came out in two canoes and distracted him. They managed to successfully lead him away! Those idiots thought he was the reincarnation of their late chief, and refused to have him moved. Some of the more sensible natives had agreed to have the animal moved for it's own protection, but most of them wouldn't listen. Thanks to their meddling, DFO eventually had to stand down and abandon the attempt. Thanks to their incompetence, their "reincarnated chief" ended up being brutally killed after he got sucked into the propeller blades of a tugboat. That poor six year old whale had grown so accustomed to playing with boats that it didn't see any danger in playing around a tugboat. The bloods on their hands. The attempt with the pen was the best opportunity for a rescue attempt, and they ruined it. Ugh! Usually I'm all for indigenous rights, but they had no right to interfere with DFO's plan to save that whale. I don't care what they thought that whale was, its rights came first! This was a Canadian Department of Fisheries and Oceans affair! Spinger, the other orphaned whale, was successfully reintegrated with her own pod and is alive to this day! Thanks in part to that meddling tribe, DFO never got the chance to try and save Luna! I know DFO has gotten a lot of criticism from the way they handled this situation, and yes they could have done more, but those stupid natives in their fucking canoes didn't help matters! So thanks a lot, Mowachaht/Muchalaht First Nations! There is just as much blood on your hands as ther is on the DFO's. I hope it was worth it to see your precious "reincarnated chief" torn to shreds by the propeller of a boat! Thanks a lot, assholes!

[Show less](#)

Reply · 2  

Appendix E

Tsu'xiit Memorial Plaque from Nootka Sound



Source: [https://en.wikipedia.org/wiki/Luna_\(killer_whale\)](https://en.wikipedia.org/wiki/Luna_(killer_whale))

Appendix F

Infographic

Luna

L98 | Tsu-xiit

If you **LOVE LUNA***, then learn more about protecting his endangered family.

Love

Luna Facts

- Was a juvenile male orca
- Preyed only on fish
- A Southern Resident
- From an endangered population
- Lived in the Pacific Northwest
- His family requires conservation
- Google: Endangered killer whales
- More: <http://orcandog.wordpress.com>

*A content analysis of 100 YouTube comments revealed that 'love' was the highest ranking category

Canva © 2016, Maria Chantelle Peronino Salmon © Jarem Frye of The Noun Project

Appendix G

Website: <http://orcandog.wordpress.com>

The screenshot shows a WordPress website with a teal background. At the top, there is a navigation bar with the URL 'orcandog.wordpress.com'. Below the navigation bar is a header image of an orca and a dog. The main title is 'A Case Study of Orca and Dog' with the subtitle 'Implications of a viral video on the conservation awareness of endangered killer whales'. The central content area features a large graphic for 'Luna', a juvenile male orca, with the name 'Luna' in a red box and 'L98 | Tsu-xiit' below it. The text reads: 'If you LOVE LUNA*, then learn more about protecting his endangered family.' Below this is a 'Love' icon and a 'Luna Facts' section with a list of bullet points: 'Was a juvenile male orca', 'Preyed only on fish', 'A Southern Resident', 'From an endangered population', 'Lived in the Pacific Northwest', 'His family requires conservation', 'Google: Endangered killer whales', and 'More: http://orcandog.wordpress.com'. A note mentions a content analysis of 100 YouTube comments. At the bottom of the graphic, it says '© 2016 Maria Chantelle Tucker, Salmon & Ocean Trust of The North Project'. To the right of the main content are three sidebar sections: 'Research Question' with a text box and a PDF link; 'About the Researcher' with a bio and University of Alberta logo; and 'The Viral Video' with a video player. Below these is a 'Luna Gallery' section with a photo gallery. At the bottom right is a 'More About Killer Whales' section with a list of links: 'BC Killer Whales', 'Center for Whale Research', 'Killer Whale (DFO)', 'Orca Lab', 'Orca Network', and 'The Whale'. The footer includes social media icons and a WordPress theme credit.

Website uses the terms ‘orca’ and ‘dog’ in the URL and title for SEO

Appendix H

Screenshot of Clip on Vine

