

FRAMINGS OF NATURE IN *PLANET EARTH II* AND *WILD SAFARILIVE*

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ABSTRACT

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The percentage of the world's population living in cities continues to grow, while media technologies become ever more ubiquitous. As a result, the mass media's role in connecting the general public to the natural world will only increase; the wildlife genre of television may have a particularly large role to play in this regard. Unfortunately, previous authors have argued that the over-dramatized depictions of nature in mainstream wildlife programs may serve to disconnect viewers from the natural world. Scholarship has also not kept up with recent developments in wildlife television, with few authors writing about hugely successful programs like *Planet Earth II* or innovative series such as *Wild SafariLIVE*. To understand how each of these programs portrays the natural world, I used a three-stage model from visual anthropology to apply the most widely-cited definition of media frames to their content: identifying repeating patterns of messages, or frames, within a sample of episodes. I then drew on literature about universal human values and connectedness to nature to theorize about how the most common frames in each program, along with more general features, might influence viewers' pro-environmental attitudes and behaviors. I found that the dominant messaging pattern in *Planet Earth II* is "Spectacle," whereas *Wild SafariLIVE* emphasizes "Discovery and Exploration." While both of these programs are likely to foster pro-environmental attitudes and behaviors, *Wild SafariLIVE* might do so more effectively.

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INTRODUCTION

The proportion of the earth's human population living in cities is growing; as of 2016, half of the world's population live in urban areas (Park, 2016). At the same time, the earth is currently undergoing a sixth mass extinction. In the past century, vertebrate extinctions have accelerated to 100 times the currently accepted background rate of two mammal extinctions per ten thousand species per year (Ceballos et al., 2015). Furthermore, nearly half of all terrestrial mammals have lost 80% or more of their range in the last one hundred years (Ceballos, Ehrlich, & Dirzo, 2017).

Urbanization contributes to biodiversity loss both ecologically and psychologically. The growth of cities negatively impacts biodiversity through processes such as deforestation, habitat fragmentation, and the spread of invasive species (McDonald, Marcotullio, and Güneralp, 2013). Psychologically, urban dwellers are susceptible to the "extinction of experience." In this case, decreasing interactions with nonhuman nature leads to a loss of concern for and sense of connection to the natural world (Soga et al., 2016; Soga & Gaston, 2016; Zelenski, Dopko, & Capaldi, 2015). The extinction of experience can negatively impact potentially significant behaviors, such as individuals' willingness to vote for pro-environmental candidates and donate to environmental conservation (Soga & Gaston, 2016). Connecting urban residents to nonhuman nature should thus be a high priority for conservationists.

There is no substitute for directly experiencing the natural world (Soga et al., 2016; Duerden & Witt, 2010). However, indirect encounters with nature can produce

more positive attitudes towards wildlife (Soga et al., 2016), and encourage prosocial and pro-environmental behaviors (Zelenski et al., 2015). For example, Soga et al. (2016) tested the effects of both direct and vicarious nature experiences (e.g. reading books, watching TV programs) on Japanese school children's attitudes towards and willingness to conserve biodiversity. They found that both types of experiences positively correlated with children's attitudes towards local biodiversity; which, in turn, influenced their willingness to protect it. The expansion of nature-related media technologies may thus help to slow the extinction of experience.

The mass media is now the dominant source of public information about science and the environment (Dahlstrom, 2014). Wildlife programs in particular have been found to increase knowledge about nonhuman nature (Fortern & Lyon, 1985), donations to conservation groups (Janpol & Dilts, 2016; Arendt & Matthes, 2016), and positive attitudes and beliefs about insects (Barbas, Paraskevopoulos, & Stamou, 2009). Additionally, Zelenski et al. (2015) found that participants who watched clips of nature programs consistently behaved more sustainably and cooperatively in a fishing simulation than participants who viewed films of the built environment – even when the nature footage was considered ‘unpleasant’ (e.g images of a flood with damaged buildings and a clip of wolves killing an elk). These results, combined with, “the sheer scale, pervasiveness, and positive valuation of wildlife and nature programming...” (Dingwall & Aldridge, 2006, p. 436) make wildlife television a potentially helpful tool for conservation. However, while many popular wildlife programs are entertaining and

undeniably well-made, critics have raised concerns about how they portray nonhuman nature.

In general, Bousé (2003) warns that wildlife programs might encourage inaccurate understandings of the natural world. To survive in the ratings-driven market, wildlife programs portray nature as more violent and fast-paced than it truly is. This sentiment is echoed by Cottle (2004), who likens predation scenes in wildlife programs to the ‘money shot’ in pornography (p. 94). Beck (2010) criticizes the BBC series *Planet Earth* for its overemphasis on ‘spectacle,’ and for its obsession with untouched wilderness. This is because, as MacDonald (2009) points out, depictions of pristine landscapes on screen are often fabrications designed to affirm the Western notion of wilderness. Authors like Cronon (1997) highlight the fact that many so-called wildernesses, at least in the United States, were artificially created by forcefully removing indigenous peoples. Furthermore, designating untouched landscapes as the ideal leaves no way for humans to inhabit the world responsibly. Even Arendt and Matthes (2016), who found that watching a short segment of a nature documentary increased participants’ willingness to donate to conservation organizations, joined the above scholars in stressing the highly constructed views of nature in most wildlife programs.

The above critiques relate to the concept of *framing*: the way a visual or textual communication is ‘framed’ can alter the ways audiences interpret it (Lakoff, 2010; Goodman, Littler, Brockington, & Boycoff, 2016; Baram-Tsabari & Osborne, 2015). Unfortunately, some authors worry that the dominant frames in mainstream wildlife

programs might inadvertently disconnect viewers from the natural world. The emphasis on dramatic behavior in many wildlife films, for example, might make everyday nature seem boring (Goodman et al., 2016; Sullivan, 2016). Given the ubiquity of mass media in modern life and the scale of current ecological problems, media scholars and conservationists need to understand how the natural world is framed in popular wildlife programs – so that they can better predict how such programs might impact attitudes and behaviors that are relevant for environmental conservation.

While two researchers have explored framing in the context of wildlife films (Hughes, 2011; Sullivan, 2016), their methods are not entirely clear. Rather than being a condemnation of their work, this reflects the fractured nature of the framing paradigm, which makes it hard to determine what counts as a ‘frame’ (Entman, 1993; Cacciatore, Scheufele, & Iyengar, 2016). Multiple internet searches also revealed only one academic article on *Planet Earth II* (2016), and none on *Wild SafariLIVE* (2007). This represents a significant gap in the literature, given *Planet Earth II*’s popularity (it broke the record for the most-watched nature program during its United Kingdom premiere [Furness, 2016]) and *Wild SafariLIVE*’s unique format; this series’ live and interactive design distinguishes it from many current presenter-led wildlife programs.

This thesis will add to the existing framing studies on wildlife television by applying the most widely-cited definition of media frames, from Entman (1993, 2007), to *Planet Earth II* and *Wild SafariLIVE*. It will simultaneously reduce the knowledge disparity on wildlife television in general, and on the target programs specifically. I will fill the aforementioned gaps by answering the following questions:

1. What are the most common frames in *Planet Earth II* and *Wild SafariLIVE*, respectively?
2. How do the various elements of *Planet Earth II* and *Wild SafariLIVE* (e.g. dialogue, visuals, music, and sound effects) help to frame their subject matter?
3. How are *Planet Earth II* and *Wild SafariLIVE* likely to influence viewers' pro-environmental attitudes and behaviors, with an emphasis on the values communicated by their frames and the extinction of experience?

Overall, then, the goal of this research is to further discussions about how to design wildlife television programs that positively contribute to environmental conservation. Answering the above questions will allow me to determine what the most common messaging patterns are in two divergent types of wildlife programs, how those messages are formed, and what their impacts might be in regard to environmental conservation. This will hopefully elucidate the relative strengths and weaknesses of *Planet Earth II's* and *Wild SafariLIVE's* formats, thereby aiding in the construction of future wildlife programs.

LITERATURE REVIEW

Brief History of Wildlife Television

Nonhuman animals are the oldest of all film subjects, as the first set of moving images were of a horse. Different sources list varying dates for the occasion (1872, 73, 74, and 77), but they all agree that Leland Stanford hired Eadweard Muybridge to determine if all four of a horse's feet leave the ground simultaneously when it trots (they do). To solve the riddle, Muybridge partnered with engineer John D. Issacs to develop the "zoöpraxiscope:" a device consisting of twelve cameras that possessed high shutter speeds and that fired electromagnetically, allowing Muybridge to construct the earliest known motion pictures (Bousé, 2000; Chris, 2006; Mitman, 2012). As camera technology evolved, animals continued to be popular film subjects.

In 1879, Muybridge became the first person to film wild animals (pigeons and deer) (Bousé, 2000). However, it took another 20 years for anyone to create a set of moving images that modern audiences might recognize as a 'wildlife film.' This honor fell to Edison, who produced the first film to contain the standard elements of today's wildlife programs. *The Sea Lions' Home*, released in 1897, had: "Moving pictures, wild animals, natural behaviors, natural habitats, and no people" (Bousé, 2000, p. 44). While Edison may have laid out the blueprints for the 'classic' wildlife film, few producers fully exploited his designs before after a suit of adventurer-filmmakers had had their fill.

The Era of Safari Films: The Johnsons

The early 1900s were a time of exploration. Filmmakers such as Cherry Kearton, Paul J. Rainey, and Carl Akeley all embarked on elaborate expeditions to remote locations – and made films about their adventures (Bousé, 2000; Chris, 2006; Mitman, 2012). Much of the wildlife-oriented footage consisted of animals being killed or harassed, often by Great White hunters (Bousé, 2000; Chris, 2006). By far, the most popular of these safari filmmakers were Martin and Osa Johnson.

Martin Johnson's rise to fame began in 1907, when he accompanied writer Jack London for two years aboard *The Snark*. After returning to his home state of Kansas, he ran a number of highly successful travelogue lectures based on his journey; marrying sixteen-year-old Osa Leighty in 1910 (Chris, 2006; Bousé, 2000; Mitman, 2012). Martin and Osa eventually received funding to travel to the Solomon Islands to produce their first film: *Among the Cannibal Isles of the South Seas* (1918) (Chris, 2006; Mitman, 2012). In 1921 Martin Johnson met Carl Akeley, the American Museum of Natural History's expert on African wildlife and inventor of the Akeley camera, who persuaded the Johnsons to travel to Africa (Mitman, 2012).

The Johnsons' first African safari film was *Trailing African Wild Animals* (1923), which detailed the Johnsons' quest to find a 'lost' lake that many Africans and Europeans already knew about (Mitman, 2012). The Johnsons returned to Africa for four years to make their next film, *Simba* (1928), which earned \$2 million at the box-office (Chris,

2006; Mitman, 2012). The couple continued to produce safari films about “darkest Africa” (Bousé, 2000, p. 61) until 1937, when Martin was killed in a plane crash.

If anyone were to analyze the media frames in the Johnsons’ films, they would likely find that the couple’s portrayals of wildlife and indigenous Africans were problematic. Concerning wildlife, the Johnsons often killed animals on screen, and in the most sensationalistic ways possible. For instance, the Johnsons frequently goaded animals like rhinos into charging, so that Osa could heroically shoot them just before they reached the camera (Mitman, 2012). As for their depictions of indigenous Africans, Ukadike (1994) had this to say: “Not only did they present deprecatory images of the Africans they worked with but their own exhibitionist tendencies epitomized arrogance, ‘master race’ narcissism, and self-glorification” (47). Along these lines, Barnouw (1993) writes that Martin Johnson found it funny to, “give a Pygmy a cigar and wait for him to get sick” (p. 51).

Nearly all writers agree that the Johnsons’ primary concern was with their own self-aggrandizement; their films were ultimately about their own heroics and triumphs, and their superiority to both indigenous Africans and wildlife (Bousé, 2000; Chris, 2006; Mitman, 2012; Ukadike, 1994; Barnouw, 1993). The dominant media frames in the Johnsons’ films would thus probably be: “White Supremacy,” “Danger,” “Great White Hunter,” and “Adventure.” Perhaps thankfully, a different type of film came to dominate the wildlife genre approximately one decade after Martin Johnson’s death.

The Rise of the 'Classic' Model: Disney's True Life Adventures

The wildlife film genre has always oscillated between peaks and valleys, and in the 1940s it was in a slump (Chris, 2006). At the same time, the Disney Corporation was struggling financially. Needing to repay a substantial debt to the Bank of America (Mitman, 2012) and demanding ever more realism from his productions (King, 1996), Walt Disney turned to wildlife films. Disney's first live-action "True Life Adventure" was *Seal Island* (1948): a short film about a seal colony in Alaska's Pribilof Islands. *Seal Island* won an Oscar in 1949, and a slew of True Life Adventures followed until 1960 (Mitman, 2012). Disney both re-awoke and transformed the wildlife genre.

The True Lives, "united the disparate elements of wildlife filmmaking up to that time, consolidated them in a unified but still flexible form, and above all popularized them as never before" (Bousé, 2000, p. 62). The Disney Corporation did this through the strict imposition of narrative: they took many of the story motifs from their animated features, such as romantic love and 'family values,' and transferred them to the True Lives (Bousé, 2000; Chris, 2006; Mitman, 2012). Disney also used extreme anthropomorphism to give their animal subjects human-like qualities, thus making them more relatable to middle-class, American audiences (Horak, 2006; Chris, 2006; MacDonald, 2009).

No one has yet analyzed the media frames in Disney's True Life Adventures, but several authors have written profusely about their content. This, in turn, makes it possible to infer which frames the True Lives promote. "Animals Like Us," a frame which makes

animals seem more human through the use of anthropomorphism (Blackmore, Underhill, McQuilkin, & Leach, 2013), would be prominent. “Variation and Personality” may be another common frame; Walt Disney firmly believed that some animals had distinct personalities, and he urged his filmmakers to design animal characters accordingly (Mitman, 2012). “The Nuclear Family” might also appear frequently, along with “Romantic Love” and “Danger.” But while Disney was releasing its True Lives in cinemas, other wildlife programs were exploring the possibilities offered by a new medium: television.

Marlin Perkins and the Start of Presenter-led Wildlife Programs

The advent of television opened new possibilities for the wildlife genre. In 1945, Marlin Perkins became the first host of a televised wildlife program. For fifteen live episodes, he brought some of the Lincoln Park Zoo’s most popular animals to WBKB’s Chicago studio (Bousé, 2000; Mitman, 2012). In 1949, Perkins and the NBC affiliate in Chicago took the show to the zoo (Chris, 2006). *Zoo Parade* premiered the following year (Mitman, 2012).

Chris (2006) classified *Zoo Parade* as a “show-and-tell” program. Partnering with a cohost, Perkins would discuss various aspects of the Lincoln Park Zoo’s animals (Chris, 2006). *Zoo Parade*, “quickly rose to one of the top three programs in daytime telecast ratings” (Mitman, 2012, p. 133), and turned some of the Lincoln Park Zoo’s animals into celebrities. But no television show is permanent, and *Zoo Parade* was cancelled in 1957 (Mitman, 2012). This opened new doors for Perkins.

In 1963, Perkins and producer Don Meier launched *Mutual of Omaha's Wild Kingdom* (Bousé, 2000). In *Wild Kingdom*, Perkins and a cohost would travel to distant lands to seek out rare or charismatic animals, having adrenaline-filled adventures along the way. (Chris, 2006). The show was a massive hit, earning high ratings (Mitman, 2012) and running from 1963-1982. *Wild Kingdom* also set the stage for a slew of action-adventure wildlife programs to follow (Bousé, 2000).

No one has conducted frames' analyses for *Zoo Parade* or *Mutual of Omaha's Wild Kingdom*. Despite this, a prominent theme that ran throughout the former program was anthropomorphism. Perkins portrayed many of the Lincoln Park Zoo's animals as pets (i.e. part of the human in-group), and stressed that they had individual personalities (Mitman, 2012). These two factors suggest the presence of "Animals Like Us" and "Individuality" frames, respectively. *Wild Kingdom*, by contrast, was an adventure show; frames such as "Adventure," "Danger," "Discovery and Exploration," "Quest," and "Excitement" might have been common. Many of these frames likely resurfaced in *Wild Kingdom's* descendants.

Modern Presenter-led Wildlife Programs

The 1990s saw an explosion of wildlife programs that, "took advantage of the potential offered by television itself" (Bousé, 2000, p. 72). These shows revolved around charismatic and/or attractive presenters who, like Perkins, embarked on wildlife-related quests (Blewitt et al., 2010). Presenter-led wildlife programs are cheaper to produce than blue chip films, faster-paced, and do not cut out the human world (Bousé, 2000, p. 73).

The most well-known presenter-led program is undoubtedly *The Crocodile Hunter* (1996).

Featuring environmental “celebrity hero” (Brown, 2010, p. 73) Steve Irwin, *The Crocodile Hunter* and its off-shoots were wildly popular. Irwin wrangled crocodiles, snakes, and other dangerous creatures – all while maintaining his characteristic bravado (Chris, 2006). A similar program was *The Jeff Corwin Experience* (2001). The host, Jeff Corwin, captured and held various animals on screen, using wit and humor to explain aspects of their biology to the camera (Horak, 2006).

As with all of the above programs, nobody has formally studied the media frames in *The Crocodile Hunter* or *The Jeff Corwin Experience*. However, like *Wild Kingdom*, they probably emphasized “Adventure,” “Excitement,” and “Danger.” This last frame was undoubtedly Irwin’s trademark, and a large part of *The Crocodile Hunter*’s appeal came from his risky behavior. Conversely, one of Corwin’s distinguishing features was his propensity for silliness, which might have added a strong “Humor” frame to *The Jeff Corwin Experience*. However, while both *The Crocodile Hunter* and *The Jeff Corwin Experience* were wildly popular, they were later eclipsed by *River Monsters* (2009).

Incorporating elements of mystery and crime-scene investigation into a show about fish, *River Monsters* was a phenomenon. Its sixth season premiere drew in 1.7 million viewers (Ross, 2014), making it Animal Planet’s most popular program ever (de Moares, 2014). Animal Planet executives attributed *River Monsters*’ success to its host, Jeremy Wade (Locker, 2015), who was a fisherman and biologist before he was a television presenter (Scott, 2016); Wade’s authenticity earned him a great deal of respect

(Locker, 2015). Once again, no one has studied the media frames in *River Monsters*, and there is very little written about it academically. Nevertheless, drawing on my familiarity with the show (I have watched every episode), I will generate educated guesses about its most common frames.

The central focus of *River Monsters* was Wade's quest to travel to remote corners of the globe, solve mysteries, and catch dangerous fish. Consequently, "Adventure," "Quest," and "Mystery," and "Danger" would be its chief frames. "Monster" and "Killer" would also be prominent, because Wade frequently uttered those two words during his narrations. However, the horror and crime elements in *River Monsters* were obvious plot devices; Wade's behavior showed that he cared a great deal about the 'monsters' he was hunting. For example, he always tried to release his target fish back alive, and nearly cried in the "Demon Fish" episode when a Goliath tigerfish (*Hyrdocynus goliath*) that he caught died. Wade's concern for the fish in *River Monsters* indicates the potential presence of bio-centric frames, such as "Unity with Nature."

Wild SafariLIVE

The internet has created new opportunities for wildlife television. In 2006, Emily and Graham Wallington founded WildEarth TV. The company specializes in live wildlife content, with their most popular series being *Wild SafariLIVE*. Since 2007, WildEarth has streamed live African safaris across the globe twice daily (WildEarth TV, 2017). Two vehicles, each containing a trained safari guide and a single camera operator, tour South Africa's Djuma Private Game Reserve and Kenya's Maasai Mara National Reserve in

search of animals; some episodes, called ‘drives,’ feature a third team who go out on foot. However, during the data collection phase of this thesis, drives only aired from Djuma Private Game Reserve in South Africa.

Djuam is part of a 625 km² network of protected areas that comprises the Sabi Sands Game Reserve (Balme et al, 2017), which prides itself in being the birthplace of the “luxury safari” (Siyabona Africa, 2017). Prior to the Sabi Sands’ designation as a game reserve in 1934, cattle ranching was a common activity in much of the area. The ranchers drilled wells and created new sources of surface water, which has produced a higher density of wildlife than might otherwise have been attainable (Sabi Sand Wildtuin, 2017; Sabi-Sands.com, 2018). Decades of efforts on the parts of the Sabi Sands’ human residents, initially in the Londolozi Game Reserve, have led the area’s leopards to become habituated to the presence of vehicles. As such, the Sabi Sands is one of the best reserves in Africa for leopard viewing (Tyrell, 2017; African Safari Group, 2018). The Sabi Sands is connected to the Greater Kruger National Park via unfenced borders on its eastern and southern edges, although its western edge remains fenced – a holdover from concerns over foot and mouth disease in the 1960s (Siyabona Africa, 2017).

WildEarth co-founder Graham Wallington has variously described *Wild SafariLIVE* as “slow television” (Future CEOs, 2015) and “virtual tourism” (South African Broadcasting Company, 2015). Unlike traditional presenter-led wildlife programs, the drama of *SafariLIVE* does not come from the risks its presenters take; instead, it originates from the unpredictable nature of its live format (SABC, 2015). Part of *SafariLIVE*’s appeal also comes from its interactive format. Viewers can send in

questions and comments via the show's Twitter and YouTube channels, and potentially have their queries answered live by the guides. WildEarth began licensing its *SafariLIVE* episodes to National Geographic in 2014, and since then its drives have been featured in numerous television specials on the National Geographic WILD channel (WildEarth TV, 2017). Despite *SafariLIVE*'s growing popularity, the recorded drives routinely reach 14,000 - 17,000 views on YouTube, nobody has published any scholarly articles about it.

Modern Blue Chip Wildlife Programs

Disney's influence is most apparent in 'blue chip' wildlife programs. Such programs typically feature: closed narratives, the depiction of megafauna, authoritative narration, the exclusion of overt political and historical references, little to no evidence of human activity, dramatic music, and spectacular visuals (Bousé, 2000; Scott, 2003). The BBC Natural History Unit (NHU) is the most well-known maker of blue chip films, with titles such as *Planet Earth* (2006) and *The Blue Planet* (2001) to its credit.

In 2016, the BBC released *Planet Earth II*. Each episode of *Planet Earth II* highlights a range of species that exist in particular types of habitats. When it debuted, *Planet Earth II*'s premiere was the most-watched nature program in 15 years (Furness, 2016). Despite *Planet Earth II*'s success, few scholars have written about it. Park (2016) appeared concerned that one episode featured animals that live in cities, since she wrote, "As the number of people living in cities around the world continues to rise, we should really be turning our attention to those animals that find city living too hard to handle" (p. 1). Besides this, no one has yet analyzed *Planet Earth II* in detail.

One blue chip film that has been rigorously analyzed is *March of The Penguins* (Jacquet, 2005). When it debuted, *March of the Penguins* was the second-highest grossing documentary film in U.S. history, helping to revitalize interest in the wildlife film genre (Chris, 2006). *March* shamelessly indulged in anthropomorphism, creating day-dream sequences and point-of-view shots that facilitated viewer engagement with its penguin characters (Horak, 2006; Ivakhiv, 2008). However, director Luc Jacquet was surprised by the ways in which many audience members interpreted his film (Wexler, 2008).

Factors such as seeming endorsements of heteronormative love, a common theme of struggling against external forces, and a refusal to mention scientific realities turned *March of the Penguins* into a rallying cry for fundamentalist Christians in the United States. To them, the film constituted scientific evidence for Intelligent Design; suggested that the traditional, heterosexual family was ‘natural;’ and, importantly, resonated with their sense of being an oppressed people in a hostile world (Mills, 2012; Blewitt et al., 2010; Wexler, 2008; Chris, 2006). *March of the Penguins* aided Fundamentalist Christians in their quest for scientific validation by removing all traces of humanity from its shots, which mimicked the objective viewpoint of science (Wexler, 2008). Given the aforementioned findings, common frames in *March of the Penguins* might be: “Romantic Love,” “The Nuclear Family,” “Heterosexuality,” “Hardship and Struggle,” and “Perseverance.”

Framing

Conservationists have given more attention to the concept of framing since 2010, when Lakoff (2010) published his widely-cited paper *Why it Matters How we Frame the Environment*, where he alerted environmental communicators to the importance of considering frames. He wrote about how subtle differences in language can highlight certain aspects of an issue at the expense of others, thus favoring specific interpretations. Lakoff (2010) contended that it does no good to present audiences with scientific facts if such communications do not resonate with frames that encourage progressive values. While Lakoff (2010) was one of the first authors to write about framing in the context of American environmentalism, social scientists have been studying framing theory for decades.

Framing is a widely-researched paradigm across multiple social disciplines. Despite its popularity, the origins of framing theory are not entirely clear (Matthes, 2009; Entman, 1993). Van Gorp and Vercruysse (2012) claim that framing theory first emerged in the field of social psychology, citing Bartlett (1932) with its creation. But Cacciatore, Scheufele, and Iyengar (2016) credit Kahneman and Tversky (1979, 1984) with being, “the pioneers of framing in the field of psychology” (p. 9). Despite this confusion, multiple authors agree that framing theory spread through many disciplines following its creation (Cacciatore, Scheufele, & Iyengar, 2016; Van Gorp, 2007).

Not all of the fields that utilize framing theory agree on what it is and how it works (Cacciatore, Scheufele, & Iyengar, 2016). For example, disciplines like

psychology tend to favor ‘equivalence’ definitions of framing, whereas sociological studies often focus on ‘salience.’ The former version of framing takes two or more statements with identical meanings but subtle differences in word choice, and tests how audiences respond to them. In salience framing, by contrast, different aspects of an issue are highlighted at the expense of others. This changes the meanings of the communications in question, and makes salience framing conceptually similar to priming (Cacciatore, Scheufele, & Iyengar, 2016). To add to the confusion, the meaning of the word “frame” apparently changes depending on whether it is used as a noun or a verb (Shmueli, 2008).

Frames as Nouns

When used as a noun, “a frame” refers to a network of associated meanings, concepts, feelings, and values. Lakoff (2012) contends that frames are physically connected in the brain, making them conceptually similar to schemas from cognitive psychology – with one key difference. Van Gorp (2007) insists that frames are more deeply rooted in broader culture than schemas, making them harder to change. However, frames and schemas often interact (Van Gorp, 2007).

The most frequently-cited definition of media frames, specifically, comes from Entman (1993, 2007). He operationalizes media frames based on their four functions. These are: “problem definition, causal analysis, moral judgement, and remedy promotion” (Entman, 2007, p. 164). A media frame does not need to be ‘fully developed’ (i.e. perform all four functions) to be present, and one sentence may carry out multiple

functions (Entman, 1993). Entman (1993) goes on to say that media frames, “are manifested by the presence or absence of certain keywords, stock phrases, stereotyped images, sources of information, and sentences that provide thematically reinforcing clusters of facts or judgements” (p. 52).

Framing as a Verb

The verb “to frame,” by contrast, refers to strategic communications that evoke culturally-relevant frames (Shmueli, 2008) – often referred to as *framing*. As Entman (2007) writes, “We can define *framing* as the process of culling a few elements of perceived reality and assembling a narrative that highlights connections among them to promote a particular interpretation” (p. 164). In other words, framing encourages audiences to filter information in accordance with the activated frame (Lakoff, 2010). This is not without consequence for environmental conservation.

Framing has been found to influence the outcomes of environmental disputes. During a conflict over the management of a protected area in the Netherlands, a small protest group called Woodland Giant utilized a diverse range of frames – including those that emphasized the aesthetic values of nature – that resonated with local residents. This allowed Woodland Giant to defeat the National Forest Service’s management plan, as the government agency relied almost exclusively on wilderness and science-based frames (Buijs, Arts, Elands, & Lengkeek, 2011).

As mentioned above, values are also embedded within frames. Social psychological research has revealed that there are about fifty universal values that are

emphasized to varying degrees across cultures (Schwartz, 1992). These values can be separated into groups, with the two overarching categories being *intrinsic* and *extrinsic* values. Activating the former category can encourage people to act in pro-social and pro-environmental ways, whereas activating the latter has the opposite effect (Blackmore et al., 2013). Visual frames have the potential to be even more effective than textual ones.

Images are powerful framing tools. They are easier to process than words, meaning that visual frames are often incorporated with little scrutiny. Furthermore, when visual and textual frames contradict, our brains typically side with the former (Rodriguez & Dimitrova, 2011). It stands to reason that wildlife films – which combine visual, auditory, and spoken cues – might have more framing potential than still images. Unfortunately, few researchers have examined the frames within wildlife films, with Sullivan (2016) and Hughes (2011) being noteworthy exceptions.

Framing in Wildlife Programs

Sullivan (2016) attended the Wildscreen festival, the international gathering of wildlife filmmakers, as an ethnographer. Based on the discussions and films she observed, Sullivan (2016) claimed that a dominant frame in mainstream wildlife films is “the money shot:” a sequence of violent or sensational behavior that is similar to the climax in pornography. Citing literature on the latter genre, Sullivan (2016) claimed that “the money shot” generated “disconnective affects” that prevented audience members from developing “a caring ecocultural ethics” that would slow biodiversity loss (Sullivan,

2016, p. 1). Sullivan (2016) contrasted “the money shot” with the film *Green* (2009), whose frames encouraged affective and empathic connections with the natural world.

Hughes (2011) came to a similar conclusion about *Sharkwater* (2006). She notes that the film highlights non-aggressive contact between director Rob Stewart and sharks, and that it breaks with wildlife film tradition by directly showing the impacts of commercial activity on wildlife. Hughes (2011) maintains that such frames, “promote a possible sense of identification with the living rather than the dying body of the shark” (p. 16). Insightful though Hughes’ (2011) and Sullivan’s (2016) papers are, they are not flawless.

Sullivan’s (2016) concerns and writing on “the money shot” echo those of earlier authors (Bousé, 2003; Cottle, 2004), but the only wildlife film she appears to have analyzed in detail is *Green*. Instead, much of her evidence comes from discussions she overheard and workshops she attended – which may not reflect the full range of content in most wildlife films. Hughes (2011) takes the opposite approach: she closely scrutinized a single film, noting how various subjects were framed within it. However, she provided no account of her methodology, nor did she identify specific frames within *Sharkwater*. With the exception of “the money shot” (which seems overly broad), neither did Sullivan (2016). A good example of a detailed frames analysis comes from Blackmore et al. (2013).

Drawing on a large body of evidence from social psychology, Blackmore et al. (2013) examined communications documents from thirteen conservation organizations in the United Kingdom. A cognitive linguist (Paul Chilton) went through a subset of the

documents, identifying and naming the frames he found within them. Based on their meanings, Blackmore et al. (2013) grouped a set of ‘little frames’ into 33 ‘big frames.’ These included, “Connection/Unity with Nature,” “Beauty in Nature,” “Money and Commodity,” and more. The authors then discussed which values their frames might activate, and whether such values were helpful or unhelpful for conservation. Wildlife filmmakers and conservationists may benefit from a similarly detailed frames analysis of specific, popular wildlife programs.

Unfortunately, this presents methodological challenges. Modern wildlife programs are multimodal in the sense that they combine moving images, sound effects, music, and spoken dialogue to convey their messages; all of these elements might influence how they frame their subject matter. The fractured nature of framing theory adds to the difficulties, as does the fact that the vast majority of framing studies have been conducted on textual information. In his review of 131 framing studies, Matthes (2009) found that 83% of all papers did not take images into account; even 72% of television-based framing studies neglected visuals entirely. This thesis will incorporate multiple elements of the selected wildlife television episodes into Entman’s (1993, 2007) widely-accepted definition of media frames, thereby providing a more solid understanding of how they communicate specific messages to viewers.

METHODS

For this research, I was primarily interested in how *Planet Earth II* and *Wild SafariLIVE* frame their subject matter. While content analysis may seem like the ideal method for such a study, Bell (2001) writes: “the framing, visual ‘angles’, scale of photographic ‘shot’, and so on, that are part of the discourse of visual analysis are seldom incorporated into (visual) content analysis” (p. 24). Not being able to account for qualities such as the scale and angles of shots would weaken this study, since those are important components of visual frames (Hansen & Machin, 2013). Furthermore, I needed to be able to account for elements such as presenters’ nonverbal behaviors and tones of voice; aspects of communication that have been found to play important roles in how humans interpret messages (Matsumoto, 2007; Krestar & McClennan, 2013). Also, prior viewings of both *Planet Earth* series had led me to believe that music and sound effects might play large roles in *Planet Earth II*’s media frames. I therefore required a methodology that allowed me to consider how the various communicative elements in wildlife television worked together to construct meaning. This methods section explains how I addressed the above challenges.

Sampling

I selected the respective episodes of *Planet Earth II* and *Wild SafariLIVE* using a purposive sampling strategy, to maximize their comparability. I chose the “Grasslands,”

“Deserts,” and “Jungles” episodes of *Planet Earth II* since their featured biomes most closely resembled Djuma Private Game Reserve. On the other hand, I excluded the “Islands,” “Mountains,” and “Cities” episodes of *Planet Earth II* because their habitats were too unlike Djuma.

The selection process for *Wild SafariLIVE* was more involved. I chose two recorded drives from *SafariLIVE*’s YouTube page: one from March 11, 2017 and one from March 18, 2017. These days corresponded with the release dates of the “Deserts” and “Grasslands” episodes of *Planet Earth II*, respectively. I matched these four episodes temporally because in popular culture, certain phrases or styles of representation may be common at particular times. Since frames are partially manifested by the presence of keywords or stock phrases, choosing samples that were released at the same time minimized the risk of stylistic trends biasing the results. However, *SafariLIVE* is an ongoing and constantly evolving series. To capture some of these changes, I selected March 4, 2018 as the date for the final *SafariLIVE* drive. This marked the one-year anniversary of the release of *Planet Earth II*’s “Jungles.”

Another caveat with *Wild SafariLIVE* is that drives typically air twice a day: sunrise and sunset. Since different animals are more active at certain times of the day, I staggered the sample episodes for *SafariLIVE*. I analyzed the sunrise drive for March 11, 2017, the sunset drive for March 18, 2017, and the sunrise drive for March 4, 2018. I chose the time of the March 4, 2018 drive based on the results of a best two-out-of-three coin toss.

A preliminary viewing of the *SafariLIVE* episodes revealed that they adequately represented the general range of content for the series (based on my four years of experience watching *SafariLIVE*). The March 11, 2017 drive did feature a rarely-viewed species in the form of African wild dogs (*Lycaon pictus*), but not for long. Likewise, the March 4, 2018 drive contained extensive footage of a leopard cub. While the cub's behavior was quite playful, leopards and baby animals are important parts of *SafariLIVE*. I thus decided to include the March 4, 2018 drive in the sample episodes.

Three-Stage Model

For this thesis, I followed a model from visual anthropology described by Collier (2001) that involves three stages: "open viewing," "structured processes," and a final round of "open viewing" (Collier, 2001, p. 40-45). The appeal of Collier's (2001) methodology is that it allows researchers to account for both the overall qualities of visual materials and their intricate details. The structured processes stage, while being rigorous in its application of methods like counting and measuring, also gives scholars enough flexibility to adapt Collier's (2001) model to their needs. However, Collier (2001) warns that the structured processes stage can take many months to complete. In my case, I had to watch all of the sample episodes at least four times during this one phase of analysis. Collier (2001) insists that the structured processes must be followed by another round of open viewing, so that researchers can re-familiarize themselves with how the details they have identified fit into the overall bodies of their visual materials.

I applied Collier's (2001) model as follows. During the first open viewing stage, I watched all six sample episodes in full. While doing so, I took detailed notes about: potential keywords and phrases (e.g. "beautiful sunset" or "crowded"), conspicuous sound effects (e.g. crunching bones as a jaguar bites a caiman) or music (e.g. loud, ominous music as a bat flies over), feelings evoked by specific scenes, etc. Recording notes in this fashion allowed me to begin forming impressions about which frames might be present in the selected episodes. My subsequent structured processes were transcribing, sorting content into Entman's (1993, 2007) functions, and counting. Figure 1 presents the general steps I used in this thesis, which I elaborate on below.

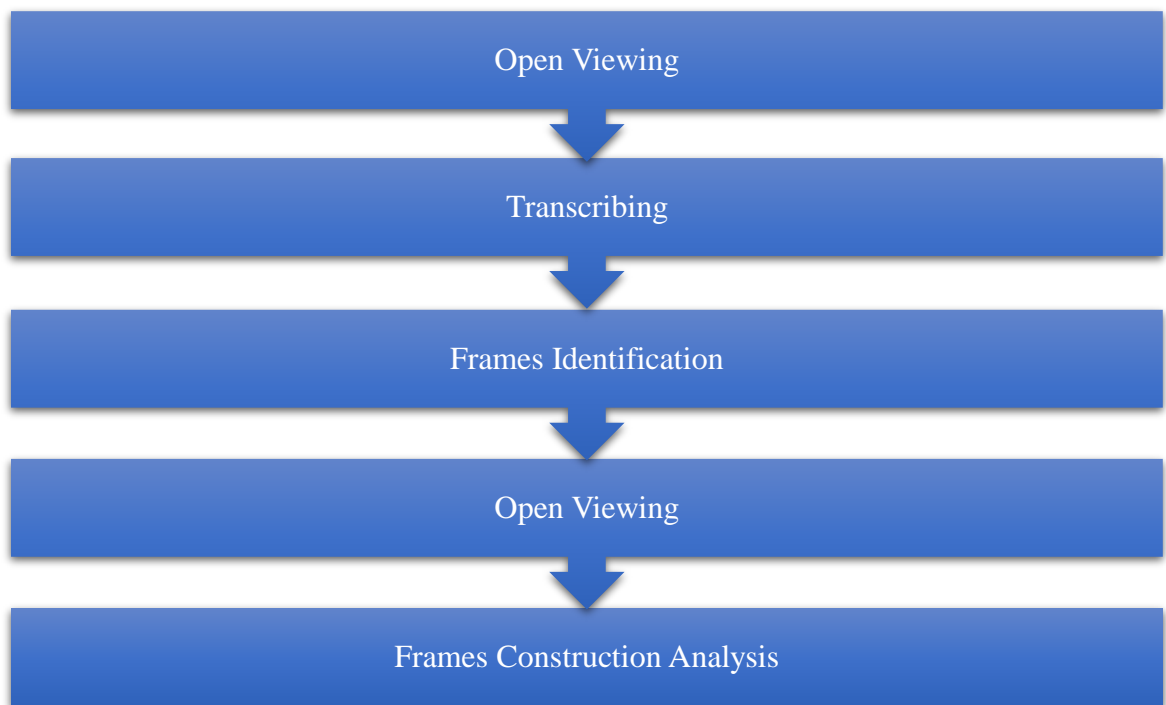


Figure 1: Overall methodological progression for this thesis

Transcribing

I developed the transcription method based on a pilot of one episode from each series that was not included in this analysis. For each episode, I divided sheets of paper into two columns: one for visuals and one for dialogue. In the visuals column, I wrote down every shot in the respective episode. A shot is a view from a single camera without any cuts. The camera can move (pan) or zoom, but once the view cuts to a different camera it is a new shot (Iedema, 2001). Shot transcriptions included a simple typology (e.g. Close, Medium, or Long Shot), along with a basic description of the subject matter (e.g. “hole in a tree” for *SafariLIVE* or “lion pride walking” for *Planet Earth II*). Figure 2 contains a list of the typologies used to label shots in this thesis, which were based on a worksheet given to me by filmmaker and professor David Scheerer (personal communication, January 22, 2018). However, I added additional distinctions (e.g. Very Close and Very Long Shots) in the name of precision.

Long Shot (LS): A shot in which the entire subject, along with nearby portions of the surrounding area, are visible.

Close Shot (CS): A small portion of a subject, such as a lion's face.

Medium Shot (MS): Most or all of a subject without any of the surrounding area.

Very Long Shot (VLS): An extremely wide view, in which the subject is dwarfed by the surrounding area. Landscape shots were also included in this category.

Very Close Shot (VCS): An intensely zoomed-in view of a subject, typically focusing on a single body part. In some cases, close-ups of very small subjects (i.e. insects) were labeled as Very Close Shots.

Medium Long Shot (MLS): A shot that features an entire subject and a considerable amount of the surrounding area.

Medium Close Shot (MCS): A shot that extends beyond a subject's face, but contains less than half of that animal's or presenter's body.

Aerial Shot: A view from above that is filmed from an aircraft or drone. Aerial shots usually double as Very Long Shots.

Figure 2: Shot Classifications used in this Thesis

I divided transcriptions by sequence, which is one of the six filmic levels described by Iedema (2001). A sequence consists of multiple scenes that occupy one or more time-spaces, but are all connected by a common theme or characters. A scene, by contrast, is made of multiple shots that inhabit the same time-space (Iedema, 2001). I used the sequence as my delineating level because the editing in *Planet Earth II* was so

seamless that I could not easily tell where one scene ended and another began. Since *Wild SafariLIVE* is live, it does not adhere to traditional filmic levels. Despite this, it does frequently cut between different teams of safari guides and camera operators, and I used these cuts as the beginnings and endings of sequences.

Once all of the visuals in a sequence had been written down, I returned to the beginning and transcribed the dialogue. For *Planet Earth II*, I recorded every utterance word-for-word. I also made note of conspicuous sound effects and musical changes that occurred at specific times. I tried to transcribe *Wild SafariLIVE*'s dialogue word-for-word, but this proved impossible. The March 18, 2017 drive lasted for two hours and twenty-five minutes, while the other drives both exceeded three hours in length. During each drive, the guides chatted almost constantly in an unscripted fashion. To overcome this limitation, I adopted a slightly different transcription strategy for *SafariLIVE*.

I used a multiple-step process to transcribe *Wild SafariLIVE*'s sample episodes. During the first run-through, I paraphrased the dialogue as accurately as possible; copying sentences that contained possible keywords or catch phrases (e.g. "chilly" or, "Isn't she gorgeous?") exactly. During subsequent viewings of each episode, I transcribed more of *SafariLIVE*'s dialogue word-for-word. Since *Wild SafariLIVE* does not contain music or sound effects (besides a short introduction sequence at the start of some drives), there was no need to make note of these. After I had transcribed all of the sample episodes for both series, I converted them to PDF files. This aided the frames identification phase that followed.

Frames Identification

The second task of the structured processes stage was to identify media frames within the six sample episodes. First, I searched for repeating patterns of visuals and dialogue within the completed transcriptions; highlighting segments that seemed to revolve around common themes. I gave each theme a name based on its central topic (e.g. “awe/wonder” or “danger”), as well as a distinct color. At this stage names were cursory and subject to change, but I attempted to base them on concepts that would be widely available to Western audiences. This was because, as Van Gorp (2007) pointed out, frames are thought to be widely shared among members of a culture. In addition, I made a preliminary attempt to identify elements of each episode (e.g. sentences, phrases, or visuals) that performed one of Entman’s (1993, 2007) functions.

While identifying the aforementioned themes, I watched all six sample episodes again. This helped me to better understand how the various elements of each episode may have contributed to framing. Viewing the *Wild SafariLIVE* drives while going through their transcriptions also allowed me to hear paraphrased sections exactly, and to copy additional segments word-for-word. I developed frames and described them in more detail during the next portion of the structured processes stage.

After I had highlighted linked elements within each sample episode that formed discrete themes, I rigorously applied Entman’s (1993, 2007) framing definition to the shows’ content. I set up a seven-column spreadsheet for each episode based on Entman’s (1993, 2007) functions. From left to right, columns were: Frame Name,

Keywords/Phrases, Problem/Issue Definition, Causal Analysis, Moral Judgement, Remedy Promotion/Action Directive, and Notes. Table 1 presents a blank sample of a frames worksheet, whereas Appendix B contains the actual spreadsheets used to code each sample episode in this thesis.

Table 1: Sample Frames Identification Spreadsheet

Sample Frames Identification Spreadsheet					
Frame Name	Keywords/Phrases	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/Action Directive

I expanded Entman's (1993, 2007) Problem Definition and Remedy Promotion functions to include "Issue Definition" and "Action Directive," respectively, because not all wildlife programs revolve around specific problems: *Wild SafariLIVE* certainly does not. For this reason, I broadened the aforementioned functions to make them more applicable to wildlife television.

Once I had created a spreadsheet for a sample episode, I watched it again. This time, I identified specific segments of each episode that performed one or more of Entman's (1993, 2007) functions. I considered: dialogue, individual shots or sequences of shots, music, sound effects, and the behaviors and vocal tones of the presenters. However, I prioritized dialogue due to its relative unambiguity – the meanings of words

were more apparent than those of specific shots or of presenters' vocal tones. I looked most heavily to other elements when I could not find any dialogue that performed a certain function within a frame, or when a particular non-dialogic element was especially pronounced and clear. For instance, a Very Close Shot of a scorpion's stinger is a strong indication of danger, and it would be hard to justify not mentioning such an image in an analysis of wildlife television.

While identifying frames, I classified content based on the following criteria:

- Problem/Issue Definition: A description of a specific problem or issue. For instance, a presenter/narrator might say, "You can see that that elephant just shook her head, which might be a sign of agitation."
- Causal Analysis: An explanation of how that problem or issue came to be or why it is the way it is. For example, "I'm not sure why this elephant is feeling stressed? Maybe it's the heat?"
- Moral Judgment: An indication of how viewers are supposed to feel about the highlighted problem or issue. I most often used a simple Positive or Negative distinction, but I utilized more fine-grained labels when presenters uttered tell-tale words (e.g. "amazing"). Moral judgments might be communicated through sorrowful music, or by lines such as, "This is not an ideal situation for us to be in, since elephants are quite powerful."
- Remedy Promotion/Action Directive: Any indication of how to resolve a particular problem, or how one should respond to an issue. To continue the

example from above, “Since that elephant shook her head, I’m going to give her extra space.”

- Keywords/Phrases: Words, lines, or visuals that grab viewers’ attention and indicate the potential presence of a frame. In the elephant example above, keywords might be “elephant” or “stressed.” A key visual might be a shot of the elephant shaking her head.

When a group of elements performed specific functions, and revolved around a central problem or issue (e.g. an elephant shaking her head), I categorized them into a single “little frame” – borrowing this term from Blackmore et al. (2013).

To aid analysis, I gave each little frame a name based on its keywords or main topic. Again, I attempted to use names that invoked concepts that most Western audience members would readily understand. In rare cases, the same group of elements seemed to equally represent multiple topics (e.g. hunting and teamwork). I chose to derive multiple little frames from such instances, rather than arbitrarily give one topic more weight than the others. Infrequently, elements from the sample episodes appeared to perform different functions for different frames. For instance, a sentence might serve as Remedy Promotion/Action Directive for one little frame and Problem/Issue Definition for another. I classified these elements as performing their respective functions for the different frames, rather than forcing them into a single role.

During the big frames identification phase that followed (described below), I reviewed all of the little frames. I re-watched sections of each episode that contained frames I was not sure about, and removed any little frames that seemed weak. In general,

I eliminated any little frames that did not perform at least two of Entman's (1993, 2007) functions. I made rare exceptions for frames that were likely to be so familiar to Western audiences that simply hearing their keywords, or seeing their associated images, would trigger the relevant concepts. Examples included the "Princess" little frame in the March 11, 2017 episode of *SafariLIVE*, and the "Seasonality" little frame in *Planet Earth II*: "Grasslands."

After I had finished delineating little frames, I counted how many times they occurred in each episode. I then grouped them into "big frames." For this thesis, big frames were thematically-linked groups of little frames. Assessing frames at these two levels elucidated the dominant messaging patterns within *Planet Earth II* and *Wild SafariLIVE* (big frames), and facilitated detailed understandings of what those messages entailed (little frames). It was this precision that allowed me to assess frames construction, and to spot similarities between the frames in the analyzed wildlife programs and descriptions of universal human values.

To delineate big frames, I went through all of the frames spreadsheets and identified common themes among them, looking for matches between these themes and Blackmore et al.'s (2013) descriptions of their big frames. When I located clusters of little frames in my results whose central topics reflected Blackmore et al.'s (2013) big frames, I generated big frame categories that corresponded with Blackmore et al.'s (2013) report. The reason for this was that their frames were identified by a cognitive linguist who had experience with framing theory (Paul Chilton), and because Blackmore et al. (2013) had drawn on psychological evidence to explain how their frames might affect

environmental conservation. Despite this, I did not adhere to Blackmore et al.'s (2013) findings dogmatically; when a group of little frames did not closely match one of Blackmore et al.'s (2013) big frames, I generated my own. When I did not judge a little frame to be closely related to any other little frames in that episode, I made it into its own big frame.

Once I had finished identifying big frames, I tallied how many times a big frame occurred in a sample episode (via its constituent little frames), and then how often it appeared in each series. I then engaged in my final round of open viewing, in which I rewatched all of the sample episodes and made minor modifications to my frames lists. I updated my tallies to reflect these changes, and then proceeded to examine frame construction.

Frames Construction Analysis

The second research question for this thesis concerned how different filmic elements constructed frames within *Wild SafariLIVE* and *Planet Earth II*. To determine this, I revisited the frames spreadsheets after the final open viewing stage. I went through all of the little frames and identified ones in which, during the earlier frames identification process, I had explicitly written down visual or nonverbal elements as helping to fulfill one or more of Entman's (1993, 2007) functions. Since keywords or stereotyped images are important parts of frames (Entman, 1993), I included Keywords/Phrases in this analysis.

Once I had highlighted relevant little frames, I moved them into additional spreadsheets labelled “Visuals” or “Nonverbal.” The visuals category was for any little frames that explicitly mentioned images in one or more of their functions. This usually meant specific shots or sequences of shots, but it could also include other visual elements that seemed to contribute to Entman’s (1993, 2007) functions (e.g. bright lighting accompanied by an upward-facing camera angle).

The nonverbal category was more varied. For *SafariLIVE*, it included the presenters’ actions and vocal qualities (tones of voice). Tone of voice was also part of the nonverbal category for *Planet Earth II*, along with music and sound effects. I incorporated these elements into the nonverbal category because I recorded them infrequently, and because there was no music or sound effects in *SafariLIVE*; creating a separate category for these elements in *Planet Earth II* would have left nothing to compare them to. I included little frames in which I had explicitly recorded visual and nonverbal elements in both “Visuals” and “Nonverbal” spreadsheets.

Once all little frames directly mentioning visual or nonverbal elements had been accounted for, I examined them in more detail. I highlighted every function square (i.e. cell) in my frames spreadsheets in which I had recorded visual or nonverbal elements, and then counted the highlighted cells. Next, I generated a set of basic, descriptive statistics to give myself a more detailed way to discuss my results. These included:

- The percentage of little frames in each episode that mentioned visual or nonverbal elements;
- The percentage of the little frames in each series to do so;

- The absolute number of each function in every sample episode that mentioned visual or nonverbal elements; and,
- The average number of every function in each episode that contained such elements.

These computations permitted me to make general claims about the importance of different types of elements for frames construction in *Planet Earth II* and *Wild SafariLIVE*. In the next section I will disclose which frames I identified in each series, how prevalent they were, and the roles of visual and nonverbal elements in their formation.

RESULTS

The Five Most Common Big Frames per Program

I identified a wide range of frames in *Wild SafariLIVE* and *Planet Earth II*: finding a total of 40 big frames in the former program and 33 in the latter. Furthermore, the 40 big frames in *SafariLIVE* were invoked 492 times across all three drives via their constituent little frames (every time a little frame arose in an episode, I considered this to be an ‘invocation’ of the big frame it belonged to). On the other hand, I counted 190 invocations of *Planet Earth II*’s 33 big frames. Big frame invocation totals for *SafariLIVE* and *Planet Earth II* are listed in Tables 2 and 3, respectively.

Table 2: *Wild SafariLIVE* Frame Invocations per Drive

Drive	Drive Duration	Number of Big Frames Present	Invocations of Big Frames
March 11, 2017	3h 5m 18s	24	133
March 18, 2017	2h 25m 2s	32	154
March 4, 2018	3h 1m 46s	31	205

Table 3: *Planet Earth II* Frame Invocations per Episode

Episode	Drive Duration	Number of Big Frames Present	Invocations of Big Frames
Jungles	49m 2s	19	52
Deserts	48m 8s	18	74
Grasslands	48m 19s	18	64

Both *Planet Earth II* and *Wild SafariLIVE* exhibited considerable frame diversity, and Appendix A lists all the big frames for each program. “Danger,” the most prevalent big frame in *Planet Earth II*, only accounted for 16.87% of all big frame invocations (32 out of 190) in that series. “Beauty in Nature” was the most common big frame in *SafariLIVE*, with 59 invocations. When divided by the program total of 492 little frames, this only comprised 11.99% of all frame invocations. Given the breadth and infrequency of the big frames in each program, subsequent discussions only concern the five most common big frames (six for *SafariLIVE*, due to a tie) in each series, which Tables 4 and 5 display.

Table 4: *Wild SafariLIVE's* Most Common Big Frames

Big Frame	Invocations	Percent Total Invocations (Out of 492)
Beauty in Nature	59	11.99
Wonder and Awe	50	10.16
Helpfulness and Community	37	7.52
Danger	37	7.52
Babies and Cuteness	32	6.52
Excitement	28	5.69

Table 5: *Planet Earth II's* Most Common Big Frames

Big Frame	Invocations	Percent Total Invocations (Out of 190)
Danger	59	11.99
Hardship and Struggle	50	10.16
Abundance	37	7.52
Competition	37	7.52
Mating and Courtship	32	6.52

Wild SafariLIVE's Most Common Big Frames

As I stated before, the most frequently-invoked big frame in *Wild SafariLIVE* was “Beauty in Nature;” I identified 59 of its little frames throughout the sample drives, comprising 11.99% of all media frames in the series. The distinguishing feature of the

“Beauty in Nature” big frame was an explicit emphasis on the positive, aesthetic qualities of the natural world. Typical keywords included “beautiful” and “gorgeous.” To complicate matters, “Beauty in Nature” was not the only big frame to mention the visual splendor of the natural world.

A closely-related big frame to “Beauty in Nature” was “Spectacle.” This big frame also stressed the pleasure of looking at the natural world, but with subtle differences. According to Scott (2003):

Spectacle has also been used to describe images that produce a visceral response in the viewer by the sheer audacity of the image itself. The power of an image to excite wonderment in an audience can be related to both the “fantastical” *and* the “natural” world (p. 1).

Thus, in the “Spectacle” big frame nature goes beyond beautiful to become almost unreal. I used this big frame when the presenter or narrator emphasized the splendor of the image over that of the shot’s subject, when they directly labeled the scene as “spectacular,” or when a shot was so fantastic that the main star was the technology used to create it. An example of the “Spectacle” big frame was a dramatic sequence of storm clouds and lightning that began at 5:24 in the “Grasslands” episode of *Planet Earth II*.

The second-most common big frame in *Wild SafariLIVE* was “Wonder and Awe” (50 invocations, 10.16%). This involved an expression of amazement directed towards the natural world, often signaled by keywords and phrases such as “Amazing” or, “How cool is this?” In the “Wonder and Awe” big frame, presenters often uttered keywords in an excited tone of voice.

In *SafariLIVE*, the “Helpfulness and Community” and “Danger” big frames both had 37 invocations (7.52%). The “Helpfulness and Community” frame involved open displays of cooperation, support, welcoming, or other forms of social solidarity. Such displays could take place amongst humans (e.g. safari guides) or non-human animals (e.g. lions). Conversely, the focal point of the “Danger” big frame was a threat to an organism’s bodily integrity that arose from a source *besides* intraspecific (within-species) aggression. In *Wild SafariLIVE*, the threat was often directed towards the human presenter, who would label it as more or less severe.

The fourth most frequently-invoked big frame in *SafariLIVE* was “Babies and Cuteness” (32 invocations, 6.5%). The central theme of this big frame was a heart-warming sentiment that was almost always triggered by the sight of an infant animal. In *SafariLIVE*, 87.5% (28 of 32) of the invocations of the “Babies and Cuteness” big frame took place during the March 4, 2018 drive in response to a leopard cub.

Lastly, the fifth most common big frame in *SafariLIVE* was “Excitement:” comprising 5.69% (28) of all big frame invocations in the sample drives. “Excitement” revolved around action, chaos, or zeal. The main difference between the “Danger,” “Aggression and Territoriality” (intraspecific aggression), and “Excitement” big frames was that the latter was usually portrayed positively. A fight between two male impalas during the mating season was not a struggle to transmit one’s genes, but a “boxing match” that onlookers eagerly awaited. After all, it was “quite exciting” (*safariLIVE*, 2017, 2:17:28). Excitement, or at least action, was also a prominent feature of *Planet Earth II*.

Planet Earth II's Most Common Big Frames

“Danger” was the only big frame that made it into the top-five slot for both *Wild SafariLIVE* and *Planet Earth II*. It was the most commonly-invoked big frame in the latter program, occurring 32 times (16.84%) across all three episodes. But “Danger” in *Planet Earth II* was not the same as in *SafariLIVE*; the lack of on-screen presenters in the former program meant that threats were never directed towards humans. Instead, the source of “Danger” was usually predation. Environmental variables also gave rise to “Danger” in *Planet Earth II*, such as heights in “Jungles.”

A closely-related big frame to “Danger” was “Hunting.” While both frames typically involved predation, the emphasis in “Danger” was on the imminent harm facing the ‘good’ prey species. In the “Hunting” big frame, the predator was the protagonist. “Hunting” was frequently, but not always, paired with the “Stealth” big frame.

The second most frequently-invoked big frame in *Planet Earth II* was “Hardship and Struggle” (22 invocations, 11.58%). This frame focused on the suffering or toil that an animal must endure, usually as the result of resource scarcity (e.g. hunger or thirst). The opposite of this was “Abundance,” which was the third most prevalent big frame in *Planet Earth II*. “Abundance” occurred 13 times, accounting for 6.84% of all big frame invocations in the series. Resources were not scarce in this frame, but plentiful.

“Competition” occupied the fourth spot in *Planet Earth II*. In this big frame, conflict arose over limited resources: including females. It was invoked 12 times (6.32%), while the fifth most common big frame arose 11 times (5.79%). Appropriately,

this was “Mating and Courtship;” a big frame that typically highlighted the efforts of a male animal to attract a female. When the wooing phase of “Mating and Courtship” had been completed, the frame focused on procreation.

Frames Construction

My second research question was, “How do the various filmic elements of *Planet Earth II* and *Wild SafariLIVE* (e.g. dialogue, visuals, music, and sound effects) help to frame their subject matter?” Overall, dialogue fulfilled most of the functions for all of the little frames in this thesis. As I described in the Methods section, I counted how many function squares into which I had placed filmic elements other than dialogue. I then separated these elements into two general categories: Visuals and Nonverbals. Every time I judged a function square (i.e. Keywords/Phrases, Problem/Issue Definition, etc.) within my frames identification spreadsheets to be wholly or partially fulfilled by Visual or Nonverbal elements, I said that function ‘featured’ such elements. The results for the Visual and Nonverbal categories were as follows.

Visuals

The roles of visual elements varied considerably between programs. For *Planet Earth II*, I included visual elements in 88 out of 190 little frames (46.32%). There was a range of seven (32-25) between episodes, and a mean of 29.33. Visual elements helped to perform all of Entman’s (1993, 2007) functions in *Planet Earth II*; they most often contributed to Keywords/Phrases (54 little frames), and least often to Problem/Issue

Definition (14 little frames). By contrast, only 18.5% (91 out of 492) of *Wild SafariLIVE*'s little frames featured visual elements. There was slightly more variation between episodes in *SafariLIVE* than in *Planet Earth II*, with a range of 13 (36-23). The mean number of little frames that featured visual elements across all three drives was 30.37. As with *Planet Earth II*, visuals helped to fulfill all functions in *SafariLIVE*; I most frequently included them in the Causal Analysis function column (50 functions), and least often in Moral Judgment (1 function). Tables 6 - 9 present the episode-by-episode and function-by-function frames construction results for visual elements in each series.

Table 6: Frames Featuring Visual Elements in Planet Earth II by Episode

Episode	Little Frames Featuring Visual Elements	Episode Total Little Frames	Percent of Little Frames Featuring Visuals
Jungles	25	52	48.08
Deserts	31	74	41.89
Grasslands	32	64	50.00
Totals	88	190	46.32

Table 7: Frames Featuring Visual Elements in *Wild SafariLIVE*, by Episode

Drive	Little Frames Featuring Visual Elements	Episode Total Little Frames	Percent of Little Frames Featuring Visuals
March 11, 2017	32	133	24.06
March 18, 2017	23	154	14.94
March 4, 2018	36	205	17.56
Totals	91	492	18.50

Table 8: Functions Featuring Visual Elements in *Planet Earth II*

Episode	Keywords/ Phrases	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
Jungles	8	5	7	9	8
Deserts	25	6	6	11	1
Grasslands	21	3	10	10	6
Totals	54	14	23	30	15

Table 9: Functions Featuring Visual Elements in *Wild SafariLIVE*

Drive	Keywords/ Phrases	Problem/ Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
March 11, 2017	4	15	17	1	1
March 18, 2017	6	9	9	0	3
March 4, 2018	11	14	24	0	0
Totals	21	38	50	1	4

Nonverbals

For *Planet Earth II*, just over half of all little frames (99 out of 190, or 52%) featured nonverbal elements. Despite this, only two functions were partially or entirely constructed by nonverbals: Keywords/Phrases (eight functions) and Moral Judgment (96 functions). Table 10, located below, lists the episode-by-episode figures for nonverbal elements in *Planet Earth II*.

Frames spreadsheets included nonverbal elements far less frequently in *Wild SafariLIVE* than in *Planet Earth II*. Only 76 out of 492 little frames featured nonverbal elements, or 15% of the total. Nonverbals contributed to a greater diversity of functions in *SafariLIVE* than in *Planet Earth II*, but distributions were not even. Seventy out of 102 functions (68.63%) that featured nonverbal elements did so in the Moral Judgment column, and 23 out of 102 (22.55%) occupied the Remedy Promotion/Action Directive column. Keywords/Phrases and Problem/Issue Definition only possessed 5.88% (6 of

102) and 2.94% (3 of 102) of the functions that featured nonverbal elements, respectively. Table 11 showcases the drive-by-drive tallies for nonverbal elements in *Wild SafariLIVE*.

Table 10: *Planet Earth II* Frames Featuring Nonverbal Elements by Episode

Episode	Number of Little Frames	Episode Total Little Frames	Percent of Little Frames Mentioning Nonverbals
Jungles	31	52	59.62
Deserts	31	74	41.89
Grasslands	37	64	57.81
Totals	99	190	52.11

Table 11: *Wild SafariLIVE* Frames Featuring Nonverbal Elements by Drive

Drive	Number of Little Frames	Episode Total Little Frames	Percent of Little Frames Featuring Nonverbals
March 11, 2017	29	133	21.80
March 18, 2017	18	154	11.69
March 4, 2018	29	205	14.15
Totals	76	492	15.45

Importantly, there are aspects of both *Wild SafariLIVE*'s and *Planet Earth II*'s construction that are not adequately described here. I elaborate on those features in the discussion section below, including the less precise but potentially significant 'sub-frames.' In the discussion, I also explain what the implications of this study's results might be.

DISCUSSION

Owing to the breadth of topics covered in this thesis, this discussion has been broken into three parts. The first portion addresses the differences in the most common frames in *Planet Earth II* and *Wild SafariLIVE*, whereas the second interprets the frames construction results. The third, and longest, part of the discussion makes tentative claims about how *Planet Earth II* and *Wild SafariLIVE* might affect viewers' pro-environmental attitudes and behaviors. It first theorizes about which universal human values are likely to be communicated by the most common big frames in each program, and then proceeds to relate *Planet Earth II* and *Wild SafariLIVE* to literature on connectedness to nature.

The Most Common Frames

The five most common big frames in *Wild SafariLIVE* and *Planet Earth II* differed considerably, with only one big frame entering the top-five slot for each program: "Danger." Even then, danger was not the same in each series. In *Planet Earth II*, threats usually arose from (often carnivorous) animals and were directed towards other animals. In *SafariLIVE*, by contrast, the on-screen presenter could also be in danger. There were several instances in which *SafariLIVE*'s guides expressed trepidation at the presence of African wildlife, such as in the following frame from the March 11, 2017 sunrise drive:

Table 12: An elephant-related “Danger” frame in *Wild SafariLIVE*’s March 11, 2017 Sunrise Drive

Little Frame	Keywords/Phrases	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
Danger/ elephants	“Oh, elephants” [Guide stops suddenly] (1:07:59).	“I can hear elephants again; breaking branches to the south of us.”	Why guide can hear elephants: “Breaking branches to the south of us.”	“The wind is in our favor, so I’m not too worried” (1:08:12).	Stop suddenly, listen carefully, and gauge the direction of the wind – all evidenced by guide’s actions.

The presence of knowledgeable guides in *SafariLIVE* also meant that danger could be qualified; the guides never overreacted, and frequently explained that taking basic precautions could minimize risks in the bush. Notice how in the above frame, the guide’s immediate reaction communicated danger: he stopped suddenly and said, “Oh, elephants” (1:07:59). However, he quickly went on to explain that he was “not too worried,” since the wind was “in our favor” (1:08:12). His behaviors during this frame, listening carefully and assessing his surroundings, demonstrated how to deal with the presence of nearby elephants.

In *Planet Earth II*, “Danger” tended to be more dramatic; it was accompanied by fast music, rapid editing cuts, and excited narration – all of which heightened the suspense. “Danger” was also over twice as common in *Planet Earth II* as it was in *SafariLIVE*. Consequently, the only frame that constituted one of the five most common big frames in both series varied considerably between them.

Frames Construction

Wild SafariLIVE and *Planet Earth II* also constructed frames differently; visual and nonverbal (i.e. non-dialogic sound) elements contributed to a higher percentage of little frames (46.32% for visuals, 52% for nonverbals) in the latter program than in the former (18.5% for visuals, 15% for nonverbals). *Planet Earth II* used nonverbal elements more formulaically than *SafariLIVE*, since they only served as Keywords/Phrases and Moral Judgments in the former series, and the scales were far from even (8 total Keywords/Phrases; 96 Moral Judgments). In contrast, nonverbal elements helped to fulfill all functions except Causal Analysis in *Wild SafariLIVE* – but not equally. However, study design almost certainly influenced the frames construction results.

As I wrote in the methods section, I gave extra weight to dialogue while identifying frames. I did so because, as an inherently qualitative project with one coder, reliability was always going to be a problem with this thesis; the results would ultimately depend on the judgments of a single individual, rather than the consensus of a team. I therefore leaned heavily on dialogue, since the meanings of specific words were clearer than those of visual or nonverbal elements. This undoubtedly led me to overlook the latter elements more often than I should have.

Despite this limitation, frames construction results did reflect the compositions of the two programs. *Planet Earth II* is more finely orchestrated than *Wild SafariLIVE*, featuring: whole film crews, the latest camera technology, high budgets, studio editing, music, sound effects, tight storylines, and carefully-planned narration. *SafariLIVE*, on the

other hand, is filmed by one camera operator at a time; either on the back of a vehicle or on foot. There is no editing, no formal scripts, no sound effects, and no music.

Consequently, the guides need to talk more to explain what is occurring on screen.

Dialogue should, then, fulfill a higher percentage of functions in *Wild SafariLIVE* than in *Planet Earth II*.

Function-specific framing results also matched the formats of both programs.

When nonverbal elements directly contributed to little frames in *Planet Earth II*, they almost always did so through Moral Judgments. This makes sense, because music often informed viewers of how they were supposed to feel: it became faster and louder when two mustangs (wild horses) fought in “Deserts,” it was soft and cute when baby mice appeared in “Grasslands,” and it was deeply sorrowful as Indri lemurs (*Indri indri*) called in “Jungles.”

Nonverbal elements also frequently contributed to Moral Judgments in *Wild SafariLIVE*. When the guides did not use specific words to communicate how viewers should feel about a subject or issue, their vocal tones and behaviors often provided clues. For example, a guide repeatedly laughed during the March 4, 2018 drive when a leopard (*Panthera pardus*) cub pounced on her mother; this was a strong, positive appraisal of the cub’s antics. During a segment involving a spider in the March 18, 2017 drive, a different guide witnessed the arachnid swinging from one side of her web to the other. His excited tone of voice indicated that he was happy with what he had seen.

Sub-Frames

The descriptive statistics presented in the results section do not fully reflect how *Planet Earth II* and *Wild SafariLIVE* utilized visual and nonverbal elements. In both series, these elements worked to form general themes, or ‘sub-frames,’ that ran throughout all the sample episodes in their respective programs. While these depictions did not fit Entman’s (1993, 2007) functions well enough for me to directly include them in frames spreadsheets, they were central features of both *Wild SafariLIVE* and *Planet Earth II*.

In *Wild SafariLIVE*, camera shots and the drives’ audio constantly reinforced a “Discovery and Exploration” sub-frame. The guides were constantly interacting with the South African bushveld: following tracks, touching plants, climbing trees, getting their vehicles stuck in holes, etc. Viewers heard branches cracking, vehicles driving over dirt roads, and the sounds of footsteps on sand and grass as the guides looked for animals. In other words, the visual and nonverbal elements in *SafariLIVE* converged to simulate actually being on an African safari.

In *Planet Earth II*, visual and nonverbal elements were strikingly beautiful: nearly every image was crisp and well-defined. A series of perfectly-lit shots of jaguars (*Panthera onca*), extending from 24:56 – 25:11 in the “Jungles” episode, exemplified this trend. In addition, multiple Close and Very Close Shots helped to highlight the intricate beauty of the natural world. The exceptions to this rule were shots of giant anteaters (*Myrmecophaga tridactyla*) breaking open termite mounds in “Grasslands.” In this case,

Very Close Shots of anteaters' tongues, coupled with exaggerated slurping sounds, were revolting.

Despite the unpleasant anteater shots, the central sub-frame in *Planet Earth II* was “Spectacle.” The visual elements in this series also communicated “Beauty in Nature,” but the prevalence of Very Close and Very Long Shots, along with the occasional slow-motion shot and computer-generated image (CGI; see VCS bees at 16:23 in “Deserts”), tipped the scales towards “Spectacle.” The following sub-section below will discuss how these sub-frames, along with this study's other results, might impact viewers' pro-environmental attitudes and behaviors.

Impacts

Given the stark loss of biodiversity around the world, wildlife filmmakers must consider how their products might benefit the broader goals of environmental conservation. After all, some series have generated vast profits by filming species and habitats that are in danger of disappearing (Jepson, Jennings, Jones, & Hodgetts, 2011). It is thus only fair that wildlife filmmakers consciously set out to create media products that benefit the species they focus on. To encourage further discussions on how to do so, I will now link my results to research on universal human values and connectedness to nature. I must stress that, because I did not use experimental design, the claims that follow do not constitute ‘proof.’ Rather, they are hypotheses that are informed by my own and others' research.

Values in Media Frames

As I have written before, one of the most thorough environmental framing analyses comes from Blackmore et al. (2013). Not only did they distill a series of frames from the communications documents of United Kingdom conservation organizations, but they connected those frames to values. Psychological research has revealed that there are about 56 universal values that are shared across many cultures. Schwartz (1992) groups these universal values into 10 motivational values, and then into four higher-order value types. These are: self-transcendence, self-enhancement, openness to change, and conservation (Schwartz, 1992).

Importantly, because they involve incompatible drives, the higher-order value types oppose each other in sets of twos (Schwartz, 1992; Maio, Cheung, Pakizeh, & Rees, 2009; Holmes, Blackmore, Hawkins, & Wakeford, 2011). The conflict between self-transcendence and self-enhancement values is the most significant for environmental conservation, because considerable research has confirmed that activating the latter values can suppress pro-environmental behavior (Bolderdijk, Geller, Lehman, & Postmes, 2012; Evans et al., 2012; Schultz et al., 2005; Schultz & Zelezny, 2003; Sheldon, Nichols, & Kasser, 2011). On the other hand, communications designed to elicit self-transcendence values can have the opposite effect (Bolderdijk et al., 2012; Sheldon et al., 2011).

In their report, Blackmore et al. (2013) identified a number of big frames that I also found in *Planet Earth II* and *Wild SafariLIVE*. These included: “Beauty in Nature,”

“Wonder and Awe,” “Discovery and Exploration,” and “Animals Like Us.” Another frame from the television programs, “Helpfulness and Community,” is similar to Blackmore et al.’s (2013) “Joint Action” and “Community Cooperation.” frames. “Beauty in Nature,” “Wonder and Awe,” and “Helpfulness and Community” were three of the most common big frames in *SafariLIVE*.

Blackmore et al. (2013) concluded that all of the above frames were likely to benefit conservation. According to them, “Beauty in Nature” (which they also called “Nature is Beautiful”) is linked to the ‘world of beauty’ value. Since this is a universalism value, it may encourage pro-environmental behaviors. The same might be true for “Wonder and Awe.” While “Wonder and Awe” was not one of Blackmore et al.’s (2013) big frames per se, they did write about those emotions in relation to other frames. According to them, wonder and awe, “foster pro-environmental action and personal wellbeing” (p. 65). Indeed, Rudd, Vohs, and Aaker (2012) found that experiences of awe made participants more willing to volunteer, more likely to choose experiences over material goods, and led them to report increased life satisfaction.

Furthermore, the “Wonder and Awe” frames in *Planet Earth II* and *Wild SafariLIVE* often expressed deep admiration for the natural world. A sequence of dialogue during the introduction of *Planet Earth II*: “Grasslands” celebrated grass for being a “Remarkable type of plant” that was “Almost indestructible” (0:45). These lines were accompanied by close shots of grass in the morning sun, adorned with dew-covered spider webs that reflected the sunrise. During the March 4, 2018 drive of *SafariLIVE*, another “Wonder and Awe” frame contested that a tall giraffe was “Absolutely marvelous” (38:20).

Considering the positive sentiments expressed in these and other examples, the “Wonder and Awe” frames almost certainly communicated self-transcendence values. The same was true for “Helpfulness and Community.”

In *Wild SafariLIVE*, guides were remarkably good-natured. They helped one another locate animals, made room for guests in other safari vehicles to get good photographs, frequently praised the talents of their camera operators (who occasionally appeared on screen), and always appeared delighted to receive questions and comments from viewers. This can only transmit self-transcendence values, especially the benevolence values of ‘true friendship’ and ‘helpful’ (Holmes et al., 2011). Since priming pro-social benevolence values also activates pro-environmental universalism values, the “Helpfulness and Community” frame is likely to support environmental conservation. Blackmore et al. (2013) came to similar conclusions for their “Joint Action” and “Community Cooperation” frames. However, not all of the frames in *Planet Earth II* and *Wild SafariLIVE* overlapped with Blackmore et al.’s (2013) results.

The frames of “Danger,” “Excitement,” “Babies and Cuteness,” “Hardship and Struggle,” “Competition,” and “Mating and Courtship” are less directly related to Blackmore et al.’s (2013) findings. Of these, “Babies and Cuteness” seems to be the most positive for conservation, as it encourages warm and affectionate feelings for nonhuman animals. For instance, a frame from the March 4, 2018 *SafariLIVE* drive explained that watching a leopard cub playing with her mother was, “Too sweet for words” (1:33:24).

Given the above factors, the “Babies and Cuteness” frame might transmit the self-transcendence values of ‘unity with nature,’ ‘a world of beauty,’ and ‘inner harmony.’

Conversely, it may also promote the hedonism values of ‘pleasure,’ ‘self-indulgent,’ and ‘enjoying life.’ While hedonism lies in between the self-transcendence and self-enhancement poles, and should therefore be mostly neutral for environmental conservation (Schultz et al., 2005), it is adjacent to the self-enhancement achievement values in Schwartz’s (1992) model. The effects of the “Babies and Cuteness” frame thus warrant further scrutiny. The same goes for the “Abundance” frame, which appears to be most directly tied to hedonistic values. It therefore should not influence conservation-relevant attitudes and behaviors significantly, although it deserves more attention.

One of the most ambiguous big frames in either program is “Danger.” While the name might sound threatening, in *Planet Earth II* “Danger” is also exciting; holding audience members’ attention through quick editing cuts and fast music, which create feelings of suspense. “Danger” in *Planet Earth II* might thus be linked to the stimulation values of ‘excitement in life’ and ‘daring,’ which should not influence pro-environmental attitudes and behaviors noticeably. Still, the blatant depictions of threats to animals’ safety might activate security values. These values, while fairly neutral, are next to self-enhancement power values (Schwartz, 1992). The security, conformity, and tradition motivational values make up the ‘conservation’ pole (also called ‘conservatism’), and they appear to be at odds with pro-environmental attitudes. However, this relationship is not as obvious as it is for self-enhancement values (Schultz & Zelezny, 2003). The frequent depictions of danger in *Planet Earth II* might thus have unwanted consequences, but there is not enough evidence to be certain.

“Danger” in *SafariLIVE* is much less severe than in *Planet Earth II*. In fact, “Caution” might be a more appropriate label. The guides frequently explained that there were methods for minimizing risks in the bush – as long as one maintains a healthy respect for nonhuman nature – and even told viewers how to handle threats like curious elephants. As a result, “Danger” in *Wild SafariLIVE* may actually help conservation by dispelling myths about African wildlife. In some cases, the “Excitement” big frame might also affect viewers positively.

“Excitement,” another of *SafariLIVE*’s most common big frames, is related to “Danger” in that it speaks to stimulation values. But it might be slightly more beneficial than “Danger,” because it does not involve animals getting ripped apart. At its worst, “Excitement” in *SafariLIVE* depicts the unpredictability of life in the bush, and at best shows a presenter’s delight at finding a particular species. For this reason, “Excitement’s” influence on viewers’ pro-environmental attitudes and behaviors is probably neutral; except for cases in which a presenter directs strong positive emotions towards wildlife. In such instances, the guide’s enthusiasm for the species in question could transfer to audience members.

Out of the five most common big frames in *Planet Earth II* and *Wild SafariLIVE*, “Competition” seems to be most strongly linked to self-enhancement values. This was the fourth most prominent big frame in *Planet Earth II*, and it nearly always depicted animals as striving against one another for limited resources. A sequence of shots that involved hummingbirds fighting over nectar in *Planet Earth II*: “Jungles” – coupled with lines

such as, “In Ecuador, competition is at its most intense” (14:08) – typified the “Competition” frame.

By placing animals in direct opposition to one another, “Competition” might encourage the self-enhancement values of power and achievement. To be sure, competition *is* a fundamental part of life in the wild – but so is cooperation. Balancing “Competition” with more egalitarian frames might be one way to counter the potentially harmful effects of self-enhancement values. *Planet Earth II*’s producers have done this to a degree, since “Helpfulness and Community” is the seventh most common big frame in the series. But it only comprises 3.68% (7 out of 190) frame invocations in *Planet Earth II*, whereas “Competition” accounts for 6.32% (12/190).

“Competition” was also frequently linked to “Mating and Courtship,” the fifth most common big frame in *Planet Earth II*. This frame big typically showed male animals, especially birds, trying to ‘win’ a female: they danced, hopped, and built stages to earn the chance to mate. Given the implicit assumptions and sometimes explicit statements that only the best males would triumph, “Mating and Courtship” might invoke many of the same values as “Competition.” Since one’s success or failure in the courtship arena can influence their perceived social standing among humans (who interpret television content based on their own schemas), this frame may also activate the power values of ‘preserving my public image’ and ‘social recognition.’ A powerful depiction of rejection at 42:20 in “Jungles,” and a strong emphasis on cleaning at 43:25 in the same episode, seem to be related to security values. These would be ‘sense of belonging’ and ‘clean,’ respectively.

None of the values connected to the “Mating and Courtship” frame are likely to advance environmental conservation. I have already explained that self-enhancement power values tend to suppress pro-environmental attitudes and behaviors, and that security values are at best neutral. Additionally, given “Mating and Courtship’s” close relationship to “Competition,” it is possible that invoking the former frame will also make the latter more salient. This is concerning, since the “Competition” frame might also communicate self-enhancement values. While all of these claims are tentative, the impacts of the “Mating and Courtship” and “Competition” frames warrant further investigation. It is possible, though unproven, that they might have negative consequences for audience members’ pro-environmental attitudes and behaviors.

Lastly, “Hardship and Struggle” may also be a less helpful frame; its depictions of struggling, exhausted animals might activate security values. Conversely, this could also lead viewers to empathize with nonhuman nature, which would promote universalism values. “Hardship and Struggle,” which is the second most frequently-invoked frame in *Planet Earth II*, is thus another frame that needs to be studied. But while the most common big frames in *Planet Earth II* and *Wild SafariLIVE* deserve attention, they may not be either program’s most significant features.

Sub-frames

The impacts of the big frames in *Wild SafariLIVE* and *Planet Earth II* might be less pronounced than those of the “Discovery and Exploration” and “Spectacle” sub-frames. This is because, although the sub-frames did not clearly perform Entman’s (1993,

2007) functions, they were almost constantly present. By contrast, the media frames were relatively diffuse; the most common big frames in *Planet Earth II* and *Wild SafariLIVE* only comprised 16.84% and 11.99% of all frame invocations, respectively. This portion of the discussion will thus describe the less precise, but more ubiquitous sub-frames in more detail.

As I wrote in the results section, the “Spectacle” sub-frame in *Planet Earth II* contains beautiful imagery that transcends everyday experience. The shots are crisp and the colors brilliant; Very Close, Very Long, and occasional computer-generated shots transport viewers to the edge of reality. Additionally, animal behaviors are nearly always dramatic. Beck (2010) writes about this tendency towards spectacle in the first *Planet Earth*, and not approvingly. He claims that *Planet Earth* teaches audiences that, “Nature is good for looking at” (p. 63), and that the series’ expensive visuals represent, “the corporatization of environmental discourse” (p. 66). Sullivan’s (2016) “Money Shot” frame is also similar to the “Spectacle” sub-frame. According to her, “the money shot” is, “The image or sequence of images that will generate the heart-stopping moment. Such images tend to be associated with rarity, sensational behavior, and otherwise un(fore)seen views and activities” (p. 9). Sullivan (2016) is opposed to the “Money Shot” frame, relating it to the ‘money shot’ in pornography. As in the latter genre, Sullivan (2016) believes that the sensationalism in mainstream wildlife film prevents viewers from empathically connecting with their subjects.

My take on spectacle differs from the aforementioned authors. In the context of *Planet Earth II*, I suspect the “Spectacle” sub-frame to be largely positive. Yes, the

images are expensive, and this does nothing to combat industrial capitalism. But they are also incredible. Their details and unique angles portray nature as being strikingly beautiful, which could serve as strong endorsements of self-transcendence universalism values. The frequent close-ups of animal faces may also enhance, rather than hinder, viewers' empathic connections to them (see Kalof & Kelly's [2011] study on animal portraiture). In her examination of spectacle in wildlife television programs, Scott (2003) also repeatedly mentions that feelings of wonder and awe are central components of spectacle: these emotions are likely to positively affect viewers' pro-environmental attitudes and personal well-beings (Blackmore et al., 2013; Rudd et al., 2012).

Another potential advantage of the "Spectacle" sub-frame in *Planet Earth II* is that its beautiful imagery and sensational happenings help to capture and hold viewers' attention. These qualities might allow blue chip productions like *Planet Earth II* to appeal to wide audiences, especially those who might not otherwise seek out wildlife-related media. Lastly, one of the few experimental studies that has been conducted on wildlife television seems to support my claim that spectacle's influence, at least in the context of the *Planet Earth* series, might be helpful.

As I wrote in the introduction, Zelenski et al. (2015) compared the effects of viewing nature documentaries against footage of the built environment and control footage. For two out of three experiments, Zelenski et al.'s (2015) nature footage consisted of a 12-minute video taken from the first *Planet Earth* series. In both cases, participants who watched the *Planet Earth* clip behaved more sustainably and cooperatively in a fishing simulation game than in the other conditions. The first *Planet*

Earth, like its sequel, was full of incredible images and extraordinary happenings that filled audiences with a sense of wonder and awe – in other words: spectacle. Given spectacle’s ubiquity in both *Planet Earth* series, it is highly likely that the participants in Zelenski et al.’s (2015) ‘nature footage’ condition encountered it. And yet, they still acted more sustainably and cooperatively than their peers. While one study is hardly enough to form definitive conclusions, Zelenski et al.’s (2015) findings indicate that the effects of spectacle may not be wholly negative.

Despite my endorsements of the “Spectacle” sub-frame, it is also limiting in certain regards. Nature is often not as exciting as it seems in programs such as *Planet Earth II*; and, as authors like Bousé (2003) have pointed out, viewers may thus be disappointed when they encounter actual wildlife. In addition, much of the drama in *Planet Earth II* comes from highlighting a few individual animals that reside in an episode’s selected biome, and then putting those animals in danger. While this may encourage viewers to empathize with the ‘star’ species, it does little to explain how the ecosystems they reside in function.

The strategy of using danger to create suspense also casts certain animals, such as the wolves at the end of *Planet Earth II*: “Grasslands,” as villains; the way Sir David Attenborough drops his voice and speaks in a gravely tone as he introduces the wolves reinforces the notion that they are ‘bad.’ Again, this is not an accurate portrayal: nonhuman animals are neither ‘good guys’ nor ‘bad guys,’ they simply do what they must to survive. Thus, while “Spectacle” showcases the beauty of nonhuman nature and makes *Planet Earth II* an enjoyable series to watch, it also hampers the program’s

educative potential. *Wild SafariLIVE* takes the opposite approach – sacrificing some entertainment value (although the program can be undeniably exciting) for realism and accuracy.

The main sub-frame in *Wild SafariLIVE* is “Discovery and Exploration.” The program shows human beings interacting with the African bush: tracking, walking on dirt roads, navigating obstacles, touching plants, driving in open vehicles, etc. Unlike in previous presenter-led programs, *SafariLIVE*’s guides also display considerable respect towards nonhuman nature. They keep their distance from giraffes to avoid spooking them, carefully select which tree species to drive over while off-roading, and usually try to influence animals’ behavior as little as possible.

“Discovery and Exploration” is similar to frames that Blackmore et al. (2013) found. They wrote:

Frames such as *adventure*, *discovery*, and *exploration* – sometimes in *wilderness* – emphasize visual experience and curiosity, often relying on first-hand accounts. These frames are likely to promote appreciation for nature and inquisitiveness (universalism and self-direction), as well as excitement and fun (stimulation and hedonism) (p. 67).

The “Discovery and Exploration” sub-frame in *SafariLIVE* overlaps considerably with the frames of “adventure,” “discovery,” and “exploration” described above – with two main differences. First, there was only one mention of “wilderness” in over eight hours of footage. In fact, the visuals in *SafariLIVE* tend to counter the ‘untouched’ wilderness ideal: Djuma is crisscrossed by dirt roads and power lines, human-made structures and safari vehicles commonly enter the frame, and during the March 18, 2017 drive one of

the guides became delighted when he found axe marks that indicated past human activities.

Second, “Discovery and Exploration” in *Wild SafariLIVE* emphasizes more than just the visual experience of nature. Viewers see the guides touching trees with their hands; listen as they comment on the sounds they hear and complain about the temperature; hear the guides describe the way certain plants feel on their fingers; and more. It is possible, though unproven, that the multisensory nature of the “Discovery and Exploration” sub-frame in *Wild SafariLIVE* makes it more impactful than the written frames described by Blackmore et al. (2013). It might also help to slow the extinction of experience, which I expand upon below.

The Extinction of Experience and Connectedness to Nature

I will now return to one of the problems I mentioned in the introduction: the extinction of experience. To reiterate, authors claim that this general sense of apathy towards the natural world makes it harder to generate widespread support for conservation (Hinds & Sparks, 2008; Soga et al., 2016; Schuttler, Sorensen, Jordan, Cooper, & Schwartz, 2018). A related concept to the extinction of experience is ‘connectedness to nature,’ which describes the degree to which an individual includes nonhuman nature in their self-definition. People with a higher connectedness to nature tend to be more environmentally conscious, more likely to engage in pro-environmental behavior (such as donating to conservation organizations), and report higher overall well-beings than those who feel less connected to nature (Shanahan & Fuller, 2016; Verges &

Duffy, 2010; Bruni & Schultz, 2010; Arendt & Matthes, 2016; Hinds & Sparks, 2008).

Furthermore, connectedness to nature in childhood correlates with one's likelihood to endorse biospheric values and support conservation organizations in adulthood (Martin & Czellar, 2017; Chawla, 2006). It stands to reason that one way to slow the extinction of experience is to bolster urban residents' connectedness to nature.

The best way to increase connectedness to nature is to deeply engage with the natural world. This involves more than just going outside: it means exploring nature in ways that focus one's attention on specific details (Shwartz, Turbé, Simon, & Julliard, 2014; Schuttler et al., 2018; Chawla, 2006). Outdoor activities that include educative components, like citizen science, might be especially helpful (Schuttler et al., 2018; Shwartz et al., 2014). Similarly, engaging with the natural world in the company of a trusted adult – who models respectful behavior and shares their knowledge about what they encounter – appears to engender connectedness to nature in children. According to Chawla (2006), respectful behavior means giving “appreciative attention” to nonhuman nature without displaying fear or “heedless destruction” (p. 71). There is nothing wrong with extractive activities like hunting, as long as they involve more than just exploitation. However, this outdoor engagement should not be overly structured. Chawla (2006) writes that children should have a sense of agency; being able to act upon the world and observe the results. I suspect that having a sense of agency in the outdoors, while accompanying a more experienced individual who shares their knowledge about nature and demonstrates respectful behavior, might also increase adults' connectedness to nature.

Considering the above factors, the wildlife program with the greatest positive impact on audience members' connectedness to nature would: direct viewers' attention to specific aspects of the natural world, provide information about those aspects, create a sense of agency among viewers, and model respectful behavior in the outdoors. Of the two programs I analyzed, *Wild SafariLIVE* most closely matched those criteria. Not only does *SafariLIVE* feature human beings exploring the natural world, but they do so respectfully; the guides do not overreact to danger, they do not harass animals to the point of charging, they tell audience members how to mitigate risks in the wild, and they are constantly sharing information about specific features of the African bush. Watching the guides react to the questions and comments viewers send through on social media might even give audience members a limited sense of agency. The results for *Planet Earth II* are quite different.

The sampled episodes of *Planet Earth II* are not likely to enhance viewers' connectedness to nature as well as *Wild SafariLIVE*'s. For one, they do not contain any footage of human beings. While *Planet Earth II*: "Cities" is full of people, I have excluded it from this thesis because its featured biomes are too different from the Sabi Sands. Still, the main emphasis in "Cities" seems to be on animals' abilities to survive in 'our' domain, rather than on human beings respectfully inhabiting the natural world. I therefore suspect that "Cities" will not promote connectedness to nature as well as *Wild SafariLIVE*, although this would make for a fascinating study.

Despite my above critiques, certain aspects of *Planet Earth II* may indeed improve audience members' connectedness to nature. The beauty of the program's

images, the power of its music, and its many close shots of animal faces might engender greater empathy towards wildlife – and empathy is a core component of connectedness to nature (Hinds & Sparks, 2008; Schuttler et al., 2018). *Planet Earth II* also succeeds in directing viewers' attention to specific facets of the natural world, and then sharing information about them. However, *Planet Earth II*'s tighter narratives and shorter run-times mean that this information is more limited than in *Wild SafariLIVE*. Another drawback is that *Planet Earth II*'s viewers are entirely passive, with no sense of agency. Of course, mediated nature experiences will never improve viewers' connectedness to nature as much as *actual* nature experiences.

The greatest challenge, then, is to design media that inspires audience members to go outside and deeply engage with the natural world. Should anyone test *Planet Earth II*'s or *Wild SafariLIVE*'s effects on viewers' outdoor time, the latter program would probably have the strongest impact. Again, this comes down to the presence of on-screen presenters who model the exact types of behaviors that produce connectedness to nature. Watching other people enthusiastically explore the natural world could prompt audience members to do the same, although this needs to be proven.

Summary

In conclusion, which program – *Planet Earth II* or *Wild SafariLIVE* – has the greatest potential to increase audience members' pro-environmental attitudes and behaviors? Overall, both programs are more likely to promote such factors than they are to suppress them. Three out of four of *Planet Earth II*'s most common big frames might

endorse values that are either neutral or unhelpful for conservation, but I do not believe that the individual media frames are the most significant elements of either program: there are simply too many of them and they are too varied. Rather, the more ubiquitous sub-frames will probably have greater impacts on audience members' pro-environmental attitudes and behaviors.

When strictly examining their potential influences on conservation-relevant attitudes and behaviors, both series' dominant sub-frames appear helpful. "Spectacle" in *Planet Earth II* portrays the natural world as being overwhelmingly beautiful and awe-inspiring, which might trigger self-transcendence values. "Discovery and Exploration," on the other hand, models enthusiastic and respectful engagement with the natural world. Despite the merits of both programs, *Wild SafariLIVE* might promote pro-environmental attitudes and behaviors more effectively than *Planet Earth II*.

There are several reasons why *SafariLIVE* may be the more beneficial program. First, its big frames more clearly promote self-transcendent values than *Planet Earth II*'s. While neither series' big frames are their most important features, this does not mean that they do not matter. Second, *SafariLIVE* simulates the exact types of outdoor experiences that are most likely strengthen individuals' connectedness to nature; combining curious, respectful exploration in the outdoors with factual information about the African bush. Third, by asking questions and making comments that actually alter the show's content, *SafariLIVE*'s viewers might have a sense of agency (if only a small one).

Wild SafariLIVE has other advantages that I have not yet discussed. The guides repeatedly cruise the same portions of Djuma Private Game Reserve and the Maasai

Mara National Reserve, and frequently encounter the same individual animals. This might lead audience members to develop place attachments to the areas the guides traverse, and affinities for the animals that are routinely featured on the show. While a full examination of these dynamics would require its own study, the place and interspecies attachments fostered by *SafariLIVE* could possibly strengthen viewers' pro-environmental attitudes and behaviors.

Lastly, one of the most significant differences between *Planet Earth II* and *Wild SafariLIVE* is that the latter program has an online community. I have seen viewers support one another on *SafariLIVE*'s Twitter feed, share information about what is occurring on screen, and even assist the guides when they did not know the answers to questions. By deepening audience members' engagements with the show, this online community might enhance *SafariLIVE*'s impacts on viewers. Therefore, while all of my claims need further scrutiny, I suspect that *Wild SafariLIVE* has the potential to bolster audience members' pro-environmental attitudes and behaviors more effectively than *Planet Earth II*. To be fair, however, *SafariLIVE* may never enjoy the same viewership numbers as the latter series—nor do I see the two programs as truly opposing one another.

Both *Planet Earth II* and *Wild SafariLIVE* have distinct advantages that complement each other well. The former series is more entertaining than the latter, and its beautiful imagery and expert craftsmanship make *Planet Earth II* a perfect example of television as art. Conversely, the educative discussions in *SafariLIVE* are more varied and in-depth than in *Planet Earth II*, and the show's realism means that viewers get to observe the ways in which animals typically behave. Additionally, *SafariLIVE* seems to

do a better job of promoting pro-environmental attitudes and behaviors than *Planet Earth II*.

Thus, an ‘ideal’ wildlife program would blend the best aspects of *Planet Earth II* and *Wild SafariLIVE*: it would celebrate the beauty and wonder of nature, feature on-screen presenters who model respectful behavior towards nonhuman nature, provide detailed and accurate information about its subjects, promote values that encourage pro-environmental behaviors, and be entertaining. This ideal series would also highlight the fact that a diverse range of people care for and are excited about wildlife, and that there are many ways to value and appreciate nature. In this way, a high percentage of viewers might be able to find positive role models in the show’s guests and presenters. But, since it may be impossible for a single wildlife program to accomplish all of these goals, the best is to make room for a wide range of series that serve different purposes.

FUTURE DIRECTIONS

Since the wildlife genre of television is under-studied, there are many future directions available. Concerning framing, a helpful direction would be to examine what *Planet Earth II* and *Wild SafariLIVE* do *not* portray. Neither program regularly discussed issues pertaining to local or Indigenous peoples, nor science and conservation. *SafariLIVE* did a better job than *Planet Earth II* in this regard, but only marginally. In the former program, I recorded nine and 13 (out of 492) invocations of the “Human Use and Local Knowledge” (the only discussions of Indigenous peoples involved their traditional uses of local resources) and “Science and Conservation” big frames, respectively. Conversely, I identified zero and four (out of 190) “Human Use and Local Knowledge” and “Science and Conservation” frames in *Planet Earth II*. There was one mention of “local people” in “Jungles,” but it was purely to generate support for conservation. However, WildEarth TV has recently hired two native-African (as opposed to European-African) guides. It would be interesting to see if frames pertaining to local/Indigenous peoples are more common now than they were before. That said, there is room for more than just framing analyses.

If one does not wish to study media frames, they could experimentally test wildlife programs’ influences on connectedness to nature. I have located only one study, by Arendt and Matthes (2016), that has done so. They concluded that nature documentaries do not affect viewers’ implicit connectedness to nature, but their examination had limitations. Arendt and Matthes (2016) only showed their participants a

highly-edited, 7.52-minute clip of a film called *Saga of the White-tailed Eagle* (2011); which is neither as exquisite a blue chip program as *Planet Earth II* nor as immersive a presenter-led program as *Wild SafariLIVE*. Even if it was, 7.52 minutes of footage hardly seems like enough to alter connectedness to nature.

A study examining *SafariLIVE*'s influence on connectedness to nature would be particularly fascinating, because the program's content closely matches connection-enhancing experiences. Researchers could recruit a pool of participants, measure their connectedness to nature (there are tools for doing so), and then show them three different programs: *Wild SafariLIVE*, a more traditional nature documentary, and a control film that is not about the natural world. Researchers could then measure the participants' connectedness to nature at different time intervals after the film viewings, along with having them maintain journals about their outdoor activities. Such a study would not only capture potential attitude changes related to connectedness to nature, but possible behavioral shifts as well; it would be especially interesting to see if participants report more engaged, rather than simply longer, time spent in the outdoors after watching any of the nature programs.

As a caveat, a single viewing of any nature program may not be enough to strengthen connectedness to nature. Another study could thus show participants multiple episodes from the same nature series over the course of several weeks, and measure connectedness to nature after each viewing; thereby determining if the connection-enhancing impacts of nature programs only emerge over time. Should researchers find that participants do not exhibit greater connectedness to even after repeat viewings, then

they can satisfactorily conclude that mediated nature experiences – excluding virtual reality (which is fundamentally different than standard television) – do not enhance connectedness to nature.

Finally, research that experimentally compares *Wild SafariLIVE*'s effects on pro-environmental attitudes and behaviors against those of blue chip and standard presenter-led wildlife programs would help to determine which format is most beneficial; I have already made several claims in this thesis that could serve as hypotheses in such a study. Several of *SafariLIVE*'s components might positively influence audience members' pro-environmental attitudes and behaviors, including its big frames, the "Discovery and Exploration" sub-frame, the attachments it might foster to the locations and individual animals featured on the show, its interactive format, and its online community. A cleverly-designed study might be able to determine which, if any, of these components is most impactful. But even if *SafariLIVE* stimulates pro-environmental attitudes and behaviors more effectively than other programs, I do not advocate for a one-size-fits-all approach to wildlife television. I explain why in the recommendations section.

RECOMMENDATIONS

I will now provide basic recommendations for how filmmakers can design wildlife programs that might enhance audience members' pro-environmental attitudes and behaviors. As I stated before, I suspect that *Wild SafariLIVE* has more pro-environmental benefits than *Planet Earth II*. Specific features of *SafariLIVE* that might positively impact conservation-relevant attitudes and behaviors include:

- The presence of knowledgeable guides who demonstrate respectful engagement with the natural world;
- Honesty about the risks posed by wild animals, without over-dramatizing them;
- Explanations about how to mitigate such risks;
- A sense of familiarity with the places and animal characters involved;
- A degree of viewer agency in the show's occurrences;
- A supportive community of viewers who interact with each other during the drives;
- Media frames that are likely to communicate self-transcendent values.

Incorporating any of the above elements into future wildlife programs could strengthen their pro-environmental impacts. However, despite my optimism about certain aspects of *Wild SafariLIVE*, *Planet Earth II* has strong advantages as well. The beautiful visuals and incredible behaviors that characterize blue chip films like *Planet Earth II* might 'hook' viewers who are only minimally interested in wildlife, and who – should they choose to – can then tune into programs like *Wild SafariLIVE* to learn more. My

strongest recommendation, therefore, is to allow space for a diverse range of wildlife programs that are designed to benefit environmental conservation in various ways; different audience members will resonate with different types of programs, depending on what they bring to the viewing experience. Consequently, the wildlife genre of television must never stagnate: new conventions, new formats, and a more diverse range of hosts will help to reach wider audiences in this ever-changing world.

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APPENDIX A

Table 13: Full Big Frames List for *Wild SafariLIVE*

	Frame Invocations Per Drive			
Big Frame	March 11, 2017	March 18, 2017	March 4, 2018	Total Invocations
Beauty in Nature	27	17	15	59
Wonder and Awe	6	15	29	50
Helpfulness and Community	12	16	9	37
Danger	11	19	7	37
Babies and Cuteness	2	2	28	32
Excitement	18	2	8	28
Peace and Contentment	6	6	8	20
Pestilence and Revulsion	2	10	7	19
Variation and Personality	7	4	7	18
Discovery and Exploration	0	8	8	16
Unpredictability and Lack of Control	0	6	8	14
Cold	12	1	0	13
Conservation and Science	6	1	6	13
Inquisitiveness and Curiosity	5	0	7	12
Heat	1	3	7	11
Aggression and Territoriality	4	3	4	11
Hardship and Struggle	0	5	6	11
Spectacle	2	1	7	10
Connection to Nature	1	5	3	9

	Frame Invocations Per Drive			
Big Frame	March 11, 2017	March 18, 2017	March 4, 2018	Total Invocations
Human Use and Local Knowledge	0	4	5	9
Seasonality	0	3	4	7
Humor and Playfulness	0	6	0	6
Hunting	0	3	2	5
Abundance	0	1	4	5
Boredom	1	3	1	5
Adaptation	2	1	2	5
Bizarre and Strange	1	2	2	5
Learning and Practice	0	1	3	4
Competition	1	0	2	3
Mating and Courtship	1	0	2	3
Stealth	0	1	2	3
Rulers and Royalty	3	0	0	3
Technology	0	2	0	2
Animals Like Us	0	0	1	1
Spooky and Scary	0	1	0	1
Injury	0	1	0	1
Terminology	0	0	1	1
Fame	1	0	0	1
Marketing	1	0	0	1
Cleanliness	0	1	0	1
Totals	133	154	205	492

Table 14: Full Big Frames List for *Planet Earth II*

Big Frame	Frame Invocations Per Episode			
	Jungles	Deserts	Grasslands	Total Invocations
Danger	10	14	8	32
Hardship and Struggle	0	14	8	22
Abundance	7	4	2	13
Competition	7	0	5	12
Mating and Courtship	5	0	6	11
Wonder and Awe	1	3	6	10
Helpfulness and Community	1	3	3	7
Spectacle	1	4	1	6
Animals Like Us	3	2	1	6
Heat	0	6	0	6
Adaptation	3	2	1	6
Hunting	0	3	2	5
Aggression and Territoriality	0	5	0	5
Babies and Cuteness	1	0	3	4
Pestilence and Revulsion	0	4	0	4
Migration	0	0	4	4
Seasonality	0	0	4	4
Conservation and Science	2	2	0	4
Blindness	1	3	0	4
Growth and Transformation	0	0	3	3
Stealth	2	1	0	3
Industry and Labor	0	0	3	3
Rulers and Royalty	3	0	0	3
Cold	0	0	2	2

	Frame Invocations Per Episode			
Big Frame	Jungles	Deserts	Grasslands	Total Invocations
Brain vs. Brawn	0	0	2	2
Hero	0	2	0	2
Ingenuity	0	1	0	1
Discovery and Exploration	1	0	0	1
Inquisitiveness and Curiosity	1	0	0	1
Sanctuary	1	0	0	1
Complexity	1	0	0	1
Specialization	0	1	0	1
Bizarre and Strange	1	0	0	1
Totals	52	74	64	190

APPENDIX B

Wild SafariLIVE Frames Identification SpreadsheetsMarch 11, 2017 Sunrise Drive Frames Spreadsheet

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
Welcome/ hospitality 1	“Good morning everybody and welcome...”	“Good morning everybody and welcome to our pre-drive.”	Start of the drive (implied).	Positive, as evidenced by the phrase, “I hope wherever you are in the world you’re settling in nicely” and upbeat tone of voice.	“Settle in nicely” with a cup of coffee or your “favorite tippo.”
Beauty 1	“Beautiful morning” and, “incredible sunrise.”	“It looks like it’s going to be a beautiful morning. It looks like it’s going to have an incredible sunrise this morning.”	Sunrise will be incredible because of the, “bit of cloud about.”	Positive, as evidenced by words “beautiful,” “incredible,” and tone of voice.	
Excitement/ chaos 1	“Seems like hyenas have had an absolute field day.”	“Seems like hyenas have had an absolute field day”	“Lots of hyena tracks.”	“Good news;” “Hopefully the hyena den will be active.”	Go check the hyena den.
Cold 1	“Last night on the way back was freezing.”	“Last night on the way back was freezing”	“There was this very cold wind that was blowing.”	“It was not pleasant at all.”	
Excitement/ chaos 2	“You can see the road is just covered in tracks;” “This is quite exciting that there are wild dog tracks.”	“...seems like the hyenas have had an absolute field day on the road here today.”	As to why there are so many tracks: “Now the dogs look like they’re going back and forth.” No	Positive/exciting: “This is definitely what I am going to be following up on.”	Find the dogs.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
			explanation given for the dogs' presence.		
Danger/ predation 1	"They don't want to be caught out by any lurking predators."	'The dogs generally will spend most of their time actually on the road until it gets a little bit lighter.'	Long grass.		"So they stick to the roads quite a bit and move around on the road itself."
Excitement/ chaos 3	"They [the dogs] definitely had an altercation with the hyenas."	"They [the dogs] definitely had an altercation with the hyenas."	'Because all those tracks we saw is the hyenas and the dogs going back and forth at one another.'	"Exciting news;" "It promises to be a good morning..."	Find the dogs.
Cold 2	"Feels like it's going to be a morning that gets colder..."	Feels like it's going to be a morning that gets colder	"It's definitely gotten a little bit colder already since we've been out."		
Beauty 2	"Well isn't that absolutely gorgeous."	"Well isn't that absolutely gorgeous."	LS of sunrise.	Positive: "What a spectacular way to start your safari adventure."	
Excitement/ fighting 1	Lots of clips from past drives of animals fighting or killing each other.	Start of the sunrise safari: "You are live, you are live."		Exciting/positi ve (implied through music and fast editing rhythm).	Watch the drive (implied).
Beauty 3	"a truly gorgeous sunrise."	'Good morning and welcome to a truly gorgeous start to our sunrise safari.'	LS of sunrise.	Positive (tone of voice).	
Helpfulness/ support 1	"But, [camera operator], I feel like	"Now, [camera operator] is going to be	Why [camera operator] needs support:	"Scary thing."	"...so I'm sure you're all going to be

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
	you've got this. You've definitely got this."	interviewing for a position here."	"This is always a bit of a scary thing, being thrown into the deep end."		very warm in extending your welcomes to him."
Beauty 4	"Truly beautiful country."	Introducing Djuma Private Game Reserve to viewers.		Positive: implied through tone of voice.	
Spectacle 1	the sunrise is truly spectacular."	"Now, you've already seen that the sunrise is truly spectacular."		Positive: implied through tone of voice.	
Cold 3	"Winter for us has definitely arrived."	'Nineteen [degrees Centigrade]! So, winter, for us... winter for us has definitely arrived.'	It's 19° Centigrade		
Spectacle 2	we have a truly spectacular sunrise	"And we have a truly spectacular sunrise."	Earlier shots of the sunrise.		
Waiting/ boredom 1	"I'm just toying for time until..."	'And basically I'm just toying with time until it's light enough to take [camera operator] to the hyena den.'	It's not yet light enough to visit the hyena den.	Concerning the hyena den: "the wonders of that particular place."	Toy for time until it's light enough to visit the den.
Helpfulness/ teamwork 1	"I have a question for you, all; those of you who have been watching the Djuma dam camera." Did any of you see a lion?"	"Did any of you see a lion? He [the lion] was coming up from the south, along Weaver's Nest, from what I heard, so I was just wondering if	"Because I definitely heard a lion, and I was wondering whether or not you could give me a slight hint."	Concerning the viewers' assistance: "That would be very, very useful information."	Let guide know whether or not a lion walked past the dam cam last night.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
		he passed the dam camera.”			
Beauty 5	“Beautiful;” “Isn’t that gorgeous;” “It’s quite – it’s very pretty.”	Silhouette of zebra against the morning sky.	MS zebra silhouetted against sunrise (9:50).	Positive (implied by tone of voice).	Look at the zebra, as evidenced by, “Look at that” and Jaime’s behavior.
Welcome/ hospitality 3	“Good morning everybody and welcome our sunrise safari.”	Start of sunrise safari (implied).		Positive: implied by tone of voice and phrase, “Good morning.”	
Beauty 6	“Beautiful, beautiful morning.”	Beautiful morning.	Vibrant sunrise (visible in the background @ 10:23).	Positive: implied by tone of voice.	
Cold 4	“It’s getting quite cold;” “winter;” “it’s starting to get quite cool.”	It’s cold: “Funny enough it was warmer when we started than it is now.”	“There’s a little, sneaky wind that’s crept up and seems to be cutting through us.”	Negative: “I really hope not, I’m not a huge fan of the winter.”	Bundle up: guide has his fleece zipped up high with the collar popped.
Excitement 1	“This is very exciting.”	“We’re on the lookout for some wild dogs.”	Tracks for three wild dogs.	Positive: “I’m also a huge fan of them [wild dogs] as well.”	Look for the dogs, as implied by Tristan’s tracking.
Aggression/ fighting 1	“Altercation;” “They’re [hyenas and wild dogs] often chasing each other...”	“There’s tracks for them [wild dogs] and hyenas going up and down, so it looks like there was a bit of an altercation...”	“Wild dogs and hyenas are not good friends at all; “great disdain for one another’s presence.”	Negative: “They [wild dogs] don’t like to stick around if there’s a lot of hyena.” Also the use of the word “problem.”	
Beauty 7	“Beautiful sunrise;” “very, very pretty.”	“It promises to be quite a beautiful sunrise.” Also, LS horizon (12:43).	Cloud bank that will be, “absolutely illuminated by this light” and create, “some	Positive: implied by tone of voice.	Look at sunrise. Implied by guide’s stopping to look at the sunrise.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
			really nice colors.”		
Cold 5	“Wind;” would be better if, “it gets a little bit warmer.”	would be better if, “it gets a little bit warmer.”	It’s too windy and too cold; as evidence by guide’s desire to have the wind stop and temperature rise.	Negative: implied by Tristan’s wish for it to get warmer and less windy.	
Excitement/ noise 1	“Altercation;” wild dogs can be, “quite vocal;” “you often hear them [dogs] chattering as they move.”	“No sign” of wild dogs “in this particular open section.” Dogs can also sometimes be located through the noise they make.	Dogs, “can be quite vocal, particularly if they’ve had a little altercation or if there is hyenas around; then you often hear them chattering about as they move.”		“...stop just to listen as well.”
Danger/ predation 2	“Nervous;” wouldn’t be seeing calm impala “if wild dog pack had come running through.”	Lots of impala and zebra in Quarantine Clearings. Means dogs haven’t been there yet.	If dogs had been through Quarantine, impala and zebra either wouldn’t be there or would be “very nervous-looking.”		Move on and, “go and check south.”
Helpfulness/ teamwork 2	“Thank you;” “...it does honestly really help us.”	“[Viewer] you say you saw a lion walk past [the dam cam] last night from left to right?”	Viewer’s tweet helps <i>SafariLIVE</i> crew because, “if he was coming from that side it means he’s not going to that side.”	Positive, as evidenced by “thank you,” “much appreciated,” and, “that means we’re on the right track.”	
Excitement/ chaos 4	“Oh, it’s chaos this morning.”	“[Guide] has got tracks for the wild dogs.”			

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
Excitement/ chaos 5	“Oh!” and [guide’s] tone of voice.	“Lots of talk coming from, on my behalf, and listening to the game drive radio at the same time.”	[Guide] found wild dog tracks and he and [other guide], “are currently having a conversation about which way they’re going to go and search.”		Listen with, “half an ear.”
Excitement/ surprise 1	“...the elephants came rushing through.”	“I’ve found that if I go and sit at the hyena den strange things happen.”	“We’ve had lions come through, we’ve had wild dogs come through, elephants...”	Positive, as implied by [guide’s] desire to go to the den and, “see what comes past.”	“So let’s go and see what does come past it.”
Excitement/ action 1	“Fast-paced;” “formula one race.”	“It’s like you gotta determine where they’re [wild dogs] going in a few seconds before you then dash off on those tracks and try to find them.”	Wild dogs move so quick.	Positive: “it makes tracking quite fun...”	“You’ve gotta kind of get a little bit of a move on while doing this.”
Excitement/ chaos 6	“Chaotic;” “they’ll go that way, then they’ll come this way.”	“It’s always good to just check at these junctions of the roads because wild dogs...dogs are quite chaotic.”	“They’ll [wild dogs] go that way, then they’ll come this way;” “they’ll run up the road, then they’ll come back again.”		“...and so you’ve always gotta check around junction areas...”
Danger/ predation 3	“...because anywhere a wild dog is, the impala does not want to be at all,” implies that wild dogs are a	“Now I can see one or two impalas around...whic h means that the wild dogs are probably not here...”	because anywhere a wild dog is, the impala does not want to be at all		

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
	threat to impalas.				
Excitement/ chaos 7	“gotta go back and forth;” “you’ve gotta do things quite fast.”	“But like I say, wild dogs are so difficult in this regard because you gotta go back and forth and check;” “The problem is they move so quickly...”	Wild dogs move so quickly.	Negative, as implied by, “wild dogs are so difficult in this regard,” and, “the problem is...”	“You’ve gotta do things quite fast.”
Conservation/ extinction 1	Talking about wild dogs’ and cheetahs’ distributions and threat statuses: “So, the species [wild dogs] is still quite healthy in terms of numbers and in terms of enough genetic variety...”	“So, in all likelihood there’s still quite a vast array of genetics that can be bred out.” “Unfortunately with cheetahs they went down to the point where there was so few of them and then bred back up that they have this genetic problem...”	“Wild dogs there’s still quite a few of them, in the Kruger Park alone there’s still over 220 of them...” “Unfortunately with cheetahs they went down to the point where there was so few of them and then bred back up that they have this genetic problem...”	Positive for wild dogs (there’s still hope for them), negative for cheetahs (unfortunately for cheetahs...).	
Helpfulness/ teamwork 3	[Guide] and colleague are clearly visible on the road tracking wild dogs, and they give [other Guide] directions.	“Now, I see [Guide] is here and he’s saying that there are tracks all over here.”	[Guide] and [other Guide] have been looking for wild dogs all morning, as evidenced by previous comments.	Positive: “Thanks [Guide]!”	“I’m gonna go check zebra drive and then go around.”
Beauty 8	“Isn’t that quite spectacular;” “Very, very, very pretty;” “beautiful	LS of sunrise	“That’s exactly what we were talking about earlier; as the sun comes up	Positive: “That is worth a stop just to have a look.”	Stop and have a look.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
	light;" "Isn't that spectacular?"		it's just gonna illuminate all of these clouds with this beautiful light."		
Conservation/ management 1	"You're asking if wild dogs can be bred to get the numbers back up?" "Well, they could indeed, Viewer, and in fact there's a lot of programs at the moment where they're trying to get the numbers of wild dogs back up, and they are relocating wild dogs from certain areas that have good populations."	"The problem with the wild dogs is that they need massive space to move around in." "It's very difficult to take members of a pack and then mix them with any other dogs."	None given. But if they need to get wild dog numbers back up, then it's implied that their numbers are too low.		"...they've come up with a few new techniques where they use boundaries to scent mark;" "...need to have a huge area so they can stay put and healthy and also they need to be relocated as an entire pack."
Beauty 9	"That's absolutely beautiful;" "What a beautiful morning."	"What a beautiful morning."	"Oh that sunrise is just absolutely magnificent with these dead trees;" "There's a woodpecker in the background... a couple of fork-tailed drongos calling;" LS of sunrise, zooms out to VLS.	Positive (implied by tone of voice).	Stop and look at sunrise, as evidenced by [Guide's] actions.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
Conservation/ management 2	“Reserves;” “...get them [wild dogs] into more parks.	“So people actually don’t want wild dogs and that’s the biggest problem.”	People don’t want wild dogs because: “their ability and way they hunt means that they are very difficult to keep in an area that is fenced off;” and, “but in those fenced off areas often the wild dogs feed too much and they kill too many of the young.”		Have a bigger area, as implied by, “So any of these big reserves...then it’s not a problem.” Also, “Hopefully people start changing their mindsets...”
Conservation/ management 3	Continuation of the previous discussion. Also, “boundaries,” “relocate,” and, “Kruger system.”	“The other problem with the wild dog is it’s notorious for breaking out of fenced areas;” “They cross boundaries and they go all over the place;” “...it’s difficult to relocate them and keep them there.”	“They tend to break out very quickly and easily.”		“They’re trying to use scent to keep the wild dogs in...;” “...and when they release them they put them into this boma first so they get used to this barrier of a fence line.”
Awesome/ impressive 1	“The longest record”	“They released them [wild dogs] in South Africa...GPS collar went dead on the northern side of Botswana. So they crossed pretty much two countries in a few weeks.”	“They are an animal that moves very, very fast.”		

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Aggression/ territoriality 1	“Chaotic;” “frenzy,” “huge fight.” “Wild dogs are territorial and will chase one another”	“...but generally there is aggression between two packs [of dogs];” “I had a sighting where two packs met...40 dogs had a huge fight...”	“Wild dogs are territorial and will chase one another.”		“Any time there is no real aggression is if it’s young males and young females that have dispersed and are now looking for a different den...males know that this is a potential mating right.”
Mystery 1	“Decode the mystery of the wild dogs.”	Almost impossible to see tracks on this road; Looks like they [wild dogs] did come here...let’s see if I can find a direction as to which way they went.	Road “baked so hard it’s like concrete;” Wild dogs can cover so much distance.		“Decode the mystery” (33:55).
Mystery 2	“I am decoding a mystery of my own.”	‘I’ve just found very fresh leopard tracks; My suspicion is it’s Tingana...’	‘My suspicion is that it is Tingana just by the size of those tracks.’		“I’m just gonna go and check Treehouse Dam because Tingana likes to walk along that area.” (36:17).
Beauty 10	“Beautiful clouds;” “very pretty.”	“What shall we look at, [camera operator]?”			LS of sunrise (37:24); “...look at the beautiful clouds.”
Bizarre/ strange 1	“This place is a mad house” (40:08); “Utterly bizarre...”	“I thought I was sitting at this junction for a reason?”	Bushwalk team drives passed swiftly (39:40).	Negative, as evidenced by [Guide’s] visible frustration.	

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Competition 1	"[Camera operator's] only beginning to know the competition;" "The challenge is on!"	"[Camera operator's] only beginning to know the competition that happens at SafariLIVE" (40:44).	"You're right [camera operator] he [Guide] came to steal our leopard" (40:31)	Silly/not serious: "No, I'm joking of course" (43:23).	"Let's go find it [leopard] before they do!" "By finding the leopard first!" (43:13).
Support 1	They [our cameramen] are truly extraordinary in what they do; It's extraordinary	"They [our cameramen] are truly extraordinary in what they do, and they are the unsung heroes..." (44:02)	And I'm waxing a little but poetic because of course [Camera operator] is leaving and we're all a little but broken-hearted (44:15), but I really don't think there are many people where we can go, "There's a bird!" And I mean we've got this at least 180° view of vegetation around us, and your cameraman's on it (44:26).	Positive: "It's extraordinary" (44:30)... "We're very fortunate in that regard" (44:47).	
Welcome 1	"Morning, morning!" "Welcome"	"Morning, morning and welcome to the morning bushwalk."	It's morning and the bushwalk just started (implied).		
Cold 6	Chilly	"It is a very chilly morning" [Guide shivers] (45:55).		Funny, as evidenced by [Guide's] laughter.	Hide below the seats under a towel.
Beauty 12	Very nice morning light on Guide's	MS Guide walking (48:06).	The lighting makes for a		

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	face and the surrounding vegetation (my notes).		very beautiful image.		
Cold 7	"It is very cold."	"It is very cold...relatively speaking for us."	"Winter seems like it's arrived early."	Negative, as evidenced by Guide's tone of voice and obvious frown (48:25).	For [name omitted]: Wear a, "lovely knitted jersey that was knitted by her Gran to keep her warm."
Cold 8	"It's cool"	"We've often found them [Hosana and Xongile] up in trees; that is not gonna be the case...on a morning like this."	"It's cool"...they're either gonna be moving around or "huddled into a little ball of warmth under a bush or under a tree."		For the leopards: move around or huddle into a ball of warmth.
Cold 9	"Chilly breeze"	"Fortunately, the wind has died down compared to yesterday."	Not, "gusting at 40 knots; probably about 8 – knots that is."	Positive, as indicated by, "Fortunately."	
Departure 1	"[Camera operator] is leaving us very soon."	"[Camera operator] is leaving us very soon."	"This is the right decision for [Camera operator] at the moment."	Negative/sad: "We're going to miss him dearly."	"We're not going to focus on that...this morning...we' re going to focus on finding some leopards."
Individuality/ personality 1	"Shadow is...a little bit grumpy."	"Shadow is not a nice leopard to walk on foot"... especially when she has, "tiny little babies in grass this long."	"Tiny little babies in grass this long," and Shadow's normal disposition.		"Not a good idea to be walking around too much in..." (55:35).
Beauty 13	Nice, morning light on the tree leaves.	LS elephants through the trees.	The morning light looks very nice on the leaves.		

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Danger/ elephants 1	“We’re keeping our distance;” “You need to be very, very careful with elephants...”	“You need to be very, very careful with elephants in general but in this wind that’s gusting around today you’ve gotta be even more careful.”	Windy weather makes elephants unrelaxed.	Dangerous	“We immediately moved to high ground;” “You don’t want to surprise animals;” “We’re keeping our distance.”
Caution 1	I’m just gonna make sure	I’m just gonna make sure, because sometimes what elephants will do is they’ll come round to double check.	because sometimes what elephants will do is they’ll come round to double check.	Negative: And we don’t want that, especially when we’re focused on tracking (57:17).	I’m just gonna make sure... Okay, so we’re gonna go quietly through” (57:41).
Mystery 3	“mystery male leopard” (58:09).	“...it’s probably Tingana I just can’t work out where he’s gone.”	I cannot find any sign of him anywhere.”		
Individuality/ personality 2	“He’s [Tingana] kind of like Shadow”...” Not like Karula and her cubs, who are so kind to us on foot...”	If Tingana sees you on foot, “he slinks off and vanishes.” Unlike Karula and cubs.	Karula and cubs are, “so relaxed.”		
Beauty 14	“Beautiful;” “dapper”	He’s [elephant bull] looking very dapper with the golden light. CS elephant butt in the sun.	It’s in the most beautiful morning light.	Positive (implied by tone of voice).	Look at the elephant (implied by Tristan’s actions).
Individuality/ personality 3	“Shadow loves this block;” “her elusive self.)	“Shadow loves this block.”	“It’s quite dense and thick in here;” “she [Shadow] has the perfect places to go		

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			and hide and be her elusive self.”		
Human- wildlife interaction 1	“Xongile has been playing havoc with us.”	“came back to where we were earlier and Xongile’s footprints are on top of our footprints.”	“I think she’s been following us.” (1:07:48)	Exciting: “This is so exciting” (1:09:10)	Walk carefully, as evidenced by Guide’s actions; “I’m listening carefully.”
Danger/ elephants 2	“Oh, elephants” [Guide stops suddenly].	“I can hear ellies again; breaking branches south of us...”	Why Guide can hear ellies: “breaking branches south of us”	“...wind in our favor, not too worried”	Stop suddenly, listen carefully, and gauge the direction of the wind – all evidenced by Guide’s actions.
Princess 1	“Where are you little princess?”	Looking for Xongile, as evidenced by guide’s behavior and recent dialogue.			
Caution 1	“When walking, need to go carefully”	“Every time you approach a leopard, lion...;” “...especially when facing the sun.”			“need to go carefully” ... “So, I need to focus”
Excitement/ chaos 8	“[Guide] is very excited;” “Everything happening this morning.”	“Everything happening this morning.”	Guide very excited because of wild dogs.		
Beauty 15	“Hello, gorgeous girl (1:13:24);” “Isn’t that gorgeous;” “beautiful Xongile”	“A proper African picture: a leopard in a tree in the sunlight.”	Camera pans left and zooms to CS Xongile in tree (1:13:32)	Positive: implied by guide’s behavior and tone of voice.	Look at Xongile (implied by behavior and the word ‘picture’).
Fame 1	“One of the most famous leopards in the	“Her [Xongile’s] mother Karula	“...Karula is so famous because of her	Positive/impre ssive: “...well-	

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	world” (1:14:26).	is one of the most famous leopards in the world.”	unbelievable mothering record (1:20:00);” “this is her [Karula’s] fifth litter (1:14:26);” “Karula’s beat ‘mothering odds’ repeatedly (1:22:30)”	deserved title...”	
Beauty 16	“This is utterly gorgeous (1:15:57);” “she’s so beautiful”	“Oh, she’s so beautiful” (1:17:07).	MS Xongile in tree	Positive (implied by tone of voice).	Look at Xongile (implied by behavior).
Danger/ elephants 3	“Uh-oh” (1:18:49)	“I don’t want to be trapped in a narrow passageway with an elephant and a predator (1:19:35)”	“Elephant”	Problematic, as evidenced by, “Uh-oh.”	Use caution: “checking to see what elephants are doing...don’t want to push elephants into bush walk team (1:21:02).
Danger 1	“70% of leopard cubs in some areas don’t survive their first year (1:20:28).	“...you want to know what percentage of leopard cubs reach adulthood?”			Survival rate increases enormously after the first year.
Beauty 17	“Nothing more beautiful;” “lovely bottom;” tail draped “artistically.”	“Nothing more beautiful than a leopard on a termite mound with chorus grass shining around her (1:27:43).	CS Xongile on termite mound.	Positive: implied by guide’s behavior and tone of voice.	Look at Xongile (implied by behavior); “have to content ourselves with view of her bottom.”
Excitement/ chaos 9	“Busy;” “chases;” “all over the place;” “changed	“We’re busy trying to keep up with them [wild dogs];” “trying to see	“Not friendly,” dense and thick bush (1:25:56); this is how wild	Challenging: ‘this is why dogs are tough...move quickly’	“Trying to see where dogs are...”

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	direction again”	where dogs are.”	dogs are, they go back and forth a lot...		
Beauty 18	“...absolutely beautiful (1:28:58).”	“Aren’t they absolutely beautiful?”	MS wild dogs (1:28:50)...CS dogs	Positive (implied by tone of voice).	Look at the dogs (implied by actions).
Helpfulness/ teamwork 4	Guide was nice to us;’ ‘other lodges help us and we help them’	Guide stays out of other guides’ ways; ‘[Guide] was nice to us so I won’t block her view (1:29:18);’ ‘don’t want to get in [Guide’s] way...’	Guide was nice to us;’ ‘other lodges help us and we help them...’		...so I won’t block her view...’
Awesome/ amazing 1	“Spectacular (1:29:47); “Isn’t that amazing!”; “Isn’t that amazing? (1:30:15).	Morning of tracking and frustration, so to have them [wild dogs] now is “spectacular” (1:30:34).	they are such cool animals, look at how they move...;’ ‘haven’t seen dogs in a long time’	Overwhelm- ingly positive: ‘haven’t seen dogs in a long time, super happy now (1:30:00);’ ‘really happy to have found them [dogs].’	Follow and film dogs (implied by actions).
Beauty/ spectacle 1	great opportunity for screen shots (1:32:03);’ “incredible”	great opportunity for screen shots’	see how the light is illuminating the dogs...’ CS dog (1:32:04)...CS many dog	Positive: “Isn’t that incredible? (1:32:20)”	Take screen shots; “look at” dogs hunting.
Helpfulness/ teamwork 5	‘communicatin- g with guide about who goes first’	‘communicatin- g with [Guide] about who goes first’	[Guide] has photographer guests...for them this is amazing, so it’s nice to give them space...(1:32:5 8)’	Positive: ‘...it’s nice to give them space..’	Communicate with [Guide] about who goes first; give Rex’s guests space.
Awesome/ amazing 2	“Aren’t they magnificent?” (1:33:07)	CS dog (1:33:03)... MS dogs	CS dog (1:33:03)... MS dogs; camera shots	Positive (implied by tone of voice).	

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			are crisp and have very nice lighting.		
Beauty 19	good to look at (1:33:14); “very pretty animals”	I don’t find them ugly I find them good to look at’	“Very pretty animals”	Positive (implied by tone of voice).	Look at the dogs (implied by actions).
Awesome/amazing 3	“Isn’t this incredible?” (1:32:23)	CS wild dogs (1:32:26)... MS wild dogs	CS wild dogs (1:32:26)... MS wild dogs; From notes: Nice light and open vista: great-looking shot.	Positive (implied by tone of voice).	Look at the dogs (implied by actions).
Excitement/chaos 10	has been frantic...’	nice dogs have allowed us to catch our breath...has been frantic’	‘seems like they’re looking around...’	Positive: “nice” to catch breath	“catch breath” = remedy to the morning’s excitement.
Excitement/chaos 11	“absolutely chaotic;” “flurry of impalas running;” “absolute confusion”	I can see impalas way off in the distance;’ ‘dogs are going to go into that area and it’ll become “absolutely chaotic” (1:34:57)’	dogs don’t stalk; everyone will run in and cause “absolute confusion”	Positive: “It’s quite amazing how they hunt” (1:35:35). “...isn’t this exciting; absolutely amazing” (1:36:00).	
Helpfulness/teamwork 6	just wanted to double-check that bush walk didn’t need a quick lift out of here...’	lots and lots of ellies around...’	...since there are so many elephants around...’	Dangerous	double-check that bush walk didn’t need a quick lift out of here’
Pest/disease 1	“Ticks;” CS ticks on Xongile’s ear (1:37:15).	CS ticks on Xongile’s ear; “She’s got so many of them [ticks] gathered around her ear, right in that sensitive skin.”	“It’s just an inevitable part of life out here; every single animal is covered in ticks (1:42:05).”	Ticks are “horrible creatures” (1:37:28), but, ‘only time an “infestation” of ticks can cause serious harm is when an animal is	“She needs her mom to come back and pluck them out” (1:38:23).

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				“already weakened completely” (1:41:12)	
Danger/ elephants 4	“Had to leave that area” because of elephants.	...we actually had to leave that area where [Guide] is, even after sitting on top of a termite mound for about 20 minutes waiting for the various different elephants herds to pass...”	The reason we made the choice to leave the elephants today is this cold wind; the elephants are likely to be unrelaxed, and also it affects our hearing’	Probably would’ve been fine. However, if you start taking silly chances you put yourself and those animals in danger...	Best to keep us safe and “most importantly” the animals’ (1:44:47).
Cold 9	“It’s a particularly cold morning”	CS butterfly sitting on road (1:47:04).	“There’s dew in the grass and it’s a particularly cold morning...”		“...so the butterflies are going to be perched in the sun trying to warm up...”
Beauty 20	“It was beautiful”	‘Last time [Guide] and I were on leave we went to the highest point in the Drakensberg Mountains...’ “thousands upon thousands of butterflies...”	Butterflies at certain times of the year move out of montane forests onto cliffs so they can “meet and mate” (1:49:28)	Positive: “It is incredible...” “It is beautiful how many butterflies there were up there” (1:49:36).	
Beauty 21	“It is quite beautiful though;” “lovely backlit zebra”	“It is quite beautiful though, that lovely backlit zebra.”	Scene is beautiful because of lighting.		
Beauty 22	“Isn’t that beautiful?”	LS zebra and impala in morning light	LS zebra and impala in morning light	Positive: “Isn’t that beautiful?” (1:54:55)	Look at zebra and impala, as indicated by guide’s actions.

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Awe/wonder 1	“Isn’t this wonderful?”	MS zebra and impala in morning light (1:55:07)	“We’re only about 50 metres from them...”	Positive: “Isn’t this wonderful?”	Look at zebra and impala, as indicated by guide’s actions.
Princess 2	“posing like a princes”	Xongile is “posing like a princes” on top of the termite mound...	CS Xongile’s backside on top of termite mound (2:02:44)		
Excitement/ action 2	“Exciting report;” “Can you believe it?”	“I’ve just heard a very exciting report that [Guide] from Cheetah Plains has picked up on cheetah tracks! On Djuma!” (2:03:12)	If [Guide] picked up on tracks, then logically the cause must’ve been a cheetah walking around in Djuma.	Positive/exciting: “Exciting report”	“That’s what I want to do now is just go and double check if this cheetah is still around.”
Princess/ beauty 3	“Princess;” “gorgeous girl”	“There’s our gorgeous girl: lounging like a princess” (2:05:04)	CS Xongile’s backside (2:04:59)...	Positive/gorgeous: “gorgeous girl”	
Quiz 1	“What has made these little indentations in the sand? (2:06:25);” “nearly impossible track quiz”	“Now here is a very interesting set of tracks;” MS tracks, zooms to CS (2:05:53)	“It is an antlion trying to find where it’s supposed to build it’s hole, but it keeps building its hole in really, really hard soil (2:24:42).”	Positive: “Absolutely fascinating (2:05:52). Challenging: “this is gonna be a bit tough.”	“If you think you know what this is, [send in your answers to] #safarilive” (2:06:18)
Road sign 1	“A bright, shining, ultraviolet road sign.”	Leaves small and nondescript	“Most butterflies see in ultraviolet and stuff, so that [purple leaves] will be like shining a spotlight out there.” (2:15:16)	Positive: “Wonderful purple coloration.”	“Wonderful purple coloration.”

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Gentleman 1	“beautiful gentleman;” “stroll along”	“I was lucky enough to encounter this beautiful gentleman right in the middle of the road” (2:16:00)		Positive: “Nice to see a big, dark gentleman (2:16:34)”	Watch him [giraffe] from a distance: “I’ve just been watching him stroll along;” “don’t want to make him feel pressured...so I’ve been keeping my distance”
Individuality/variation 1	“Generally;” “some of them have slightly different colors;” “like hair color in humans (2:17:35)”	“And they generally – generally – get darker with age”	“Like hair color in humans” implies that there’s natural variation.		“You gotta be careful with that”
Disgust 1	“human feces;” “it’s kinda gross”	“they [mature bulls] emit a pheromone that basically smells like human feces”	Sexual maturity	Negative: “It’s kinda gross (2:17:51)”	
Beauty 23	“Beautiful kudu;” “exquisite;” “unbelievably beautiful”	“There is our beautiful kudu. Do they not look exquisite in the morning light?” (2:18:47)	“morning light;” “It’s also after the rain; the vibrance of the green is that much more again...the contrast of the animals against this golden light and vivid greens...(2:19:02)	Positive: “unbelievably beautiful” and tone of voice.	Look at the kudu, as implied by Tristan’s behavior.
Camouflage 1	“they camouflage really well”	“as we come along they [kudu] start moving into denser vegetation...that’s because	“those white markings...just help to break up the outline a little bit...and match with the		

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		they start to camouflage really well in that vegetation'	whiteness of that tree'		
Beauty 24	"absolutely beautiful"	"They are absolutely beautiful" (2:20:09)	"The condition of the animals after this rain is incredible: they all look very clean and they've got nice, big bodies"	Positive: as implied by everything.	Look at the kudu, as implied by guide's behavior.
Strange/ useful 1, 1	"Abnormally large [ears] for the size of their head;" "Massive, massive ears"	"Massive, massive ears"	"They [ears] work really well in this dense vegetation"... 'easier to hear predators coming than see them' (2:20:50)	Positive: 'their ears are my favorite thing;' "quite cool to see" their ears "focus in on you;" "clever tactic"	
Danger/alert 1	"You can see how they're very alert"	"You can see how they're very alert; see how they keep looking?"	"That's because of the wind"... disrupts their hearing and blows scents around (2:21:16)	Negative: "Poor kudu"	
Excitement/ eventful 1	"interesting morning"	"has been an interesting morning on bush walk (2:26:01)"	Why interesting: 'were planning to find Xongile...she came behind us...had to wait for lots of elephants...'	Interesting	
Quiz 2	"Nearly impossible tree quiz"	"We've got a tree for the nearly impossible tree quiz" (2:26:40)		Positive: "This particular tree has got exquisite, white flowers (2:27:10)"..."	"If you know what the nearly impossible tree is #safariLIVE or

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				smell delicious”	questions@wil dearth.tv
Trust 1	“Complete and utter faith”	“Elephants right up next to us showing complete and utter faith that we’re not going to do anything” (2:27:38)		Positive: “Oh, what beautiful elephant herd.”	
Infant/baby 1	“very young calves”	“There’s a couple of very young calves in this herd as well.”			Talk in baby voice, as evidenced by 2:27:55
Calm/ peaceful 1	“nice, calm, relaxed;” “such a peaceful scene (2:29:02)”	“This is a lovely big herd: nice, calm, relaxed (2:28:20)”		Positive: “This is very special.”	Sit and talk quietly, as implied by guide’s behavior; “Look at this”
Special 1	“It’s very special”	“Of all of the creatures out here, spending time with elephants is probably one of my favorite things to do (2:29:25)”	“The sound of them feeding, the rustling, the crunching...”	Positive: “It’s very special.”	
Cheeky 1	“he’s just cheeky”	He [Darrel] has a penchant for coming up and attempting to touch the vehicle...likes to intimidate people’	“There’s no harm in him, he’s just cheeky.”		“Which is a habit we’ve been trying to break”
Mating 1	“Estrus;” “heat;” “ready to mate”	Lots of bulls around: ‘Youngish bulls...followi ng along behind the breeding herd.’	...in the hope that a female is coming into estrus, or into heat’ (2:31:11)	None of them in this particular group, I would say, have a chance...bigge r bulls would fight them off”	

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Poaching/ human influence 1	Artificial situation; “elephant poaching crisis;”	You’ve observed that elephants in South Africa have bigger body size, and want to know if that’s actually the case?’	We do have some of the remaining tuskers, because elephant poaching crisis has not hit us as hard; poaching is artificially selecting for either smaller- tusked elephants or elephants without tusks (2:32:53)’		
Individuality/ variation 2	“individual elephants”	“We do recognize individual elephants...”	“...by their tusks and rips in their ears.”		
Calm/ peaceful 2	“lovely, peaceful”	“A lovely, peaceful elephant sighting” (2:35:17)		Positive: “What a lovely surprise.”	“Let’s try for one last view before they disappear off into this vegetation.” (2:35:28)
Abundance/ over- population 1	“huge amount” of elephants in Kruger; “there are so many of them [elephants] about;” ‘some people even argue that they’re overpopulated’ 、	How does elephant viewing here compare to other reserves and parts of Africa?’		Negative: It’s a ridiculous argument, I know.	
Beauty 25	“one of the most beautiful things about an elephant;” “long, beautiful eyelashes”	‘Why do elephants have such long eyelashes?’	“Long, beautiful eyelashes” protect elephants’ eyes from		

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			thorns and dust		
Beauty 26	“Exquisite birds”	CS woodland kingfishers (2:39:11)...	Why kingfishers are beautiful: “Their bright, blue wing; contrast with the black and then that red beak...”	Positive: “...absolutely incredible”	
Awe/wonder 2	“incredible to see;” “amazing birds”	But if you see, they do have a really big beak in relation to their body. These guys are ferocious predators (2:40:29).	‘I’ve seen them take lots of different types of prey...’ “will even take small mammals, like mice” (2:40:43).	Positive/incred ible: ‘It really was incredible to see, they are amazing birds, even though they are quite small (2:41:07).’	
Cold 10	“chilly”	“It feels like an August day today”	“It’s blustery, it’s quite chilly, it’s not very summer- like at all” (2:42:19)	Negative: “I’m really not ready for winter just yet.”	“Hopefully this will blow through and it’s just the edge of a cold front.”
Lovely 1	“Lovely ellies”	MS elephants; “What a lovely sighting this has been”		Positive: “lovely sighting”	
Individuality/ variation 3	“Unique;” “individual elephants”	“Do some elephants have a unique taste in food like human beings?” (2:48:22)	‘There are elephants that start to associate people with fruit, particularly oranges...there are certain elephants that really start to develop a taste... (2:58:46)’		
Hot 1	“It is getting quite warm	“It is getting quite warm now”	“The sun is getting up and it’s getting	Negative, insofar as it makes the	

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	now;” “getting quite hot”		quite hot in the sun”	hyenas retreat inside their den.	
Peaceful 3	“peaceful”	MS elephant drinking (2:53:41); “It’s always so peaceful watching elephants drink”		Positive: “I love sitting and watching elephants drink”	Sit and watch them [elephants] drink.
Cold 11	“chilly;” “beginning of winter”	“It really feels like the beginning of winter.”	“...very crisp bite to the wind (2:54:53)”		
Marketing/capitalism 1	might have a slight marketing problem;’ ‘might need to re-market that one’	‘lots of you are saying you’d like to bottle leopard urine?’	‘trying to sell a bottle of Chenele’s leopard urine doesn’t quite have the same ring to it as Chenele’s Number 5...’	Funny, as evidenced by guide’s chuckling.	“You might need to re-market that one.”
Aggression/dominance 1	“massively aggressive response;” ‘showing every sign of dominance’	LS elephant bull chasing smaller bull (2:59:00); “You can see that massively aggressive response from the older bull”	“Just reminding the other bull that he’s the biggest guy here, and that he would like to drink in this exact spot (2:59:19)”	Positive/funny : “That’s what I love about elephants, they’re characters.”	For younger bull: “You’re being told to get out of the way, mister.”
Aggression/dominance 2	“fight each other”	“Yes, absolutely, the males will fight each other.”	“If you’ve got females in estrus and two big, evenly-matched bulls they can fight and they can kill each other”		
Infant/baby 2	MS elephant calf (3:03:37); “little one”	MS elephant calf (3:03:37); “look at this little one”		Positive/cute: implied by Jaime’s tone of voice	Talk in baby voice

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgment	Remedy Promotion/ Action Directive
Beauty 27	“gorgeous”	“What a gorgeous way to finish off our morning”	LS elephant herd (3:03:59)...	Positive, or guide wouldn’t want to sit there, “for the next few hours.”	Sit there for the next few hours.

March 18, 2017 Sunset Drive Frames Spreadsheet

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
Beauty 1	Beautiful	It’s a beautiful, sunny, summer’s day.	It’s beautiful because it’s sunny.	Positive: implied (tone of voice).	
Excitement/ fighting 1	Lots of clips from past drives of animals fighting or killing each other.	Opening Sequence: “You are live, you are live.”		Exciting/ positive: implied through music and fast editing rhythm.	Watch the drive (implied).
Welcome 1	Good afternoon; welcome		Start of the sunset safari (implied).	Positive: implied.	
Tech Issues 1	Technical glitch	‘We’ve had a slight technical glitch, which is why we’ve come out a little bit later.’	“Gremlins” (20:46)	Negative: “I want to apologize”	
Tech Issues 2	Feed Skipping		“Gremlins” (20:46)		
Welcome 2	Good afternoon; welcome to the sunset safari.		Start of the sunset safari (implied).	Positive: implied.	
Tech Issues 3	Crash cut to LS bush; no sound	“Still having a couple of issues”		Negative: “Sorry about that”	
Redemption 1	“Hopefully [Guide] will be able to redeem	“We have failed miserably, [Camera	Grass too long to see Franklin, as evidenced by	Funny, as evidenced by guide’s laughter	“We’ll have to try to redeem ourselves this afternoon by

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
	herself... (Stef)	operator]" (7:28)	4:59-7:17 segment.		finding another Coqui Franklin that is visible"
Quest 1	Quest	"Hopefully [Guide] will be able to redeem herself on her quest"			
Dehydration 1	"I'm already a little dehydrated"	Guide stutters at 8:02	"[Guide] has literally marched us across Djuma over the last couple of minutes"		"I need to have some water"
Luck	"Hopefully, with some luck;" "fingers crossed"	Trying to find Karula and her cubs			"Fingers crossed"
Havoc 1	Havoc	"We're going to go through a particularly thick patch of bush here, that will create havoc..."	Bush will "create havoc," "as we're having to bend down and go through it all"	Boring, as evidenced by the need to cut to another guide.	"Why don't you go have a look at the elephant that [Guide's] got." (9:36)
Beauty 2	"Isn't that pretty?"	LS elephants drinking; MS elephants drinking (9:59)	"The female and her calf have come out to have a drink..."	Positive: implied (tone of voice).	"Look at that"
Heat 1	Warm; late afternoon heat; hot	"These elephants – being big, large animals – they end up getting quite hot"	"...and it is warm..."		"...they throw that [water] often onto their backs and onto their ears just to cool them [elephants] down" (10:35)
Multi- tasking 1	"She's a lady that can do two things at once"	LS elephant drinking and having a scratch on a tree at the same time (10:50)	"...when you're busy drinking and it all gets too much"	Positive: "Isn't that amazing?" (10:56)	Lean against a tree, scratch, and drink all at once.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
Beauty 3	“Very, very pretty”	“She’s got very nice tusks, this female”	Long, symmetrical, straight tusks; CS elephant tusks and trunk (11:01)	Positive: “Very, very pretty”	
Cheeky/ personality 1	“Very, very cheeky;” “quite a character;” “full of nonsense”	“This little one’s quite a character”	“Because when we first found them...it was coming up to us and shaking its head...”		
Heat 2	“afternoon heat”	“You can see that elephant’s just been sprayed, so it’s going to stay nice and cool in this afternoon heat”	Earlier sequence of elephant mom spraying calf with water.		Being sprayed with water
Territoriality 1	“He’s pushing very, very far into an area...but he shouldn’t be coming this far”	“...I’m wondering if those male leopard tracks were Tingana’s or if they were in fact Quarantine’s.”	Sounds like Quarantine is on a kill next-door to us	Negative/risky : “He shouldn’t be coming this far...;” If he runs into Tingana they’ll box.	“We’ll have to just wait and see”
Spectacle 1	“They put on such a fantastic show for us”	“I’d love to spend some more time with those young hippos”			Spend more time with the young hippos.
Awesome/ amazing 1	“How cool is this? (16:22)”	“An African cuckoo;” MS cuckoo’s head (16:18)	Sighting is cool because it’s hard to catch African cuckoos on camera.	Positive/cool	“We need to try and see as many cuckoos as we can.”
Infant/baby 1	“Oh, hello babies!”	“Look who’s on the road in front of us: little crested Franklin chicks.”		Positive/cute (implied by tone of voice)	Talk in the baby voice

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Fear/Anxiety 1	“Quite nervous of us”	“they’re [Franklin chicks] quite nervous of us, of course...”			“Mom and dad will usher them into the long grass where they’ll feel a lot safer.”
Bravery 1	“This one is not scared, this is a brave crested Franklin”	CS Franklin in front of car; “standing in front of the car”	“Looks like he’s not happy with us.”	Mocking/condescending: “What are you gonna do about it though? You can’t do very much at all.”	“And off it goes.”
Infant/baby 2	“little chicky (19:04);” “chicks everywhere”	“Oh my goodness there’s chicks everywhere!”	They’re coming out of the grass because, “they’re starting to relax with us”	Positive: “This is beautiful!” (19:18)	
Bizarre 1	“This is bizarre!”	“Oh my goodness, and a dwarf mongoose is joining them!”		“This is bizarre!”	“Let’s see if I can get another view [of the mongoose]” (20:11)
Human use/Local knowledge 1	European settlers used to use it (21:38)	Once these [milkweed] seed pods burst open... “there’s a type of cotton wool inside them...”	Cotton-wool substance is, “super, super flammable.”	Positive: “Wonderful plant”	“I’ll come back here when this cotton wool is actually showing and I’ll show you exactly how flammable it is (21:42)”
Toxic 1	Toxic	‘Milkweed and euphorbias secrete milky latexes that are toxic; milkweed isn’t so bad, <i>Euphorbia cooperii</i> one of the most toxic			Implied: don’t get euphorbia latex on skin or eyes.

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		plants in South Africa.'			
Human use/Local knowledge 2	They use it as a fish toxin (22:54)	Euphorbia latex used as a fish toxin to kill fish.	'Because it's very toxic.'		
Danger 1 (Caution)	"We were taking it carefully;" "don't want to get charged by anything protecting a kill."	'Approaching a patch of bush in which they smelled a carcass.'	"Protecting a kill"		Take it carefully
Disgust/ stench 1	"It is very stinky"	'Found a dead tortoise that had been killed when the bank fell down on top of it.'	"Tortoises for some unbeknownst reason, tortoises and pythons, smell the worst..."		
Danger 2 (Caution)	"Wanting to take it carefully"	"Very, very lush here (24:50);" wading through chest-deep grass	Grass can hide holes		"You're wanting to take it carefully in case you step in a hole or..."
Pest/ticks 1	"No doubt that I'm covered in ticks"	"I have no doubt that I'm probably covered in ticks from head to toe"	Wading through long grass and thick bush (implied)	Worth it: "You have to shed a little blood here in Africa to see this..."	Scratching: "For the next few weeks I'm probably going to be scratching like a madman again (25:17)
Wilderness 1	"Proper, pristine wilderness."	"We're in a proper, pristine wilderness (25:26)"	"This has never had any human habitation or intervention; we're very far from any road...(25:32)"	Positive/peaceful: "It's just a nice, peaceful place to be (25:47)"	
Exploration/ discovery 1	"I don't think I've ever been to this	"I don't think I've ever been to this	"I don't really remember being here (26:03)"		

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	particular bend in the river..."	particular bend in the river..."			
Welcome 3	"welcome"	"Now [viewer's name], you're a new viewer...welco me to the SafariLIVE experience..."	New viewer	Positive: implied (tone of voice).	"Keep watching;" "I hope you spend the next few years, next few decades, growing with us" (26:18)
Danger 3 (Caution)	"dangerous animals;" "it is risky [out here]"	"How do I get used to...walking around with all these dangerous animals?"			"You just gotta stay aware the whole time (26:32);" "You gotta constantly question yourself...am I being too bold?"
Helpfulness/ teamwork 1	"I'll help you there, don't worry (27:34)"	"[Camera operator's] stuck on a bush now"	"It's this thick bush that we've got here...holes and twigs and branches everywhere..."		
Heat 3	"I think it's a little bit warm..."	Too warm for the hyenas at the hyena den (29:00)			"So I'm going a little bit slowly"
Impressive/ big 1	"massive;" "very big"	"...a water monitor that is coming out of Twin Dams;" series of CS and MS of a water monitor lizard	"I would say that in terms of metres, it's probably about a metre, metre and a half? (31:30)	Impressive: "Very, very big indeed"	
Tech Issues 4	Feed Skipping; frozen screen; black screen (32:06)	Guide: "Sorry about that, you just lost signal with [other guide]"	Remoteness: "Coming to you out of one of the earth's largest wilderness areas has its moments...(32 :20)	Negative, but well-timed: Sorry about that...but I'm glad that you did because we've got a kite spider (32:27)	Crash cut to a different guide.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
Awesome/ amazing 2	“awesome ride;” “it must be amazing...”	“It must be amazing to be a spider...”	“...the wind is blowing you to and fro...”	Positive: “...it must be quite a awesome ride (33:05)”	
Awesome/ amazing 3	“absolutely incredible”	“It is absolutely incredible for me to figure out how quick these spiders react to flies or insects in their web (33:57)”...”tha t was literally faster than I could register...”	“They obviously must react quick”...or things would get away (34:02)...	Positive/cute (implied by tone of voice)	
Awesome/ amazing 4	“How did she remember”...” Did you see that?” Also, guide’s tone of voice.	CS spider swinging on web (34:52)	“That means she specifically made her web at an angle, rather than vertical, because then she wouldn’t be able to do that (35:15)”	Positive: implied (tone of voice).	
Awesome/ amazing 5	Tone of voice; “We all think spiders are not that clever, but let me tell you...” “which is amazing”	“How she remembered that she had a fly left over in the web there, I don’t know (35:35)”	“Obviously a lot more aware of what they’ve got in their web than we give them credit for (35:43);” “...probably takes a utilization of the few brain cells that they have at a level that’s probably far higher than even we have (36:05)”	Positive: implied (tone of voice); “which is amazing to say”	

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Awesome/ amazing 6	“We’ve been seeing some amazing things this year (36:34)”	“We’ve been seeing some amazing things this year with spiders”	‘Saw a green orb spider the other day that caught a bunch of flies...snipped them free...decided she had caught enough spiders for the day...no she caught a massive fly...thought that was enough for her for the day...’	Positive: “amazing things”	
Awesome/ amazing 7	“Quite interesting,” “truly amazing”	“How she [spider] would’ve built this web is quite interesting”	“She would’ve climbed up this tree, for instance...would’ve let out piece of silk...the wind would’ve trailed that piece of silk until it stuck on this branch here...”	Positive: “Truly amazing (39:39)”	
Weird and Wonderful 1	“Weird and wonderful”	“[Viewer], you want to know what’s on her back? That is her body”	“No one really knows what it [kite-shaped back of kite spider] is for...perhaps a bit of a deterrent for birds...she looks like a thorn (41:43)”	Positive: “Weird and wonderful”	
Beauty 4	beautiful thicket of trees;	“We’re in this beautiful thicket of trees here (42:07)”	“Absolutely enormous knob thorn...and the tamboti tree behind it...”	Positive: tone of voice and “beautiful thicket”	

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Connection to nature 1	“It’s nice to spend some time with them [trees];” “I’m gonna go introduce myself [to tree];” LS guide touching tree (42:36)	“Two old giants of this particular thicket in this particular forest...”		Positive: tone of voice and “it’s nice to...”	LS guide touching tree (42:36); “I’m gonna go introduce myself”
Empathy 1	bad luck; wrong places at the wrong time	“She [Shadow] always have such bad luck...”	“She seems to get herself into the wrong places at the wrong time (45:05)”	Negative: “I always feel bad for her”	Empathize: “I always feel bad for her (44:59)”
Hardship/struggle 1	“Shows you how hard it can be;” “It isn’t always that easy...sometimes it’s a battle”	Talking about Shadow’s poor mothering record: “She seems to get herself into the wrong places at the wrong time.”	“Sometimes there’s just a bit of misfortune when it comes to raising children (45:20)...”	Unfortunate, but indifferent: “That’s just the way it goes”	
Evening/comfortable 1	“The nice thing about this time of the day is...”	“It’s started to cool down a bit”	“The sun’s starting to get lower in the sky (45:45...)”	Positive: “I would hope that we should start to see some animals coming out...”	Go check the airstrip to see if any animals are congregating there (46:10)
Angry/grumpy 1 (elephants)	Angry; grumpy	“There’s a very angry elephant cow (46:55);” “As soon as she saw us...came straight at us with her head towards the sky...”	“You can see she’s slightly stressed; she’s oozing liquid from her temporal glands (47:16)”		“When an elephant cow comes at you or shows that she’s unhappy...I typically give them room and I don’t play games with them (47:31)”
Almost dangerous 1 (elephants)	“Uh-uh, don’t start, you just keep walking;” Guide’s stern tone of voice	“...and it’s not uncommon for a big bull like this to come right up, walk past you, sniff	“Now bulls like this, you can see he’s still quite young...are	“But he’s fine”	“I just warned him, straight away...” and then he just keeps on moving; All

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		and interact with the car..."	very curious (48:54)..."		the guides agree that talking to the animals is a great way to diffuse a situation with elephants (49:24)
Danger 4 (elephants/caution)	"cautious around elephants;" "can hurt you"	I always try to be cautious around elephants because they are really the only ones that can hurt you in the cars...	...because they really are the only ones that can hurt you in cars...	Dangerous	With an elephant you can raise your voice a little bit, and they typically just move passed.
Danger 5 (elephants)	"also quite scary;" "one of the most uncomfortable feelings"	"it's probably one of the most uncomfortable feelings, I think, to have a big elephant bull standing right next to you...also quite a scary feeling (49:53)..."	"...because an animal's behavior can just change 'like that'...."	"It's not often..."	"...usually they will show you signs if they're starting to get upset..."
Angry/grumpy 2 (elephants)	"angry"	"Oh, let's just make sure this is not our angry [elephant cow]... yes, it is (50:14)"		Dangerous, as evidenced by Guide's cautious behavior.	Give her space and talk to her: "Hi big girl..." "I don't want to get too close to her"
Beauty 5	"That's actually quite beautiful"	"Here's a young elephant...only a couple of years old...quite curious with us...standing directly behind the sun...that's	Standing behind the sun; "backlit"	Positive: implied (tone of voice).	

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		actually quite beautiful...'			
Tech Issues 5	tech loop; reset the screen	'We have to reset the screen, so we're going to go to a tech loop now.'		Negative/unexpected, as evidenced by guide's "Oh...(52:58)"	'Grab a cup of coffee or a nice, cold drink...'
Beauty 6	"it is a beautiful afternoon;" MS elephant calf (55:25)	"...and it is a beautiful afternoon to be viewing elephants"	Beautiful lighting, as evidenced by MS elephant calf @ 55:25	Positive: implied (tone of voice).	View elephants
Excitement/rowdy (playfulness) 1	Excited; rowdy	"...and I always find that at this time of the evening is when the elephants get rowdy and quite excited..."	"time of the evening"		
Animals Like Us (Communication) 1	they're all communicating with one another	"They were letting off very, very soft rumbles...one of the infrasounds that we can hear..."	'One of the main ways elephants communicate; they're all communicating with one another'	Positive/amazing: "it's amazing when you hear that (56:24)..."	"Have a listen"
Beauty 6	Lovely	"Isn't that a lovely shot?"	LS elephants with the setting sun in the background	Positive: "lovely"	
Beauty 7	Lovely	"That's lovely in that light (57:58)"	MS elephant illuminated by the setting sun	Positive: "lovely"	
Aggression 1	Chased out; bossy; forced out	'Do elephant bulls leave on their own or are they forced out? Matriarch and females will turn on bulls between 15-20 years	Bossy behavior: "You can see how bossy he [young bull] is, if he keeps that up he'll be chased out"	Negative: Young bulls without mentors can cause "huge problems"	Having big bulls around to mentor younger bulls (59:42)

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		and force them out.'			
Cheeky/ mischievous 2	Cheeky; nonsense	"Now this bull is being very cheeky"	MS elephant cow facing young bull with calf behind her (59:58)		"And you'll see that that cow won't really tolerate his nonsense..."
Pest/fly 1	flies	"Sorry, I'm swatting flies"			"This one I'm going to kill"
Beauty 8	Beautiful	'Isn't this beautiful here with the nice, golden light?'	MS elephant herd illuminated by setting sun (1:00:42)	Positive: "beautiful"	
Sleepy/tired 1	"very, very sleepy"	"We've found a very, very sleepy Nkuhuma pride (1:01:03)"; they are very fast asleep		Negative: "I was hoping they would not be [sleeping]"	"We might have to be a little bit patient..."
Pest/fly 2	flies	"You can see that they are battling a little bit with the flies (1:01:45)"	Temperature: "...even though the temperature is starting to cool, the insect activity is still very high"		Twitch ears: That's why their ears are twitching...to get rid of the flies that land around the ears
Subadult 1 (Implying familiarity with/ connection to the cubs)	subadult	"They're starting to look more subadult and far less cubby...(1:02:43)"	they're [cubs] starting to lose that cub look, aren't they? Starting to look a little bit more like adult lions...they're bodies are starting to get more and more proportioned ...	Positive: "It's amazing to see how big they are"	
Support/ encouragement 1	"Many of you are complimenting	"many of you are complimenting [Camera	"[Camera operator] is one of the best...he	Positive: "it's a pleasure to be working with him"	

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	[Camera operator]"	operator] on his lovely camera work (1:03:24)	moves the camera around with grace and ease..."		
Contentment 1	"pure content behavior"	"That is a picture of pure content behavior (1:03:47)"	'They are absolutely loving the shade...'	Worth it: "It's worth being patient for"	Be patient: "I think we're in for a long afternoon of just sitting and watching and waiting..." Maybe an animal will come around and pique their interest
Pest/mange 1	mange	"[Viewer], does it look like the mange is gone? (1:04:55)"... "it's slowly but surely diminishing"		'I think they'll be fine'	Get older: 'Immune system will strengthen with age, and the cubs will spend less time right up next to one another...'
Sleepy/tired 2	"siesta afternoon"	'It's that kind of afternoon, isn't it...a siesta afternoon...lions are doing it very well' (1:06:23)	'It feels like that kind of afternoon'		
Healthy and fit 1	and they're all looking healthy and fit; they're all looking quite good	'So all six [lions] are here and accounted for, which is good news, and they're all looking healthy and fit' (1:06:57).	There's no limping individuals, there's no issues with any of them, they're all looking quite good (1:07:02).	Positive: "So, all is well" (1:07:05)	
Awesome/amazing 8	incredible	"Look at this erosion ditch from the rains..."	Rain: "Look what it [the rains] did!" (1:08:39)	Positive/incredible: "Isn't it incredible?"... "it's nice to	"I can't wait for it to rain again: I'm gonna come

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				see these things”	straight back here and have a swim under this waterfall (1:08:48)”
Connection to nature 2	“there’s a tree that I like to visit”	‘We came here because there’s a tree that I like to visit’		Positive: “Wow”	
Human use 1	Man; chopped open; maintained; “man has been living here for ages (1:11:00)	“Look at this hole...that is where man has chopped open and maintained a beehive (1:10:07)”	‘That hole has a cavity...cavity would’ve been a brilliant place for bees, but needs to be maintained, needs to be widened, so that honey collector can smoke the bees out and collect the honey’ (1:10:34)...	Positive: “Awesome!” “That’s epic to see”	“Look at this hole...”
Human use 2	‘before that there were people living here, but...’	‘Before that [the creation of the reserve] there were people living here, but it was seasonal...’	‘...lots of malaria in summer, not enough surface water in winter...’		‘People would move in in good years and move out in bad years’
Awe/wonder 1	“absolutely enormous”; Guide’s tone of voice	‘What is the oldest living tree in my area? Either this very tree of one very close to it...there’s a leadwood that’s probably the oldest tree on Djuma...’	‘It’s the biggest leadwood I know that’s growing... ‘	Positive: implied (tone of voice).	‘Only way to know for sure is to carbon date the trees’ (1:13:13)
Humor/ Danger 1	“mamba-ed in the face...falling	“Let’s see if I can get up here and have a			

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	and breaking something	look inside, without getting mamba-ed in the face...or falling off and breaking something (1:14:16)”			
Elusive/ stealthy 1	elusive	‘We can’t even find a single track of this particular cat [Karula]...she’s being very elusive at the moment...’	‘...which is typical of Karula’ (1:16:44)		Keep looking: ‘We’re still looking for Karula’ (1:16:13)
Sleepy/tired 3	“Our lions have not moved very much...”	“Our lions really have not moved much at all...” (1:17:05)		Negative: Guide clearly wants the lions to wake up and move around.	‘The sun is going to set soon...I hope the lions will start waking up...when the commercial vehicles come in one or two of the cubs might pick their heads up...’
Beauty 9	“beautiful sunset”	‘The sun is just starting to dip below the horizon; I’m hoping that as it goes down we’re going to end up with a very, very beautiful sunset’ (1:17:20)	“The sun is just starting to dip below the horizon...”	Positive: “It’s nice that the sun is going down”	
Contentment/ peace 2	“absolute happiness and comfort...”	“Isn’t that the picture of absolute happiness and comfort? (1:17:54)”	CS sleeping cub’s face (1:17:54)	Positive: Tone of voice and “happiness and comfort”	Look at the lions, as implied by the word “picture”

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Individual variation 1	Not all cats' noses darken with age	"The blackening [of the cubs' noses] is starting"... used to use the nose to age lion or leopards, they say cats' noses change color...mostly true, but I've seen examples of cats whose noses stayed pink...like Shadow			
Happiness 1	"absolute happiness"	"That is the picture of absolute happiness"	VCS cub's face (1:19:54)	Positive: tone of voice and "absolute happiness"	
Game 1	"a little game"	'The two at the back are starting to have a little game with each other' (1:20:00)	The cubs were pushing one another with their paws.		'But it looks like everybody's comfortable again, and back to sleep we go.'
Dehydration 2	Haven't drank today; rehydrate	'You can see that there's no signs matting on the lions' chins, which means they haven't drank today...I imagine their first port of call will be to have a little drink...'	'...just to rehydrate themselves after a long day of being warm and hot, and probably panting a little bit, which would've led to quite a bit of moisture loss'		Have a drink at the pan
Danger/disaster 1	"Would be a bit of a disaster"...will potentially kill these cubs	'Nkuhumas are pushing into the Tslalala pride's territory...if	'Tslalalas haven't been here for a while and the Nkuhumas are feeling	Negative: "would be a bit of a disaster"	"Hopefully, with luck, the Nkuhumas won't be here..."

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
		they bump into each other the young males from the Tslalalas will potentially kill these cubs...'	pressured by the Torchwood Pride'		
Individual variation 2	It's amazing how some of them differ	'And that tail that's sticking out has still got lots of little spots on it. It's amazing how some of them differ; it's much like our little hyena cubs that we have in the den at the moment, one's far less spotty than the other one' (1:22:09).	Positive: "It's amazing how some of them differ"		
Danger 6	"the damage that that would be able to do"	'You can see how big and curved they [lion's claws] are, and the amount of damage they'd be able to do...would be quite something to be hit by that..'	'The size of that paw is probably easily the size of my hand and the circumference of my face...big, strong forearms'	Negative: "I would never want to be hit by a lion (1:22:36)"	
Danger 7 (alert)	threat; alert; scared	You're wondering whether the cubs sleep more deeply than the adults? I don't think so...	The cubs are more alert to the environment because they're far more scared of what goes on around them...the cubs lift their heads when		Be alert.

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
			vehicles approach, females don't		
Danger/upset 8	ran across the road and are pushing deeper into the vegetation (indicates elephants are afraid of something)	Something seems to have upset them [elephants] because the rest of the heard ran across the road and now they're pushing and shoving deeper into the vegetation...	"The smaller thing can honestly upset an elephant" (1:24:45)		
Injury 1	That looks like an old injury	"But look at this cute little calf, it's missing it's tail (1:24:49)"...th at's a very old injury, you can see that it has completely healed...CS stubby elephant tail (1:24:56)	That could be from a number of different things...maybe it was born like that...maybe into got into an altercation with another elephant or maybe there was a stampede...	Negative: I really think that's the most unfortunate thing to lose when you're out in the bush, is your tail	
Beauty 10	"Just look how beautiful she [giraffe] is" (1:26:28)	"Today's one [giraffe] is a cow giraffe..."; MS giraffe head and neck	"She's also in tip-top condition"... healthy skin; healthy body; healthy, nice and round tummy; fat muscles...	Positive: "Looking very awesome" (1:26:48)	"Just look at that"
Welcome 4	"Welcome to the SafariLIVE family..."	"Wow, hello Melinda! You're a new viewer, so welcome to the SafariLIVE family" (1:26:57)	"you're a new viewer, so..."	Positive: "Wow!" and tone of voice	

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Pest/flies 3	flies; plague	I take back what I said earlier about the flies not being a bit of a plague this afternoon...the y've managed to come out in force here (1:27:42)		Negative: tone of voice and MS Stef swatting at flies	MS Stef swatting at flies (1:27:36)
Bicycle tire/rubber 1	bicycle tire; rubber	A giraffe's lips feel like a bicycle tire (1:28:33)... except one that's not inflated...tongue also feels like a piece of rubber	They're very fond of acacias which have hooked thorns (1:28:15)		
Danger 8 (Alert)	uncomfortable; alert zone; spooked	It just got a little bit uncomfortable with us; we're in that giraffe's alert zone, which means it stopped doing what it was normally doing and is now alert of our presence (1:30:01)	Proximity to giraffe (implied)		As long as we don't go any closer...if we even took one step further that giraffe might even be spooked enough to run away
Pest/flies 4	flies; buzzing	"These flies that are buzzing around me at the moment are maddening"		Negative: "maddening"	MS Stef beating himself with a branch (1:30:19)
Danger 9 (Defending young)	charge; terrible kick	"...aren't giraffe known to charge?"... yes, they'll charge to	"...to protect their babies (1:31:50)"	Not a big deal: They wouldn't charge me without me provoking	Implied: Don't run up to baby giraffes

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
		protect their babies, and they've got a terrible kick...		it...even then, giraffe are fairly nervous around people (1:32:11)	
Poaching 1	anti-poaching helicopter	We're just repositioning quickly, because an anti-poaching helicopter flew over and caused the lions to get up and move to a different spot (1:33:08)	Implied: To counter poaching	Positive: Maybe that helicopter coming over was a good thing...maybe it's going to wake them [lions] up (1:34:14)	
Awesome/ amazing 9	"Were quite something;" "really incredible"	Those lions Stef was talking about "were quite something...used to hunt all kinds of large game (1:33:22)	"...they were such a big pride"... were 38 lions in the mountain pride at the time	Positive/incredible: "It's pretty incredible"	"Imagine that"
Water/ drinking 1	"head for water";	Like I said, I'm pretty sure that they are going to head for water... (1:34:19)	...it's that time of the day...especially after that very warm start that we've had to the day...		
Beauty 11	"incredibly pretty eyes"; "beautiful group of lions"	"Such incredibly pretty eyes already" (1:34:37)	...all of them [Nkuhumas] have really pretty eye colors...	Positive/amazing: "Aren't those eyes amazing?"; "I really enjoy watching the Nkuhuma pride, they really are a beautiful group of lions"	Look at them: "I really enjoy watching the Nkuhuma pride"
Seasonality/ abundance 1	"time of plenty"	The winter time is obviously the	...prey animals weaken and	Positive: "They will be fine, they look	

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		time of plenty for lions...	also the grass tends to brown up a little bit, so it becomes a little bit easier for them to camouflage... (1:35:23)	good otherwise (1:35:42)"	
Teamwork/ cooperation 1	Tristan mentions lions hunting as a unit: "position themselves accordingly" implies teamwork	Why do lions have black fur behind their ears?	When they're hunting, the lions behind them will see the black fur and be able to position themselves accordingly...(1:37:24)		
Affection 1	affection; groom one another	Look at that, a little affection between the adults; MS lionesses grooming one another (1:37:45)	"This is very common display for when the lions are starting to wake up for the evening"... "they just get their coats into good condition again before they start their nightly walk..."	Positive: This is a good sign for us; they're starting to wake up; must feel quite nice	"Look at that"
Pest/ticks 2	ticks	You can actually see the female closest to us, her edges of her ears are quite tatty...	...and that's because of ticks...they mostly go on edges of ears and suck the blood...eventu ally edges of ears get bitten off (1:38:54)		Grooming
Pest/flies 5	flies	Why do flies seem attracted to their ears?	I imagine heat...there's also a bit of moisture that's secreted		

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			through the wax...that is why they [flies] go inside of there, they're after all of that (1:40:36)... also very little fur there		
Affection/ bonding 1	affection; bonding	"Look at that, isn't that sweet?" (1:41:36); MS cub rubbing head with lionesses (1:41:33)	Time of day: This is the best time of day to be with lions, which is when they're waking up and there's so much affection (1:41:50)...	Positive: "Isn't that sweet?"	"Look at that"
Hunger 1	"look quite hungry	You're saying that as the cubs are coming here and that as the lionesses are standing up, that they look quite hungry and that you expect they'll be hunting tonight. I'm in the same camp as you...	I know they killed an impala last night...but that wouldn't have been enough food for so many lions (1:42:30)	"Hopefully they'll get some food"	"So they're definitely on the lookout for a meal"... will be looking for anything like zebra, wildebeest, and if they're really lucky a buffalo...that's what they really wanna be after..
Hunger 2	Continued from previous discussion: "look like this" is understood to mean "hungry"	In summer you'll find that oftentimes lions will look like this...	We've just gone through a full moon phase, and when it's full moon the lions' success rate dips completely because of the brightness of the night...the prey animals		Now that we're coming out of full moon into new moon hunting will become a lot easier...they will also hunt smaller prey like impalas to try and tide them over until

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			see the lions a lot better		they can get access to things like buffalo (1:43:20); Will also be more buffalo around once the seasons change
Seasonality/ hunger 1	That's because it's summer now; As we start to come into winter	And at the moment, if you're a regular viewer you've seen that we're not seeing many buffalo at the moment (1:43:28).	That's because it's summer now, so there's a lot of food and water everywhere (1:43:31), and most of the buffalo have moved into different areas...the buffalo spend the large majority of their time in areas with better grass (1:43:47)		As we start to come into winter, that grass resource gets exhausted and the buffalo start shifting into the Sabi Sands area and we start to get the herds coming through, and that's when the lions will take advantage of that (1:43:56).
Affection 2	Tone of voice as Tristan says, "Ah, look at that;" CS cub greeting lioness (1:44:10)	"That is one big pile of lions all mashed up together there;" CS cub greeting lioness (1:44:10)		Positive: "Isn't that amazing?" (1:44:16); "It's so cool to see these guys together"	"Ah, look at that" (1:44:12)
Territoriality/ aggression 1	Run-in; scrapes and cuts; getting pressured from the Torchwood Pride; pushing west	You're asking why the Nkuhumas have been spending so much time in the west lately? (1:44:30)	It's because they're getting pressured from the Torchwood Pride...Torchwood Pride is very big...also the Nkuhumas have just been split...only	Negative: Which is not ideal for us, it'd be nice if they started coming back towards Djuma, but at least we do have Arathusa	

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			three adult lionesses...they are in no way going to be able to defend themselves against nine...lots of scrapes and cuts...I think they had a bit of a run-in...the Birminghams also have finally started pushing west again...these Nkuhumas will have heard the Birminghams calling so they know this is a safe place for them to enter...'	and we do get to see them fairly regularly (1:46:04)	
Darkness/ nighttime 1	"it's starting to get very gloomy;" "don't want him out in the dark"	I just turned on my lights because it's starting to get very gloomy, so what we're going to do is go back to Stef so he can say his goodbyes	... "because we don't want him out in the dark, even though I reckon he could make it and survive a night in the wilderness if anybody could..."	Negative: The whole discussion implies danger, e.g. because Stef can't be out after dark.	"But let's not test the theory and let's go across to Stef so he can say goodnight"
Discovery/ exploration 1	"uncovered a few secret places in the bush that I didn't know was here..." "places you've	"We've had a pretty epic afternoon over here...trying to find Karula but in doing so we've managed to	"trying to find Karula"	Positive: It's nice to know there are still places you've never explored in the bush	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
	never explored..."	uncover a few secret places in the bush that I didn't even know was here" (1:46:49)			
Danger 10	"relative safety"; every shadow is a bit jumpy	MS Stef walking in twilight (1:46:28); "Right now, every shadow is a bit jumpy. It's a bit irresponsible to be out at this time of night" (1:47:15)	The rest of them are just to the right, and in this long grass there is absolutely no sign of them (2:05:56)... very, very difficult to actually see them without spotlight...that's why I [Tristan] was saying Stef shouldn't be walking around at night, is because of this (2:06:11)	Negative: "a bit irresponsible"	"it did require us to do a proper march from here to the relative safety of quarantine open area"
Cleanliness	So I need to quickly clean the bonnet, or the hood, of my car; MS guide cleaning hood of car (1:48:14)	We're still driving around, but we have a bit of an issue and we need to stop. And I'll tell you why.	[Camera operator] and I were doing some chopping; we were removing trees that were overhanging the road. So I need to quickly clean the bonnet, or the hood, of my car (1:48:02).	Funny, as evidenced by singing and laughing.	Wipe the hood of the car: MS guide cleaning hood of car
Cold 1	"cold weather"; winter	"and we're gonna start missing them	"They're not too fond of the cold weather,	Negative(?): Because I can promise you	"So we better start making the most of the

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		[chameleons] in winter, winter they're going to disappear" (1:49:21)	and so are the tortoises..."	we're going to start missing them in the winter months	reptiles" (1:49:29)
Human-wildlife interaction 1	When Gregory the tortoise comes in at breakfast we have to shout, "Gregory, watch your toes!"; I don't know why she has a taste for human toes, but she goes after them	Oh, and Gregory. When Gregory the tortoise comes in at breakfast we have to shout, "Gregory, watch your toes!" (1:54:06)	"Because she seems to want to eat toes. I don't know why she has a taste for human toes, but she goes after them" (1:54:14).	Ridiculous: "It's quite ridiculous" (1:54:15).	... we have to shout, "Gregory, watch your toes!" (1:54:06)
Awesome/amazing 10	unbelievable	"it was unbelievable, we used to be guaranteed almost every time we came here to see the lions"	"last year, when the Nkuhumas used to live between Gowrie Cutline and hyena road"	Positive: "unbelievable"	Speaking of the Nkuhumas... off to Tristan
Fortress 1	"impenetrable fortress of bush"	"They [Nkuhumas] are awake, but they've gone into an impenetrable fortress of bush" (1:56:30)	"massive dip in front of us;" There's no ways that I can negotiate getting down here, it's just far too steep.	Fine: "It's just fine, it's not the worst thing in the world (1:57:19)"	...will have to be patient and wait it out (1:57:12)
Helpfulness/teamwork 2	"that was all thanks to Tayla;"	You can see that my bonnet is nice and clean, that was all thanks to Tayla	"She came along with her cloth and her spray and she was cleaning with a frenzied hive of activity..."	Mixed: "Fun to watch;" but not necessary, I'm capable of cleaning it myself; it was good for us (1:57:47)"	
Helpfulness/teamwork 3	"There is another vehicle that's	"Now, there is another vehicle that's	"...because we're all trying to see	Futile: ...but, like I say there's actually no	Turn off lights: Now, I'm going to stop blinding them,

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	trying to help us”	trying to help us (1:57:50)...	where these lions go...”	way to get down there	so I’m going to turn off our lights quickly on that side...
Spectacle 2	spectacular	Hopefully they’re gonna go drink at a pan, because if they drink at this pan it is going to be spectacular (1:58:17)	“We should get a beautiful reflection of all of them together”... that picture of them all lined up and on the bank will be very nice	Positive: “going to be spectacular;” picture of them all lined up will be, “very nice”	I’m just gonna try to reposition us quickly to see if I can get a better view on them (1:58:46)
Caution 1	“need to be a little bit careful”	need to be a little bit careful here, because of the amount of logs that we have (1:59:06)	the amount of logs	Not a big deal, as evidenced by the use of the phrase, “a little bit careful”	be a little bit careful
Hunting 1	“This is them in full-on hunting mode”	“Look at her testing the wind”... she’s busy smelling, trying to see if there’s any sign of any animals that could be close by that she could potentially hunt...”this is them in full on hunting mode” (2:01:25)	“...they’re looking around for food items at this stage”		“Look at” this female in front; “look at” her testing the wind
Awesome/ amazing 11	“It doesn’t get more special than that”	“It doesn’t get more special than that. To have all these lions surrounding the vehicle is quite something” (2:02:06)	“The atmosphere that surrounds them...” “...they still have this aura about them as they walk around the vehicle in the	Positive: “It’s quite something;” “It is quite spectacular to have them” so close to the vehicle (2:02:13)	

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			darkness” (2:02:23)		
Focused/ hunting 1	they’re focusing very intently to the north	“They’re really focusing very intently to the north here” (2:03:24)	“I wonder if there’s not maybe some impalas close by?” “In this area that we’re in”... you’ll get lots of impalas, zebras, often nyalas that come in...the odd buffalo...		“Maybe they’re going to find one of those” (2:03:50)
Seasonality 1	“and now it’s completely different”	I remember tracking Shadow here; it was so open, there was not one blade of grass...and now it’s completely different		Positive: “It’s amazing to me”	
Beauty 12	“isn’t that spectacular?” “it really is a beautiful evening”	“It really is a beautiful evening” (2:04:53)	“And isn’t that spectacular with that beautiful evening light over the tops of the trees?”	Positive	
Hunting 2	“the perfect conditions for lions to be hunting”	“and the perfect conditions for lions to be hunting” (2:04:55)	When that sun goes down a bit further...and I can see there’s a bank of cloud coming...whe n that goes down even further it’s going to be a dark evening...(2:0 5:05)	Positive, for the lions: “the perfect conditions for lions...”	So they’re going to try to hunt now, before the moon comes up when it’s at it’s darkest (2:05:17)

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Learning/ training 1	watching and learning;	Are the cubs too young to observe a hunt? No...they are starting to observe hunts	They're getting to that age when they need to start watching and learning (2:06:34)	Positive: Great news, because it means that in about 3-4 months time we should see them start trying to actively hunt with the pride.	Watch the cubs hunt: implied
Boredom 1	nothing here; very quiet; pity	No we've just arrived at the pans here at Nyala Road south...as you can see, there's nothing here (2:08:23)	Not even a frog for us to have a look at this evening	Negative: "Oh well, that's a pity" (2:08:58)	Look at spiders: "There's a couple of spiders here though"
Eerie/spooky 1	It's very, very eerie out tonight	"It's very, very eerie out tonight" (2:09:27)	Very, very quiet out here: few things that are calling...		Just the occasional call of the fiery- necked nightjar
Search 1	We're still on our search for the scorpions and the...; we're still looking for all of them (2:10:01)	We're still on our search for the scorpions and the chameleons and the Karula and her cubs; we're still looking for all of them (2:10:01)		Positive: Luckily, if you have more things you're looking for you have a better chance of finding one of them (2:10:07).	"Let's hope that that rings true this evening" (2:10:12).
Hibernation 1	estivate; hibernation; during the winter months	You're wondering where all of the frogs went?...with all of the water drying up now a lot of them have sort of moved on, some of them even burrow...	with all the water drying up...they sort of estivate...bush veldt rain frogs go through a temporary hibernation during the winter months...		They are around, you've just gotta know exactly where to look
Pest/creepy crawlies 1	creepy crawlies	Do we check our rooms for	...because you'll be		I check my pillows, shake

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		creepy crawlies before bed? I do...	surprised as to what you can find in your bed (2:12:24)...I grew up on a farm where you could find snakes, spiders...and you don't want to be bitten by one		duvet, always check around my blind...
Infrared 1	Infrared; LS impalas in infrared (2:15:30)	I'm gonna sneak up on these guys [impalas] and see if they don't run away...we're gonna switch to infrared for a change (2:15:16)	LS impalas in infrared (2:15:30)... impalas are "so relaxed" because they can't see infrared light	Positive: "How interesting is this, to see these boys at night?"... not great for photography of course, because it's pitch black...but it's amazing to watch animals as they're so relaxed (2:16:40)	"Right, have a look at this" (2:15:31)
Strange 1	They do look a bit strange, don't you think	"They do look a bit strange, don't you think?" (2:16:25)	"Look at their eyes glow" (2:16:25).	Strange: "They do look a bit strange, don't you think?" (2:16:25)	
Frightened 1	"looks like he got a bit of a fright" (2:16:46)	LS impala running (2:16:41)... "There goes the other one there, darting off" ... "It looked like he got a bit of a fright"	"They got a bit separated there"	Positive/funny, as evidenced by Tayla's chuckling	Find the other impala, as evidenced by LS impala running (2:16:41)
Excitement/ fighting 1	action; fighting; boxing	"We're gonna start to see the battles	The rut: "As the rut comes	Positive: "Which will be quite exciting	

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	matches; battles	between the impala now..."	around" (2:16:58)	(2:17:28)..." I'm very much looking forward to getting some action; some boxing matches between the various animals..."	
Beauty 13	beautiful	It's not a nightjar, it is a beautiful spotted eagle- owl that is perfectly perched for us" (2:19:05)... there is another one here in front that's making friend with a scrub hare	I'm sure that's why they are on the road, is it's easy to catch these things [insects] around here (2:20:05)	Positive: Very, very cool	"Let's see if it's gonna go up and grab something" (2:20:35)
Beauty 14	"beautiful sighting"; spectacular; very, very, very pretty	The other one on the tree is also spectacular; a beautiful sighting of this one here (2:21:11)	"Much closer to us, and you can see a couple stars in the background there as well"	Positive: "A very, very, very pretty way to finish our drive" (2:21:22)	
Sleepy/tired 4	second round of sleep	Some of you may be wondering where the Nkuhumas are. They were lying down where we left them.	So, they were busy going for their second round of sleep.		I would suggest watching the Arathusa dam cam tonight...I'm pretty sure the lions are going to make an appearance there...
Awesome/ amazing 12	Isn't this amazing; very cool sighting;	Tristan: Tayla has a very cool sighting of	Why elephants are relaxed: The elephants	Positive: "Isn't this amazing?"	"Look how cool this is!" (2:22:54)

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	look how cool this is	elephants in infrared (2:22:17). Tayla: We have got elephants at night time, and look how relaxed they are...	can't see this [infrared] light, so it doesn't affect them (2:22:52)		

March 4, 2018 Sunrise Drive Frames Spreadsheet

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
Welcome 1	Good morning; warm welcome to you all	Good morning and a very warm welcome to you all	...another episode of <i>SafariLIVE</i>	Positive: “Looking forward to another morning of exploration...”	“Please, feel free to send through your comments on #SafariLIVE” (2:05)
Beauty 1	MS tree branch with sunrise behind it (1:33)	MS tree branch with sunrise behind it (1:33)	Sunrise (implied)		
Search/quest 1	“Look for”	I'd like to look for tracks for Thamba	“I have not seen that young gentleman yet” (2:31)		“And that'll be my plan for the morning”
Beauty 2	“beautiful morning;” “magical conditions”	Hello everyone and welcome...on this beautiful morning...it's wonderful conditions for a safari	MS guidet driving with radiant sunrise in the background (3:22)	Positive: “beautiful morning; magical conditions”	
Search/quest 2	searching for	Like [guide] I am also	Why guide's looking for	Hopeful: So, I'm hoping	“I'm just checking the

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
		searching for a leopard...but I'm searching for a female and her young cub	Thandi now: We had their tracks coming onto Djuma two days ago but we were so busy with other leopards that we didn't have time to look for them...	they're still gonna be around	road very carefully for any tracks and signs of them" (4:18) ... "And hopefully, those tracks and signs when we do find them will lead us to the leopards"... failing that we could just get lucky and bump into them walking straight down the road towards us...holding spotlight at an angle
Sunrise 1	"soon the sun will be up"	"Soon the sun will be up and it's going to be a very, very nice morning" (5:09) ... perfect conditions for tracking	The sun coming up	Positive: "Perfect conditions for tracking" (5:11)	
Excitement/ action 1	having a go at a python; leopards having their kills stolen; crossings	The last drive Sebastian and I did together was the most epic game drive ever (5:54)	We had crowned cranes and Egyptian geese having a go at a python...we had leopards having their kills stolen by hyenas...crossings out of our ears	Positive: "most epic game drive ever"	
Excitement/ action 2	"So that sounds quite exciting"	We spent three hours with the wild dogs last night...I got an		Positive: "So that sounds exciting"	So we're gonna do a boundary patrol...all the

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
		update from my dear friend at Nkorho saying that wild dogs are now at Nkorho, and that they're chasing a scrub hare while an elephant is chasing them (6:38)			way up to the Nkorho driveway...and we're gonna see if those dogs don't maybe come back this side or perhaps they'll pop out on Chitwa somewhere (6:56)
Pest/insect 1	attacked by a massive insect	"So sorry everybody I've just had a massive insect fly into my eye"	A massive insect just flew straight into my eye	Negative: implied by everything	Faith, I don't think you're gonna be able to stay with me...we're going to tech loop and we'll be back shortly
Stealth/sneaking 1	sneaking up quite stealthily	You can see she's [Thandi] sneaking up quite stealthily towards us (15:15)	There's something in the area that she is very interested by...it looks like she can hear something (15:38)	Positive: I can't believe how lucky we've got (16:09)	"Look at her creeping up there..." ...watch how she positions her feet very carefully...
Mystery/confusion 1	I wonder where the cub is?	I wonder where the cub is (18:14)... the cub must be somewhere here, the cub's tracks was with the mother's (16:14)	Maybe she told the cub to stay put? ... So, she could try to hunt or work out whatever is ahead of her up here?		
Mystery/confusion 2	I wonder what it is?	"I wonder what it is (17:01)? Didn't see any impala hear	She must've heard something, and she's no necessarily sure what it is,	Surprising: That's why I'm quite surprised that she seems to think that there	

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		when we drove past it...	and she just thought she'd creep in a little bit closer to investigate (17:34)	is something here	
Beauty 3	beautiful scene	"What a beautiful scene"	MS zooming to CS Thandi (17:40)	Positive: We have been spoiled rotten with leopards lately and I hope our luck continues.	I hope our luck continues
Naughty 1	naughty girl	"She almost looks like she's been a naughty girl? (17:59)" "She keeps looking over her shoulder with a bit of a guilty face, it appears to me (18:03)"	"So maybe she's been misbehaving, who knows? (18:07)"		
Baby/infant 1	cub	I'm hoping the cub isn't too far away, and I cannot wait to see how much it's grown	because at this point in a cub's life their growth is incredibly fast	Positive: "I cannot wait to see..."	Even better than her moving under the vehicle is I think she's gonna take us back to the car now, now that she's worked out exactly what is not there (20:09)
Awesome/ amazing 1	"Absolutely awesome"	LS Thandi (18:29...)	LS Thandi (18:29...)	Positive: "Absolutely awesome" (19:01)	
Guilty/sad 1	It looks like she's almost a little bit sad/guilty	Thandi, why are you pulling that funny face today?	"It almost looks like she's a little bit sad/guilty" (19:15)	Funny, as evidenced by guide's laughter	
Human-wildlife interaction 1	Is she gonna walk under the car? I thought	"Is she gonna walk under the car? I thought	Because we're parked on a bit of an		

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
	for a second she might	for a second she might” (19:41)	embankment that creates quite a lot of space underneath the car, and sometimes leopard will actually move underneath the car – especially when they’re sneaking around like this (19:54)		
Support/ success 1	well done [Guide]; very successful morning already	“Well done [Guide] on a very successful morning already (20:33)”	"Thandi just materializing out of nowhere..."	Positive: “I think that’s marvelous”	“Let’s hope she manages to lead [Guide] to that little bundle of joy...(20:42)
Beauty 4	beautiful, big male giraffe	“We have got ourselves a beautiful, big male giraffe, and he’s doing what he does best, which is chewing the cud (20:55)	CS giraffe face (20:28)...	Positive: “beautiful, big male giraffe”	“Watch closely folks” (20:55)
Injury 1	He’s got a little bit of an injury there; CS wound on giraffe’s neck (21:30)	“He’s got a little bit of an injury there” (21:30)			
Thick bush 1	MS thick bush (21:52); thick vegetation (22:44)	We’ve just got a glimpse of the cub, but sadly it’s just disappeared behind this dead tree...it’s gonna be super tricky for us to follow them	They are moving through a very, very tricky area	Negative: “sadly”	But I’m confident that if we loop around, we might be able to just get another quick view of them (22:34)...these little vehicles

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		(22:08)...too many small little riverbeds there that are in our way			of ours are so useful in times like this...
Luck 1	Okay, we're in luck	Okay, we're in luck (23:10)...	She's slowly making her way straight towards us	Positive: We're in luck	Okay, I'm gonna keep moving a little bit.
Awesome/ amazing 2	Absolutely awesome	But here we are, we're gonna get some great views now...	"But here we are..."	Positive: "Absolutely awesome" (23:47)	
Baby/infant 2	little cub	"And here comes the little cub!" (23:49)	So there's mom"... LS leopard coming out of thick bush (23:47)	Positive: tone of voice	Speak in baby voice (23:50)
Cute 1	"little jump"; guide's tone of voice; MS cub jumping over branch (24:00)	... "How cool was that little jump?" (24:08)	MS cub jumping over branch (24:00)	Positive: "That was epic"	
Playfulness 1	playful mood	And it looks like this cub's in a very playful mood	CS cub stalking Thandi (24:27)...	Positive: And I'm very happy that a lot of you are ecstatic about this incredible, incredible scene.	
Curious/ cautious 1	looking at us a little bit inquisitively	And it's been a while since this little cub's seen us, and that's why it's looking at us a little bit inquisitively	And it's been a while since this little cub's seen us,		
Unhappy/ solemn 1	Thandi's still not looking very happy; solemn mood	"Thandi's still not looking very happy (25:14)	"I'm not too sure what's going on, Thandi"	Funny, as evidenced by guide's laughter	"Stop pulling that funny face (25:18)"
Welcome 2	"hello everyone and welcome"	"As you can see, we've got a tiny little	We should invite in some other viewers	Positive: It's a great pleasure to welcome	Let us know how you're feeling and ay

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		leopard cub and its mother (26:12)”	on another platform, since it’s been so long since we’ve seen this family of leopards (25:38)	you on board this live safari	questions you’d like to ask using the comment box below (26:22)
Awesome/ amazing 3	so we’re incredibly excited; incredible morning; magical, magical scene	“And it appears like they are showing us an incredible morning (26:33)”...The cub is looking so playful, bounding around with joy	We have got incredible lucky, we followed these leopards’ footprints to where we found them in this area (26:56)	Positive: “And isn’t this an absolutely magical, magical scene” (26:42)	And we are looking forward to see what they get up to (27:02)
Happy 1	happy to hear; heart is very full	I’m happy to hear that your heart is very full...	...having seen this leopardess and her youngster...	Positive: ...so is mine (27:27)	
Spectacle 1	wonderful views; “straight down the barrel towards us”	Now, I just need to try and work out what out best way is to try and loop ahead of them (27:33)	They may actually pop back out on this road, that seems to be the general direction they’re heading in...		I wanna try to race ahead, turn the vehicle around, and have them walking “straight down the barrel” towards us (27:45)
Awesome/ amazing 4	awesome; truly special	You’ve just commented on how much this cub has grown up, and how awesome it is...it really is awesome, and the fact that we’ve been able to follow this cub’s life		Positive: “truly special” (28:48)	

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		so closely is truly special			
Awesome/ amazing 5	Fascinating, fascinating; Scott's tone of voice	"We are incredibly lucky in this area of South Africa in that we get the most fascinating, fascinating sightings of leopards (29:06)"	They are very habituated to our presence	Positive: "We are incredibly lucky"	
Spectacle 2	We're in for a treat; leopards and an elephant in the same shot; "How crazy!"	"We might be able to see the leopards and an elephant in the same shot" (30:38)	"There's a big elephant just up ahead of us here"	Positive: "We're in for a treat"... "How crazy! What next! (31:00)"	Look at this... Now I'm sure this leopard will just slink past right in front of the elephant (31:09)
Danger 1	"trample the cub"	You're wondering if this elephant could trample the cub? Yes, it certainly does have the physical capabilities, but I don't think it has the inclination	Leopards are hard to detect, as evidence by: With lions it could well happen more often, if lions are in bigger prides and easier to detect than a solitary leopardess and her cub (32:23)	No big deal: "So, I don't think that's gonna be a problem"	
Awesome/ amazing 6	amazing; fantastic!	"What an amazing start to this morning, ladies and gentlemen (33:49)"	Thandi and her cub, as implied by: "I am dying to see that little bundle of joy. And interaction like that, fantastic!"	Positive: "I am so excited for all of you! (33:58)"	Take screen shots: "No doubt you got some marvelous screen shots"
Disgust/ unpalatable 1	"one of the most	What we are seeing, is that	Those of you who have seen		

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	unpalatable trees you can imagine”	after that giraffe finished chewing the cud..it has moved on to one of the most unpalatable trees you can imagine (34:19)	me on bush walk will remember the facial expressions I exhibited when I tried to eat a leaf of the silver cluster- leaf...Lots of tannins in leaves: “I first thought maybe he was trying to do something to his stomach, because by ingesting some tannin... (35:00)		
Meditation 1	like he’s meditating	That look he had on his face earlier when he was ruminating...st aring off into the distance; brain capacity very, very low; like he’s meditating (36:00)	Ruminants can completely lower their brain activity while they’re ruminating so they don’t have to sleep (35:50)		
Injury 2	that thing on the neck; those injuries...	That really sort of bad-looking scab on the neck	Those injuries are passed on by the oxpeckers...ox peckers’ primary diet is blood...if they come onto a wound on a giraffe they’ll peck that scab open and feed on the blood (37:16)...it	No big deal: It’s not going to cause him [Giraffe] too much harm (37:45)	Smashing neck onto tree to have a really big scratch (36:42)

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			ends up leading to big scabs and rashes like this		
Awesome/ amazing 7	“absolutely marvelous”	Look how tall he can get...	To obtain a competitive edge: “...unhindered by competition from anyone else” (38:26)	Positive: “Absolutely marvelous” (38:20)	
Powerful 1	ramrod; extremely powerful swing of the neck	For males, ossicones add into what the giraffe uses as a ramrod, or a big hammer...gira ffes will swing their long necks at each other, aiming ossicones into head and body of their opponent...the y can kill each other...	The purpose of it is for mating...the strongest males will mate and females always watch as males batter each other with what looks like an extremely powerful swing of the neck (40:05)	Impressive, as evidenced by “extremely powerful swing of the neck” and Steve’s enthusiastic tone of voice.	
Evolution 1	evolved	That’s one of the reasons they think giraffe have evolved such long necks, not just for feeding competition... but also to enable that swing (40:19)	Genetics with longer necks got more of a swing... genetic lineage favored giraffes with longer necks...so over time the longer neck just perpetuated (40:41)		
Pest/insect 2	burns; I’m alright though; it was a big bug	I did get something in my eye, it was a big bug...it just burns	I don’t know if these bugs have some sort of chemical defenses that get released	Okay: I’m alright though, thank you for all your concerns (41:28)	At least I can actually see again now...still a bit itchy, I’m

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			when we squash them		trying to not rub it (41:38)
Awesome/ amazing 8	How cool is this little cub?	How cool is this little cub keeping a beady eye on us? (43:34)	We've got no idea really how much time they've spent with vehicles over the past three weeks; Scott seems to be implying that the cub might be keeping a "beady eye on them" because she hasn't been around vehicles much in the past three weeks.	Positive: How cool	Habituation: This cub is on the right track to become a very, very well- habituated female leopard, who, hopefully we'll be able to follow for years to come.
Cute 2	Cute	MS cub playing with Thandi (44:17)		Positive: Cute	
Danger 2	Hukumuri "imposter" male leopard; another 8-9 months before the cub is completely safe	But, it does still have a long way to go. I'd say another 8-9 months before it's completely safe...	Especially with the Hukumuri "imposter" male leopard who's moving into this area (44:36)		
Healthy 1	Healthy; tip- top shape	You're impressed with how healthy Thandi is looking? I agree, she's looking in tip- top shape (44:56)	She appears to be a very successful hunter...she doesn't seem to have much trouble finding food	Positive: implied	It would be interesting to try to work out how successful one leopard is compared to another...
Teamwork 1	team; assisting	When will the cub start hunting with mom? From about a year of age I'd say there's a	"They're not programmed to do that (45:54)" Mom might be walking through the		

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		chance a cub could assist a mother through default, but they will never work as a team	bush and flush prey towards the cub, who latches onto it instinctively...		
Awesome/ amazing 9	How cool is this?	MS cub playing with Thandi (46:09)		Positive: "How cool is this?"	
Learning/ training 1	hone its skills; practice	But I mean, even from now...and even from months back...it [cub] would've started stalking and pouncing on small little insects... maybe a tortoise...(46:28)...this playing also helps it to hone it's skills	...allow it [cub] to practice and hone its hunting techniques on them	Positive: Useful	
Awesome/ amazing 10	That's so cool!	"That's so cool, it's the second time it's [cub] done one of those funny little pounces straight up into the air" (47:11)	LS cub pouncing (47:01)	Positive: That's so cool!	
Spectacle/ money shot 1	great shot	Here comes another one, this is gonna be good...Oh, we have the perfect angle because Thandi is walking straight towards us...I	...because Thandi is walking straight towards us	Positive: "This is gonna be good;" "I think we're gonna get a great shot"	"Come on little cubster, one big pounce for us" (47:30)

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		think we're gonna get a great shot			
Beauty 5	"Too beautiful for words"	We may be in for some real, golden opportunities here...	There are not many rocks on Djuma, and to see a leopard on a little outcrop like this is just too beautiful for words (48:03)	Positive: Too beautiful for words	Yes, jump onto that log – I mean rock... Now we just need the cub to follow, which I'm sure it will.
Awesome/ amazing 11	How cool is this?	MS leopard on rock (48:54)		Positive: How cool is this?	
Awesome/ amazing 12	Absolutely incredible	"Well that was absolutely incredible..."	MS leopard on rock (48:54); ...to have them in this little rock" (49:59)	Positive: "I'm very happy about that"	Now we need to see if I can get out of the hole that I put us in.
Orca 1	Little orcas	There was a really cool hippo walking around out of the water that disturbed these Egyptian geese... good for us because now we get to see these "little orcas" (51:08)	[Guide] described them as "little orcas" because of the patterns on their back	Positive/funny: That is so funny	
Danger 3	dangers; crocodiles	They [goslings] grow up so quickly, especially with all the dangers that lurk around a body of water	Crocodiles, fish eagles, all the raptors that like to move around here...		I think that adult is going to lead them to safety, to that little bit of cover
Cute/precious 1	they're so precious	But they're [goslings] so precious...	I can't help but chuckle when they wiggle their bottoms and flap their wings like that (51:59)	Positive/cute: It's too precious	Laugh, as evidenced by guide's laughter and, "I can't help but chuckle"

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Awesome/ amazing 13	It would be amazing to see something like that	I want to know how those [Egyptian goose] chicks get down from there. Do they just dive-bomb into the water and hope for the best?	Height of the nest, as seen in MS Egyptian goose on top of weaver-bird nest (53:58)	Positive: It would be amazing to see something like that	Imagine: “Can you imagine?”
Awesome/ amazing 14	“there’s even a crake”; guide’s excited tone of voice	There’s all sorts of things around today, there’s even a crake...two crakes		Positive: That’s quite nice to see	
Beauty 6	beautiful specimen; looking very pretty	We’ve just found a beautiful specimen	For mating: What happens is he goes up into the sky and does his display...he stands out because he’s very brightly colored...all the ladies look and go, “Ooh, look how strong he is, I want his genes...” (57:18)	Positive: “beautiful specimen” and Steve’s tone of voice.	Look at that guy (56:34)
Cheeky 1	very cheeky birds; naught stuff	“The paradise wydars are very cheeky birds (57:25)”... Polygamous, meaning that the male will mate with every female that is willing to, and then she will go and lay her eggs in the nest of my	Because they’re lazy, as implied by: “How’s that for a life, huh?” (57:45)	Negative: cheeky	

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		favorite bird, the green- winged pytilia...so they do all the naughty stuff...and they do absolutely no parental care			
Bizarre 1	bizarre; strange; crazy; Tayla's puzzled tone of voice	I think what we've got is a queen ant.. I think it's a queen ant because of the size of its abdomen	I don't know what it's doing, I don't know if it's dying, and I don't know how she got on the car...Perhaps it's a new queen...maybe after all the rains she flew off and lost her wings?...I don't know (59:30)	Strange: How crazy is this...it's all a bit bizarre	I'll ponder what I'm going to do with this precious ant and how I'm going to help her...(1:00:01)
Excitement/ suspense 1	"That's where the action is for the moment"; "almighty wrestling match"	But bear in mind that Thandi might have an opportunity to get their next meal...it's an adult male impala, but she's taken those down before...it'll be an "almighty wrestling match if she does, in fact, succeed" (1:01:14)	What's interesting is that there's an impala feeding nearby...it's got no idea these leopard are here...	Positive/ exciting, as evidenced by guide's tone of voice	We won't show it to you just yet, because it will require [Camera operator] to pan a long way away from the leopards, and that's where the action is for the time being (1:00:55)
Cute 3	"It was so cute"	"It was so cute, when we	...her and the cub were lying	Positive: "so cute" and	

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		initially found them here..."	on the ground, rolling around with one another (1:01:22)	guide's tone of voice.	
Cute 4	Guide's tone of voice as he says, "Oh, here comes the little cub again"	"Oh, here comes the little cub again" (1:01:43)	MS cub jumping over branch (1:01:40)	Positive: tone of voice	
Bizarre 2	bizarre; strange stuff	At what age do cubs start eating meat? Around 3 months of age, as a general rule. However, what's interesting is that on a number of occasions, Thandi took meat back to the den site when the cub was even younger (1:01:52)	We're not sure if the cub was getting to feed from any of the kills that were taken back or if it was just mom who was snacking on them	Negative: Not the best parenting, because it put the cub in danger	
Cute 5	Guide's laughter and MS cub pouncing on Thandi @ 1:01:52	MS cub pouncing on Thandi (1:01:52)	MS cub pouncing on Thandi (1:01:52)	Positive: laughter and tone of voice	"Oh, jump on"
Excitement/suspense 2	Let's see if mom doesn't spot this impala; Scott's hushed, expectant tone of voice	Let's see if mom doesn't spot this impala...it doesn't seem like she's detected it yet but I'm confident she will shortly	LS Thandi and cub walking towards screen right (1:02:39); "She's heading in the right trajectory to see the impala"		"Let's watch very closely here" (1:02:41); "Let's just keep watching very closely" (1:03:08)
Playfulness 2	"the way it runs around up ahead of mom	I have a feeling this cub could	... "the way it runs around up ahead of mom	Negative: tone of voice	Okay, let's get moving

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	and bounds in the air”	possibly blow it for mom...	and bounds in the air” (1:03:25)		
Spectacle/ money shot 2	two-shot; cool views	“We may be able to get a two-shot of her walking passed the impala” (1:03:31)... No, the impala’s spotted them...but we may be able to get you some cool views of the impala shouting at the leopards (1:03:41)	Isn’t it interesting how the prey don’t just flee; they’d rather keep an eye on the threat (1:04:11)	Positive: “How cool is this?”; “What a treat, what an absolute treat” (1:05:52).	“Let’s see if I can’t get us a few more two- shots” (1:04:20)
Uniqueness/ finger prints 1	unique like finger prints?	You’re wondering if a leopard’s spots are unique like finger prints? Yes, they certainly are...	...each leopard has got slightly different spots...they all look different		Spots can be used to tell leopards apart
Alarm/alert 1	high alert; alarm calls	Now, this is not ideal for the leopards...ever ything in the area is going to be on high alert...	...having heard this impala’s insistent alarm calls (1:05:24)	No big deal: ...so it’s not going to be a huge issue	But thankfully they’re not starving...
Learning/ training 2	practice prey	We’re gonna send you over to [Guide] who has one of their [leopards’] favorite practice prey...	[Guide chuckles] Practice prey; I believe Thamba tried to kill one of these the other day (1:06:13)	Funny, as evidenced by guide’s laughter	

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Comfort/ sunbathing 1	lovely rays; enjoying the morning rays	We've got ourselves a pair of squirrels... [who are] quite enjoying the morning rays (2:06:24)	It's not that cold in the Sabi Sands this time of year, but we find that as the sun rises it pushes all of that cold air down, and you get a few moments of quite chilly weather, and so he's just enjoying these lovely rays...	Positive: "lovely rays"	...and so he's just enjoying these lovely rays as it comes onto his face
Preparation 1	"hoard them [nuts] for the winter months"	He's [squirrel] sitting in a Marula tree...and surrounded by one of the squirrel's favorite fruits: the marula, and the nut...that you often find squirrels taking up into their little tree holes, where they will hoard them for the winter months...	"hoard them for the winter months" implies that they gather nuts because there's less food in the winter.		
Cute 6	Steve's chuckle; CS squirrel in marula tree (1:07:28); that is so cute	"Isn't that a picture? [laughs]" (1:07:28)	CS squirrel in marula tree (1:07:28)	Positive/cute: "That is so cute" (1:07:36)	Pan camera down: If you come all the way down, [Camera operator], to the bottom of the tree...
Tourism 1	tourist; gawking	"I don't know who's the tourist now, us	He is gawking at us, wondering	Positive/funny: "This is very comical"	

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		or him?" (1:08:07)	what it is we would like?"		
Busy 1	"they're always so busy"	It's marvelous to see squirrels just doing their thing...	...they're always so busy, it's difficult to get them on camera (1:08:42)	Positive: "It's marvelous..."	But in the early morning they like to sun themselves...a nd as the winter approaches, as it starts to get a bit cooler, that will be something we see more and more often
Beauty 7	beautiful; majestic; the colors are so amazing	"And isn't that just such a nice picture of clouds building up in the background, and the beautiful, majestic marula tree" (1:09:03)	LS marula tree with grey clouds in the background (1:09:04); "The colors are just so amazing with the light coming from our right-hand side"	Positive: beautiful; majestic, amazing; tone of voice	Implied by the word "picture:" look at it.
Heat 1	it sounds like it's going to be a warm day	It's debatable if we're going to see some rain later, but it sounds like it's going to be a warm day	"To my left I can hear the 'galloping horse' of the barred wren- warbler; which, uh, locally it is known if it's calling it's going to be a warm day" (1:09:30)	Silly/not serious: It's one of the local "superstitions" (1:09:36)	
Energy 1	require lots of energy; energy	Small, little animals require lots of energy to sustain themselves..	... when you see them moving, you'll see how much energy they actually use		Hence the high need for seeds and high- valued fruit in their diet (1:10:07)

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Playfulness 3	spring in its step; try and play	"I love the way the cub's got such a spring in its step..."	...jogging along to keep up with mom: almost enticing her to try and play" (1:11:13)	Positive, as evidenced by guide's laughter	She's [Thandi] having none of it, but the cub is still trying it's best to urge her on.
Awesome/ amazing 15	That was so cool	"That was so cool! No ways!" (1:11:29)	MS cub jumping on Thandi's back (1:11:12)	Positive/unbeli- evable: "That was so cool! No ways!" (1:11:29)	
Spoiled 1	we're getting spoiled absolutely rotten	"Well, we're getting spoiled absolutely rotten this morning" (1:11:35)	"It's not always like this"	Positive: "so you've joined at a good stage"	Everyone should phone a friend and tell them to log in and catch some of this magic, because it doesn't get any better than this (1:11:52)
Spectacle/ money shot 3	"that will be the money shot"	... "that will be the money shot" (1:12:10)	"Imagine if we can get the come bounding after mom straight down the barrel towards us" (1:12:08)	Positive: implied by tone of voice.	"Let's do a big loop ahead, get ahead of them"
Patience 1	"it you're just patient with me guys"	MS guide driving, trying to get ahead of leopards (1:12:15); "Let's do a big loop ahead, get ahead of them"	Because if we send you away now, even though this isn't very exciting, then we may miss the magic when it happens (1:12:29)	Not exciting: even though this isn't very exciting...	I'm gonna suggest, that if you're just patient with me guys and give me a short time to get ahead of them it'll be the best (1:12:20)
Disappoint- ment 1	"No, she's just veered off, don't veer off" and Scott's tone of voice	"No, she's just veered off, don't veer off" (1:12:49); This makes our lives a little bit tricky	I was hoping they were gonna come straight down the road towards us, but they've veered	Negative/trick y: This makes our lives a little bit tricky (1:12:54)	Oh, no, she's popping out again...

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			off it kinda to the left.		
Awesome/ amazing 16	“How cool is this?”	MS Thandi and cub walking down road towards the camera (1:13:24); “How cool is this?”	“Perfect sunlight coming straight towards us” (1:13:24);	Positive: “How cool is this?”; “this is absolutely magical”	“Let’s do one more loop ahead while the going’s good, because it is a nice, big, grassy clearing” (1:14:30)
Thick bush 2	thick spot	“Now she [Thandi] has just slunk off the road, she may come back onto it. She is heading into quite a thick spot” (1:15:07)			“So let’s just bank one more guaranteed view of her” (1:15:11)
Spoiled/ grateful 1	spoiled rotten; need to just take a moment to be grateful	“Well, it doesn’t get any better than this” (1:16:33); “spoiled rotten no other vehicles have wanted to join us here”	“We’ve literally had this leopardess and her cub for coming on two hours now”; “spoiled rotten no other vehicles have wanted to join us here”... not too sure why, obviously there’s some other action elsewhere (1:16:42)	Positive: “Well, it doesn’t get any better than this”	“We really need to just take a moment to be grateful for this wonderful, wonderful morning” (1:17:03)
Human Use 1	you can use the seed oil for many, many different things	It looks like it’s [Nyala] feeding on a jacket plum...nice trees with a nice fruit...	Why jacket plums are nice: you can use the seed oil for many, many different things... You can use it to oil your gun, you can use it if	Positive: Nice trees	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
			you've got any bald spots...it's supposed to promote hair growth...the fruit's quite tasty too.		
Beauty 8	beautiful	Yes I do have a very beautiful, blue-feathered bird, Tayla.	MS European roller (1:20:15)	Positive: "Beautiful;" tone of voice	
Mystery/quiz 1	clue; I wonder how many of you can quickly comment and tell me what species of bird this is; those are the clues I've given	I wonder if the folks back home, the bird enthusiasts, can tell me what kind of bird this is.			I wonder how many of you can quickly comment and tell me what species of bird this is...Well done [viewers], you two were quick on the draw. Indeed, a European roller (1:21:30)
Well-behaved 1	He's [roller] been very well-behaved	He's been very well behaved; he's been sitting with us for a long time...they're an easy bird to film...	Easy bird to film because they don't seem to go very far; they like the sit and wait hunting technique (1:21:14)		
Seasonality/summer 1	seasonality; summer months; greening	I always enjoy the first time we see European rollers because it is a nice forthcoming of the summer months (1:22:16)	European rollers always herald to me the coming of summer and the greening that is to come...	Positive: I like the seasonality of birding here	

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Beauty 9	it is indeed a beautiful bird	Yes, [viewer], it is indeed a beautiful bird	All the rollers are beautiful (1:22:58)	Negative: One thing you can be certain of with beautiful birds is that they do not sound pretty...if you look pretty, then you generally sound very, very bad (1:23:16)	Let me play you the call of the European roller
Hunting 1	perfect for breaking and catching...	Nice, strong beak (1:23:21)	... perfect for breaking and catching beetles and grasshoppers		
Breeding/territoriality 1	breeding; territory; demarcate	We do not hear the [European roller] call because she says it is a mating call, and that is correct. Not just a mating call, but why do birds call? Birds call for territory (1:24:59). And what's the purpose of a territory? Yes, a territory is designed for the purpose of breeding (1:25:05)... Birds don't scent-mark in any way...	...Birds call for territory (1:24:59)... The purpose of a territory is for breeding... Calling is to demarcate their territories. Birds don't scent-mark in any way, so calling is their primary mechanism (1:25:21).		Birds don't scent-mark in any way, so calling is their primary mechanism (1:25:21).
Helpfulness/teamwork 1	"Copy, keep coming, let me know when	Welcome back everyone, sorry, I'm just	... somebody would like to join us in this	Apologetic: "Sorry"	"...let me know when you're closer"

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	you're closer:" Evidence of guide helping another guide.	midway through a radio conversation (1:25:55)...	magical sighting (1:26:02)		
Base camp 1	I wonder if that's where she would like to set up her next base camp?	...seems like Thandi is heading to a termite mound where she's stashed the cub before.	I wonder if that's where she would like to set up her next base camp for the time being? Where she can then deploy herself out on hunting missions (1:26:23)	Positive: "It'll be great prospects for our afternoon if she does in fact do that" (1:26:30)	So, I'm guessing that's what's going to happen.
Spectacle/ money shot 4	going for gold; walk past us at eye level	What I wanna do now is get us low down in this river bed...	...so that they walk passed us at eye level: going for gold (1:26:58)		They have already gone passed us (1:27:26)
Awesome/ amazing 17	How cool is this?	How cool is this?	"A leopard on a log: it doesn't get better, even if it is only six inches off the ground" (1:28:26); MS cub on log (1:28:26)	Positive: How cool is this?	
Headquarters 1	"headquarters"	It seems like Thandi knows this is an area the cub is kind of familiar with...she'll leave the cub here in all likelihood, head off alone...	...the termite mound where she's left the cub before is just to the left of it...will be far more stealthy and effective that way (1:29:20)	Positive: "I'm very, very happy that we've come here" (1:28:32)	I think Thandi's going to spend the rest of the day here, until she thinks it's time to get their next meal...
Afternoon safari 1	"for our afternoon safari"	What's important is that it's great prospects for	...now that we've got a nice base to work from...now	Positive: "great prospects"	Come back here: Now that we've got a nice base to work from

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		our afternoon safari...	that we think we know where their next headquarters will be (1:29:35)		
Relief 1	Phwew, I'm quite relieved...	Well, I'm quite relieved that they've stopped moving...	...they've taken us through some seriously tricky areas to negotiate (1:32:15)	Positive: I'm quite relieved	
Playfulness 4	[Camera operator], it looks like the cub might be creeping up on here again; LS cub pouncing on Thandi (1:32:30)	"[Camera operator], it looks like the cub might be creeping up on here again" (1:32:23)	LS cub pouncing on Thandi (1:32:30)	Positive: Guide's laughter and, "Wonderful, wonderful stuff" (1:32:39)	Let's see if the cub doesn't do an almighty pounce here (1:32:28)
Playfulness 5	MS cub jumping (1:32:40); jumps for joy	"I love the way this cub just jumps for joy; it's done it a couple of times today" (1:32:48)	MS cub jumping (1:32:40)	Positive: I love the way...	
Hardship/ motherhood 1	nightmare; tiring business, being a mother; imagine how much work she'd have then?	"Tiring business, being a mother" (1:32:52)	MS cub playing with Thandi (1:32:45)	Negative/challenging: "Even this one seems like a bit of a nightmare" (1:33:03)	"Imagine if she had two cubs, and sometimes leopards will even have three! Imagine how much work she'd have then!"
Cute 7	Too sweet for words	I couldn't agree more, you've just mentioned that this is too sweet for words, and it	We've been completely spoilt this morning; All the shots of the cub playing with Thandi	Positive: "Too sweet for words"	The good news is it's not over yet, it looks like they're going to set up shop here for the rest of the morning

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		really is (1:33:24)			
Playfulness 6	playful; next attack; little pounce; lots of energy	...who knows how long they'll be playful for, but for now it looks like this cub still has lots of energy...It looks like it's planning it's next attack...	LS cub getting ready to pounce on Thandi (1:33:40); MS cub pouncing on Thandi's head (1:33:41)	Positive: Guide's laughter and, "That was a very good little pounce" (1:33:46)	
Support 1	"You're doing a great job"	Sorry, we are using the bush walk camera so it's taking a little longer to do all these things...	Sorry, we are using the bush walk camera...	Apologetic: "Sorry"	[Camera operator] is trying to multitask with his hands like you've never seen before (1:35:22)
Uncertainty 1	But I'm uncertain; not certain as to what that was	But I'm not sure... So, I'm not certain as to what that was.	I couldn't see the colors on the back very well because of the sun, and we couldn't go underneath the tree because the antenna was going to hit it and knock the bird off (1:35:42)	Positive: I like to see things that I'm uncertain as to what they are (1:36:18)	But you can send your screenshots through and we can have a look a little bit later (1:36:04)
Cute 8	Incredibly cute little fur ball	We are not too interested in the birds at the moment...	...and that is due to the fact that we have this incredibly cute little fur ball right in front of us (1:37:55)	Positive: implied	
Playfulness 7	Attacks of playfulness	"This cub's really loving this log" (1:38:51)	It keeps heading back to the log and launching its attacks from		

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			there... “attacks of playfulness” (1:38:58)		
Lurking/lying low 1	lying low; lurking	A beautiful, beautiful young male leopard [Thamba], who tends to be camping out a lot on Djuma at the moment. I think we’re actually missing him quite a bit, I think he’s spending a lot of time on the northeastern corner of our property (1:39:29)...	The reason why I think he’s lurking there is that we’ve seen him a number of times in similar kind of areas, and a young male leopard like Thamba, especially with lots of big males in the area and a territorial dispute taking place...he’ll be lying low in an area where those two are not spending too much time (1:40:00)	Not ideal: So, smaller areas than a leopard would normally traverse	
Cute 9	MS cub peeking over a branch (1:40:38)	“There’s that little head peeking over” (1:40:38); MS cub peeking over a branch (1:40:38)	Here comes the cub again...using the cover to stalk up to mom (1:40:20)	Positive: Guide’s laughter and, “Too cute” (1:40:47)	You can’t stop out in the open like that, you’ve gotta continue your attack! Oh, and there it is, the tail (1:40:56)
Agitation 1	There was a little snarl there; There was a little, kind of, snarling huff	“It looks like mom is getting slightly less playful as it starts to heat up” (1:41:05)	... as it starts to heat up; Why guide thinks so: “There was a little snarl there as the cub came back onto the		Send the cub away: Oh, there was a little, kind of, snarling huff that sent the cub off in the opposite direction (1:41:25)

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			scene” (1:41:07)		
Practice 1	You need to practice that move again.	“Oh, that wasn’t very graceful”	MS cub jumping onto log and falling (1:42:56)	Funny: As evidenced by guide’s laughter.	“You need to practice that move again” (1:43:00)
Pet 1	domestic cat; many similarities to a domestic cat	Do domestic cats and leopards share any of the same behavior... Judging by their [the leopards’] behavior this morning, it’s fairly cat-like, and I wouldn’t think it’d be hugely different to a domestic cat...	... in terms of the way they move, the bonds between mother and cub, the playfulness between mother and cub, I think will be very similar (1:43:58)		“You tell me”
Rest 1	“lie down in the shade”	Sadly, as this poor other vehicle’s arriving on the scene Thandi’s getting up and mobile again (1:44:27). But I’m confident she’s just going to lie down in the shade...	... because I’m confident this is gonna be where she stashes the cub for the next short while, until she decides to head off hunting again (1:44:44)		Hopefully she’s successful on Djuma, and then takes the cub back to a kill on Djuma that we can then go and enjoy witnessing (1:44:54)
Danger 4	you can see how her ears are twitching and kind of alert; double-check; possible threats; threats that could pop up at any moment	It seems like she also might be listening to something: you can see how her ears are twitching and kind of alert (1:45:15)	Maybe it was something she just kind of heard down there and wanted to double-check what it was? Just to make 100% certain that there’s no issues; no		... make 100% certain that there’s no issues; no possible threats

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			possible threats. “Even though it’s a very peaceful and tranquil scene here, there are threats that could pop up at any moment” (1:46:08)		
Playfulness 8	CS cub pouncing on Thandi (1:45:40); MS cub biting Thandi’s foot (1:45:46)	CS cub pouncing on Thandi (1:45:40); MS cub biting Thandi’s foot (1:45:46)	CS cub pouncing on Thandi (1:45:40); MS cub biting Thandi’s foot (1:45:46)		
Excitement/ action 3	then we saw the flapping of an elephant’s ears as he chased the kudu off	We just stopped to look at a flower...and saw some kudu moving...and then we saw the flapping of an elephant’s ears as he chased the kudu off (1:46:40)	... because the kudu move quite stealthily through the undergrowth, and elephants don’t like to be surprised	Positive/funny: Guide’s laughter	“So he [elephant] had a bit of a fright, he chased the kudu off, then he cooled right down again” (1:47:09)
Awesome/ amazing 18	“That is quite something;” “it is immense”	But look how thick the vegetation is here, folks, it is immense. If we had not stopped to talk about a flower, we would not have seen the flapping of elephant’s ears, let alone the kudu (1:46:49)		Impressive: “So that’s quite something” (1:47:04)	

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Playfulness 9	MS cub getting ready to pounce (1:47:46); MS cub pouncing on Thandi's head (1:47:51); playful happiness	No major updates, really... "more of the playful happiness"; MS cub getting ready to pounce (1:47:46); MS cub pouncing on Thandi's head (1:47:51)		Priceless: "Sorry guys, I just had to snap a few pictures of that. Even though I'm not supposed to, forgive me" (1:47:53).	Take pictures: "Sorry guys, I just had to snap a few pictures of that. Even though I'm not supposed to, forgive me" (1:47:53).
Agitation 2	Oh, an interesting sort of snarl from Thandi there; MS Thandi snarling (1:48:05)	Oh, an interesting sort of snarl from Thandi there; MS Thandi snarling (1:48:05)	"...maybe it's got to do with the fact that there's a second vehicle on the scene" (1:48:13)... hard to be certain.	Neutral: "That's interesting..."	
Playfulness 10	MS Thandi and cub playing (1:48:35)	Here it comes again...		Positive: "Too good to be true"	
Individuality 1	"all of them are their own individual"	"...and it's the same with wild animals: there are no set rules, all of them are their own individual" (1:49:48)	With all of these questions, hmm, I can't emphasize enough that if we think of us as humans, our own species, it's like saying, 'How long will a baby blue human baby's eyes stay blue?' And you answer will be, 'Well, it depends.' And it's the same with wild animals.		I guess that may help one's train of thought with wildlife-related questions: they can often be related to us as humans (1:50:02)

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Playfulness 11	playful	Yes, you're right, the cub is very full of it this morning. I don't think I've ever seen it so playful (1:50:17)	I guess it's kind of a combination of the fact that it's growing and becoming bolder and more confident...	... "But yes, this morning has been absolute, pure joy" (1:50:30)	
Break 1	May as well take a moment just to breath	"May as well take a moment just to breath..."	"...I've been chatting non-stop for just about two hours now" (1:50:54)	Funny, as evidenced by guide's laughter	May as well take a moment just to breath
Surprise 1	MS Thandi jumping as the cub pounces at her (1:51:15)	MS Thandi jumping as the cub pounces at her (1:51:15)	MS Thandi jumping as the cub pounces at her (1:51:15)	Funny, as evidenced by guide's laughter	
Terminology 1	termed; call	[Viewer] no, we will not call leopard cubs kittens.	I'm not sure where the divide becomes...I think all of the big cats' youngsters are termed cubs, and the smaller cats like serval, caracal, I think those would be termed as kittens	No big deal: "But I mean, at the end of the day I think everyone will know what you're talking about" (1:51:47)	
Awesome/ amazing 19	marvelous; absolutely magnificent specimen	"We have got ourselves a marvelous tree over here" (1:52:20)	"It's an absolutely gorgeous specimen of a torchwood" (1:52:34)	"Absolutely magnificent specimen; it's probably it's probably one of the best specimen of torchwood that I've seen" (1:54:13)	
Human Use 2	and have been known to be used very	It [torchwood tree] produces a very nice little pod...and	So they're very, very flammable	Positive: tone of voice	... you can put in the bottom of a paper bag. You can

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	similar to little tea lights	the pods are actually flammable, and have been known to be used very similar to little tea lights that you can put in the bottom of a paper bag. You can actually light them, and they will burn (1:52:40)			actually light them, and they will burn
Human Use 3	It is a ritualized emetic if you use the roots; it is a good way of purging yourself	It is a ritualized emetic if you use the roots...	...so by taking the roots, it'll cause your body to vomit (1:53:05)	Useful: "It is a good way of purging yourself" (1:53:09)	
Scarification 1	scarification	In Zulu culture it [torchwood roots] was very well used in strengthening the body through scarification (1:53:15)... The Zulus get their witch- doctor to cut them... generally on their chest...someti mes you find scars on their face or back...and then they'll gauge that [product from the torchwood	...they believe that to be a strengthening agent (1:53:42)... a lot of cultures use a talisman or a medallion of some sort...and they believe that will strengthen them...and their mindset believes it so much that they can go into battle, or any form of physical combat, with absolutely strength and certainty; believing that	Positive: Guide's excited tone of voice.	

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		seed] into the wound...this was something done a long time ago...almost like a talisman	what they've done is for the betterment of their being (1:54:06)		
Awesome/ amazing 20	"Absolutely magnificent specimen"	"Absolutely magnificent specimen; it's probably it's probably one of the best specimen of torchwood that I've seen" (1:54:13)... definitely one of the biggest ones I've seen	This one obviously got to a height before the elephants had much of a say in the matter; it got passed that browsing height and it is doing a marvelous job (1:55:07)	Positive: "Absolutely gorgeous" (1:54:21)	
Human Use 4	we used to use them as decoration in the camps	In my hands are the pods of the <i>Faedherbia albida</i> ...we used to use them as decoration in the camps (57:03)	As they start to ripen they go different colors		
Dry Season 1	dry season; most of the trees lose their leaves	These (Anna tree pods) are what the animals feed on during the dry season in Zambia.	Because most of the other trees lose their leaves...and the rest of the trees and the grass disappear...so there's almost nothing for the animals to eat...but the Anna trees like to grow near water, so they grow along the banks of the	Positive: They're really, really, really good in terms of fodder	So all the animals move to the banks of the Zambezi River...if you're lucky enough to swim quite well you can swim to the islands...other wise, you have to rely on eating these pods (1:58:33)

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			Zambezi River...		
Beauty 10	The view is just sensational; beautiful	But we wanted to stop here because the view from here is just sensational (1:59:38)	“But as [Camera operator] pans out there you’ll just have a look at how beautiful this landscape that we are perched on is” (1:59:59); VLS tree- covered escarpment (2:00:09)	Positive: “Absolutely stunning” (2:00:02)	“...you’ll just have a look at...”
Welcome 3	welcome to the show	“[Name] new viewer, welcome to the show” (2:00:15)		Positive: “It’s wonderful to have you on the show” (2:00:43)	“Please, feel free to send more comments and questions through (2:00:45), we’d love to educate you and tell you all sorts of wonderful things” (2:00:48)
Science 1	So quite a nice, easy scientific name to remember	“Very nice scientific name to remember...”	...because Era, all of the lovegrasses, Era was the goddess of love, so all of the lovegrasses are named after Era, so Eragrostis, and this one, because of the gummy stickiness, is called gummiflua (2:02:15)	Positive: “So quite a nice, easy scientific name to remember” (2:02:18)	

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Science 2	It doesn't look very wet on the surface, but by finding grass like this here, it is a very good indication that water comes down through the sandy section, hits the clay, and then pushes up	"It doesn't look very wet on the surface, but by finding grass like this here, it is a very good indication that water comes down through the sandy section, hits the clay, and then pushes up" (2:03:19). "And that's what this band of silver cluster-leaves also is indicating"	Cause essentially what happens is that, you've got the silver cluster-leaf band, and I've said this before, but where the soil meets, where the sand meets the clay layer, it forces water to the surface. And a plant like this <i>Eragrostis</i> , this gummy grass, grows in the flay-like or marsh-like environment (2:03:09)	Positive: "So, quite a nice thing to see" (2:03:26); "Fantastic. That was a nice little view, a nice little explanation of the gummy grass" (2:03:47)	"But there are small little signs and indications that if you pay attention to, you can see" (2:03:38).
Competition 1	competition for the water resources there; outcompete	What tree species in this area requires the most space to grow? I don't know... The marulas take up quite a bit of space, they don't seem to have too much growing in underneath them... Along the riverine areas you have large jackalberries, large leadwoods, that require a fair bit of space. But	But then you also have lots growing underneath them, purely because of the competition for the water resources there (2:04:45)... and it's purely got to do with the soil that they're able to grow like that, but they kind of outcompete any other species growing in that area (2:04:58)	"So, I'm not sure if I'm answering your question very well?" (2:05:05)	

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		then you also have lots growing underneath them, purely because of the competition for the water resources there...But we do find clusters of silver cluster leaves, and it's purely got to do with the soil that they're able to grow like that, but they kind of outcompete any other species growing in that area...			
Excitement/ Fast 1	they are so quick and fast-moving	There are birds all over the place today folks. I wish I could capture all of them for you on the camera, but they are so quick and fast-moving that I can only just train my binoculars to them before they disappear (2:05:30). And [Camera operator], it is a hard job trying to keep up with my birding...		Positive: "But we love it..."	"...and we will continue to bring you these beautiful birds" (2:05:40)

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Abundance/ lushness 1	so green and so lush; nearly lost myself in the vegetation	What season is it there? It is our summer months... we're right at the end of our summer (2:06:03)... But, the vegetation is looking great (2:06:23)	...and that is why it is so green, and so lush (2:06:11). This is the normal state of affairs for this time of the year, barring when we don't have drought.	Positive: "I did a walk yesterday, nearly lost myself in the vegetation, it was so fantastic" (2:06:31)	
Seasonality/ summer 2	We get our rains during the summer months	'We get our rains during the summer months, and that is what provides all the forage and the food for everything that survives here...as soon as sort of March/April passes then we don't expect any more rain...then we go into a long dry period' (2:06:52)		Neutral/Just the way it is: 'The dynamics of the savannah are geared to that, it is a summer rainfall environment, relatively low...' (2:07:15)	'...until spring, which, sometimes rain can come as early as September (2:07:00)... but it doesn't happen often and it's not huge amounts that turn this environment over...'
Awesome/ amazing 21	"marvelous forests"	'We do have forests farther to the west towards the mountains and the escarpment...' (2:07:41)	'...It's where the rain shadow accumulates all that rainfall throughout the year and we get marvelous forests up there' (2:07:49)	Positive: "marvelous forests"	
Relaxed 1	they never seem to be very relaxed; "But these two seem quite	'They [warthogs] never seem to be very	'I've made this comment before, that warthogs I think watch	Positive/surpri sed: Guide's tone of voice as he says, "But these two	

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	chilled” (2:09:06); “They’re quite relaxed” (2:09:33)	relaxed’ (2:09:05)	<i>SafariLIVE</i> because they know we follow leopards’	seem quite chilled” (2:09:06)	
Mystery/ confusion 3	“unusual”; “I wonder what it was doing in a thicket in the ground?”	‘We were driving on Chitwa a few moments ago and I saw this big raptor fly quite low...I’m trying to work out if it was the fish eagle...I wonder what it was doing in a thicket in the ground’ (2:10:13)	‘We do know that they scavenge when the opportunity is available, so perhaps it was something small...I can’t imagine why else a big bird like this would be sitting in a very grassy and dense area with lots of trees’ (2:10:29)	Bizarre/ strange: “Unusual”	
Cheeky 2	Cheeky	‘I’ve just heard some squirrels alarming...I know not to trust the squirrels, cause they’re cheeky, and they often just alarm for no reason’ (2:10:46)	‘I don’t know why; I feel like they’re maybe a bit temperamental at times and they just start shouting for no reason’ (2:10:55)... ‘But I suppose the squirrel’s got a lot more things trying to go after it’ (2:11:20)		‘So, we’ll have a little look and give the squirrel the benefit of the doubt: maybe it’s telling the truth today...I’d honestly rather trust a waterbuck or an impala alarming over a squirrel’
Search/ investigation 1	I think we’re gonna go and start investigating around here; Maybe we’ll find young Hosana; we’ll have a look at	‘So, what I was saying to you is that I think we’re gonna go and start investigating around here. Not quite in	‘Maybe we’ll find young Hosana tucked away, curled up, just having a little snooze (2:13:55)’ ... ‘I have yet to do a birding	Positive: “it’ll be nice...”	‘If that fails then we’ll have a look at the hippos, and see what other birds we can find around the dam’ (2:14:04)

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
	the hippos, and see what other birds we can find	and around the rooms, but there's some other nice forested roads behind the dam...' (2:13:48)	drive since being back, so it'll be nice to refresh my memory and try and test myself' (2:14:15)		
Thick bush 3	very, very thick bush; impenetrably thick	'It's difficult to know what they're doing at the moment because they're in some very, very thick bush (2:14:37)... Even with our little vehicles that can go just about anywhere we sadly can't get you any views of where they're chilling out' (2:15:06)	'because they're in some very, very thick bush' (2:14:37)... but it's impenetrably thick...	Alright: 'But we've had such a wonderful morning that I think we'd be greedy to want anything more' (2:15:11)	'We're gonna head off and head back later this afternoon...the y're probably gonna spend the rest of the day here.'
Breeding 1	they should start breeding soon; laying eggs	'Look what we have found...it's my first white-backed vulture nest on Djuma... There's a male and female pair that's probably just fixed up this nest...'	'...because they should start breeding soon (2:16:02). They should start laying eggs around now...'	Positive: That is quite a nice thing to see (2:16:17); "It's marvelous to see" (2:18:48)	
Competition 2	definitely outcompetes any of these other vultures	"The lappet-faced [vulture] definitely outcompetes any of these other vultures	Lappet-faced vulture is, "a whole 10 cm taller" than the white-backed		

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		when it comes to feeding” (2:18:45)	vulture (2:18:36)		
Wingspan 1	What is the wingspan of the vulture; The reason for their very large wingspan	‘What is the wingspan of the vulture? I’ll have a look at my app, but it doesn’t actually give me any wingspan here’ (2:19:08)	‘The reason for their very large wingspan... they’ve got very big, broad wings, which enable them to just coast on the sky...pick up the air currents which help them to fly with absolutely no effort at all’ (2:20:33)		“Any of the viewers out there might know the wingspan of the white-backed vulture? (2:19:27)” I might have it in my other, beautiful raptor book...if you’ll just give me a moment.
Human-wildlife interaction 2	had to reposition all of a sudden because we’re being charged by a Speke’s hinged tortoise; I’m gonna have to move it	‘I had to reposition all of a sudden because we’re being charged by a Speke’s hinged tortoise that’s coming at us quite quickly’ (2:21:00)	“I think it wants to come into our shade” (2:21:04)		I’m gonna have to move it
Disgust/smelly 1	doesn’t smell particularly pleasant; urine	‘As most of you know, you should never pick up tortoises...because in their bursa sack, which is where the store water and urine, when they get a fright they’ll use it as a defense mechanism and expel it and it doesn’t	‘... when they get a fright they’ll use it as a defense mechanism...’	Negative/smelly: “...and it doesn’t smell particularly pleasant”	‘...if you do need to absolutely pick up a tortoise...do it gently and don’t be aggressive... just go to it gently’ (2:22:04)

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
		smell particularly pleasant (2:21:39)			
Human- wildlife interaction 3	It literally changed its course and it's coming straight towards us	'It literally changed its course and it's coming straight towards us...it's not afraid of humans...I just want to make sure it doesn't go under the car, because then we're not going to be able to go anywhere' (2:21:58)	'I don't know why it's coming to the car like that?' (2:22:46)	Funny/ surprising: 'Surprised by a tortoise, have never had to change my route because of one before [laughs]' (2:23:08)	'...it's gonna keep coming to the car, so we're gonna move away' (2:22:23)
Dehydration 1	it'll just find a little bit of water to quench it's thirst	'It'll [tortoise] be okay...'	Why it'll be okay: 'Like I said, it didn't release everything from that bursa sack' (2:23:15)	Neutral/Okay: It'll be okay	"...it'll just find a little bit of water to quench it's thirst"
Heat 2	And it really is heating up quite considerably	'We've stumbled upon a herd of elephants. They're tricky to see, they're all kind of seeking shelter.'	'And it really is heating up quite considerably, so I think a lot of the animals are going to be winding down and just moving a bit more slowly' (2:23:53). 'Elephants also love sleeping, specifically in tamboti thickets. I		s'o I think a lot of the animals are going to be winding down and just moving a bit more slowly (2:23:53)... 'I think it's mainly because of the deep shade that's created by the canopy structure of the tambotis...'

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			think it's mainly because of the deep shade that's created by the canopy structure of the tambotis.'		
Bully 1	class bully; school bully	'This one we're looking at is a bit of a class bully, it appears' (2:24:24)	'At the moment the bully appears to be bullying one of the trees in front of us' (2:24:30)		'It's actually just lied down, the school bully.'
Flatulation 1	flatulating; flatulate; fart	'He's [school bully] also flatulating as we speak.'		Funny, as evidenced by Scott's laughter	
Beauty 11	beautiful tune	'We've got a fork-tailed drongo in the tree, before I even saw it I heard it, it was singing its beautiful tune' (2:25:36)	'I wonder what had it excited earlier?' (2:25:40)		'But it seems to have settled down now.'
Awesome/ amazing 22	the most awesome call	'Now, fork- tailed drongos have got the most awesome call...'	'Why awesome: It's quite mechanical...it really almost sounds like no other bird call, really' (2:25:51)		
Luck/amazing 1	I count myself very lucky to have heard something like that; How amazing is that?	'I once heard a fork-tailed drongo mimicking a black-backed jackal...I count myself very lucky to have heard	Why lucky: '...because since then I've only ever heard them [drongos] mimicking other birds' (2:26:35)	Positive: "How amazing is that?" (2:26:16)	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
		something like that...			
Exploration 1	new road; I haven't been down it	'We're slowly venturing to the new road. I haven't been down it'	'...but [Camera operator] was telling me how beautiful it is, so at some point we'll go down there and explore' (2:27:20)	Positive: '[Camera operator] was telling me how beautiful it is'	'so at some point we'll go down there and explore' (2:27:20)
Awesome/ amazing 23	which is quite amazing	'I don't have a direct bird, but actually one just landed on the tree there' (2:29:11)	'...one decided to grace us with its presence' (2:29:17)	Positive: "which is quite amazing"	
Conservation/ overpopulation 1	there's been a huge decline in large, mature knobthorns in the Kruger National Park in the last 20-25 years; and that has been attributed to the number of elephants in the population	'What I want to talk about is the fact that that tree is extremely dead, and it was a knobthorn... there's been a huge decline in large, mature knobthorns in the Kruger National Park in the last 20-25 years' (2:29:55)	'The tree was killed potentially, most likely, by elephants in its search for the cambium bark at the base of the tree (2:29:44)... and that has been attributed to the number of elephants in the population' (2:30:01)	"A natural part of the process, natural part of the ecosystem" (2:32:33)	"The ecology out here does not stop, and it is important to pay attention to it all" (2:33:18)
Heat 3	heating up; it is hot	'The sterling wren-warbler is telling us that it is heating up...'	'...and it is indeed, I can feel it' (2:31:26)		"As the warbler tells us it is hot, we would like to get some wind in our hair" (2:33:25)
Abundance 1	it is a microcosm of ecosystems; there are huge amounts of insects living	'That tree though, although it is dead, it is a microcosm of	'You saw the barbet jumping in there, I showed you woodpeckers yesterday,		'And it'll slowly break down into...'

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
	within the wood and underneath the bark of this tree	ecosystems’ (2:30:38)	there are huge amounts of insects living within the wood and underneath the bark of this tree’ (2:30:47)		
Safety 1	Vultures and large raptors, including the bateleur, like to nest in trees like that one when they’re alive, because it is the most difficult tree to climb, as a predator	‘Vultures and large raptors, including the bateleur, like to nest in trees like that one when they’re alive...’	‘...because it is the most difficult tree to climb, as a predator, as a baboon, it’s got thorns everywhere’ (2:31:50)		‘But when they are dead they are much easier’
Beauty 12	They do look quite majestic, and quite lovely in the landscape	‘With the right light, and the sunset behind it these kinds of trees are fantastic for photography’ (2:32:13)	‘They do look quite majestic, and quite lovely in the landscape’	Positive: ‘They do look quite majestic, and quite lovely in the landscape’	‘[Camera operator], I know, loves to set up a setting sun behind a tree like that’
Exploration 2	we are taking the opportunity to explore	‘...and we are taking the opportunity to explore’	‘[Guide] is obviously unable to leave a beautiful leopard sighting...’		‘So we’re going to keep checking the water points, and all the roads’
Heat 4	But I must say, it is heating up quite considerably	“Beautiful, beautiful day. But I must say, it is heating up quite considerably” (2:34:35)			‘So, looking forward to getting into some shade, having some breakfast’ (2:34:42)
Uncertainty 2	so I’m too clued up; so I’m not too sure	‘Any updates on Shadow and her daughter Not Barbara? (2:34:50)... Not that I’m	‘...but I have been out of town and only just got back a few days ago...so I’m too clued		‘I’m not sure if any of you guys or any of the other Safarians may know what’s going on with

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		aware of...but I have been out of town and only just got back a few days ago'	up...Shadow's territory also overlaps other properties, so we can't always go and see her...so I'm not too sure'		Shadow and Not Barbara? (2:35:36)'
Danger 6	he may get killed by	'Not Barbara's at an interesting age...just over a year old now, which means she could be safe in regards to Hukumuri, a big, new, male leopard that's pushing into her mother's territory, or she may get killed by...she male already have been killed by him for all I know' (2:36:06)	'Hukumuri, a big, new, male leopard that's pushing into her mother's territory...' "because there is this territorial shift and takeover currently happening" (2:36:22)	Neutral/ Interesting: 'Interesting times ahead for the leopard population or leopard dynamics on Djuma' (2:36:16)	
Territoriality/ dominance 1	his territorial shift and takeover; only a matter of time before Hukumuri completely overthrows Tingana	"because there is this territorial shift and takeover currently happening" (2:36:22)... I find it interesting that it's happening in almost the same way as it did three years ago... I think it's only a matter of time before	'In the last 2-3 months, from the last time we've seen the Hukumuri male he's been spending more time here on Djuma and pushing deeper and deeper into Djuma' (2:37:22)	Negative: 'And I'm hoping like crazy that Hukumuri doesn't get ahold of Thandi's cub. Because if he does, that will be the end of that' (2:37:33)	

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		Hukumuri completely overthrows Tingana' (2:37:06)			
Wet road 1	but unfortunately, it's very wet down here; getting very boggy	'We came down to do this road, but unfortunately, it's very wet down here. I heard the other guides talking about a spot down here that was getting very boggy, with deep ruts...'	'...with all the rain that we've had'	Negative: "unfortunately"	'So I don't think we're gonna take the risk with all the rain that we've had. We'll let it dry' (2:38:22)
Conservation/ habitat loss 1	because of habitat loss, and because... there are fences up that restrict them from migrating naturally	'What happens if all the water dries up, where do the fishing birds go?... 'The problem comes in for the animals that don't have wings" (2:39:25)	'What would've happened many years ago is that the animals would've gone towards the mountains... but they can't do that anymore because of habitat loss, and because... there are fences up that restrict them from migrating naturally' (2:39:58)	Negative: 'But they can't do that anymore, unfortunately' (2:39:48)	'Luckily for them they've got wings, so they can just fly in search of a new spot' (2:39:04)
Heat 5	It's got so hot; it's starting to feel humid as well	"It's very quiet" (2:40:01)	"It's got so hot" (2:40:05)		'So most of the animals are going to be moving out of the sun now, starting to feed closer towards the drainage

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					lines...under some of these shaded trees' (2:40:28)
Sun 1	I can feel the sun already, already burning down on my skin; sun protection; sun screen	"I can feel the sun already, already burning down on my skin" (2:41:11)		No big deal: 'But, because we're in March the sun's not going to be too dangerous right now'	'But, because we're in March the sun's not going to be too dangerous right now... nothing a little sun protection can't fix' (2:41:23)
Heat 6	hot and humid conditions (2:42:21)	"Most certainly [It's warmer than 22° Celsius]"	'The humidity levels are quite high also, the stickiness and mugginess of the low veldt make it tricky to bear... obviously the temperatures are quite high also, but I find dry heat is easier to handle than hot and humid conditions' (2:42:21)		"I'm looking forward to one or two big storms"
Drought 1	The area also is desperate for more water	"I'm looking forward to one or two big storms; we haven't had nearly as many as we would normally have during a summer" (2:42:30)... 'The area also is desperate for more water... It certainly is a	Why the area is desperate for water: "We haven't had nearly as many as we would normally have during a summer" (2:42:30)		'... unless we get a lot more rain' (2:42:49)

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
		reality [waterholes drying up] unless we get a lot more rain' (2:42:49)			
Climate Change 1	But the way the global weather patterns are at the moment, things are shifting and changing so much...	'But the way the global weather patterns are at the moment, things are shifting and changing so much that who knows, maybe we'll have a rainy winter. Even though that's technically not supposed to happen.' (2:43:02)	'I feel that the world over is experiencing quite different weather conditions' (2:43:09).		
Spoiled/ abundance 1	We're really spoiled, there's a huge amount of leopard around at the moment	"We're really spoiled, there's a huge amount of leopard around at the moment" (2:43:36)	'We could bump into Shadow and Not Barbara in this area, as well as the Hukumuri male, those three leopards frequent this area. Hosana as well, a young male... there's a huge amount of leopard around at the moment'	Positive: 'We're really spoiled...'	
Thirst 1	Seed eaters have a very, very high need for water	"Seed eaters have a very, very high need for water" (2:44:51)	"Seed eaters have a huge requirement for water, because the seeds that they feed on are	Neutral/necess ary: "Which is very, very important for their survival" (2:45:43)	'So, it's a very common practice to find, especially at this time of day, as it's warming up,

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			very dry and lack water” (2:45:11)		as the predatory birds are at their lowest, ... you’ll find all the small seed eaters accumulating in large flocks ... coming down in groups onto water to have a little bath, have a little drink, and then off they go again (2:45:40) ... So having a little thorn tree next to a water hole makes their lives easier.’
Drought 2	I believe [Guide] says Djuma is desperate for water. I think we could do with more water	“I believe [Guide] says Djuma is desperate for water. I think we could do with more water, I think the last rains have done very, very well...” (2:46:00)	‘But we could always do with more. The dams could do with filling up, and all of these small puddles here will last a few more weeks before they dry up...’ (2:46:08)		“But the rain would be nice, and I feel like there might be more on the horizon” (2:46:19)
Beauty 13	magical	LS Treehouse Waterhole and bush (2:47:52)		Positive: “Magical” (2:47:52)	
Search 1	I’d like to get onto Shabam Road, and go and check for any sign of the Hukumuri male	‘Alright, we need to continue. I’d like to get onto Shabam Road, and go and check for any	“That’s one of his most usual pathways of entry and movement” (2:48:08)		‘So I just want to check carefully and see if he hasn’t used this, kind of, pathway again.’

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		sign of the Hukumuri male' (2:48:04)			
Hunger 1	Well now I'm hungry	'Well now I'm hungry, I wasn't hungry, I might have to have another Marula...'	Guide's mention of breakfast at 2:49:35	Okay: "I'm definitely not starving, that's for sure."	'I might have to have another Marula...'
Mystery 1	So, a bit of a mystery	'I heard on the radio that there are some more dogs (2:50:08)... But now that they say they've got dogs in the west, I've wondering if the dogs that were seen at Nkhoru may be a different pack of dogs... So, a bit of a mystery'	"...because, I didn't see any more tracks running back this way" (2:50:48) ... 'I didn't see anything this morning, but it was quite dark so it's easy to miss tracks...'		'So I just thought maybe we'll head down there and see if they've crossed back on the property' (2:50:34)
Mystery 2	I don't really know where Shadow likes to hang around these days	'Although I don't really know where Shadow likes to hang around these days...'	'With Karula's, uhh, disappearance, there was of course a lot of shuffling around: she could've ended up anywhere' (2:51:33)		
Awesome/ amazing 24	he's huge, absolutely huge	'Which is the biggest leopard in the area at the moment? Two contenders: the Anderson male... Mbvala, his	'... I always used to mistake him [Mbvala] for a lioness... he's huge, absolutely huge (2:52:35) ... but in the	Positive: "I'd love to see him [the Anderson Male]"	'One day I'll get to see him and I'll be very, very happy' (2:53:06)

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		nickname is Vin Diesel (2:52:24) ... I always used to mistake him [Mbvala] for a lioness... he's huge, absolutely huge (2:52:35) ... But in the area that we're driving in, it's of course gonna have to be the Anderson male'	area that we're driving in, it's of course gonna have to be the Anderson male, because Mbvala's territory is too far away'		
Luck 2	So, maybe we'll get some luck today	'We're on Triple M now, and this is where I always bump into Shadow...'	... "she's always walking down this road" (2:53:12)		"So, maybe we'll get some luck today" (2:53:31)
Awesome/ amazing 25	amazing sighting; magnificent	"Remember that amazing sighting we had where she was carrying that scrub hare?" (2:53:15) ... We had that entire sighting to ourselves for ages...it was magnificent	'We had that entire sighting to ourselves for ages...it was magnificent'	Positive: "It was magnificent"	
Content 1	I'm not really too bothered, though,	'I'm not really too bothered, though, that I haven't seen any big cats today'.	'It's been quite nice to do a little bit of birding, I'm glad we found the pods from the Anna tree ...' (2:53:39)	Positive: '... so that was quite nice' (2:53:44)	"Yea ... so we'll see" (2:53:45)
Abundance 2	So very fortunate at the	'And with all of the leopards	'There's four different	Positive: "So very fortunate	"Long may it last" (2:57:05)

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	moment with the density of leopards	around at the moment, it's almost impossible, well not impossible, but it's almost foolish to try and take a guess as to what's going on' (2:56:18)	makes around ... well, possibly five ... and Shadow, she's been moving through the area, Kuchava sometimes comes into our southeastern kind of corner, Thandi, the Ingrid Dam Female ... nine leopards on what is a tiny, tiny piece of property' (2:56:45)	at the moment with the density of leopards" (2:57:01)	
Helpfulness 1	I'll be happy to go especially there for you	'Has anyone checked Genet Jackson's cavity in a tree recently?' (2:57:21) ...	'I'm not too sure, I've been away on leave for a couple of weeks'	"It'll be worth popping back in there at some point" (2:57:56)	'Next time you're watching, let us know a little bit sooner, a little earlier on on the drive, and I'll be happy to go especially there for you' (2:58:05)
Baby/infant 3	You want to know if baby elephants will ever, kind of, suck the end of their trunks?	'You want to know if baby elephants will ever, kind of, suck the end of their trunks? (2:59:54) ... Kind of, yes' ...	'... more often than not I've seen them kind of chewing on the end of their trunk. I guess it could be termed sucking the end of their trunk.' (3:00:13)		
Thick bush 4	He's heading off into quite a thick area...	'He's [young, male elephant] heading off			'So let's see if I can get is a little bit further

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		into quite a thick area, so ...' (3:00:35)			forward,' "and snipe another view of him" (3:00:39)
Gratitude 1	I'd like to just say a big thanks	'There's not much time left, so I'd like to just say a big thanks,' "for jumping on board this live, safari, extravaganza" (3:00:52)	'There's not much time left, so ...'		'Be sure to try and tune in this evening if you would like to spend some more time with Thandi and her cute little cub' ... (3:00:59)

Planet Earth II Frames Identification Spreadsheets

"Jungles" Frames Spreadsheet

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Description	Causal Analysis	Moral Judgement	Remedy Promotion/ Action Directive
Eden 1	The Jungle is Eden	The Jungle is Eden. It covers less than 6% of the Earth's surface, but it's home to half the plants and animals on land (1:03); Aerial shots of tropical forests; MS moving downward through the understory (1:18)	"Jungles have just the right amount of light, water, and nutrients, and they have had, everyday, for millennia." (1:16)	Deeply sorrowful, as evidenced by the music and supported by Indri calls.	
Competition 1 (space/food)	the most competitive place on Earth	But to survive here, it [Indri] has to face one	At any one time, a staggering	Beautiful (evidenced by the visuals,	Like every jungle animals, Indri have to

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		major challenge: paradise is crowded (2:05); series of CS of jungle animals (toad on a mushroom, stick insect, chameleon, etc.)	variety of species and countless individuals are striving for space and food	such as VCS side of snake @ 2:39) and sorrowful, as evidenced by music and Indri's calls.	find their own way to find their own way to survive in the most competitive place on Earth (2:41)...
Complexity 1	Jungles are complex places	Jungles are complex places (3:09). Tangled, three-dimensional worlds...	...created by lush, tropical vegetation (3:16)	Spectacular, as evidenced by MS looking up at canopy with bright shaft of light (3:11)	
Built/designed 1	they're built for climbing	90% of the animals here spend their whole lives up in the tree. And each of them has to find its own way of getting around.		Positive, as evidenced by fast-paced, upbeat music.	They [spider monkeys] travel in family groups. With long limbs and a prehensile tail that can grip like a hand, they're built for climbing (4:03)
Danger 1 (heights)	One third of spider monkeys never make it to adulthood	But imagine having to learn these skills as high up as this. One third of spider monkeys never make it to adulthood (4:23)		Negative, as evidenced by lowered tone of voice.	
Baby/infant 1	This youngster; baby music	This youngster is only a few months old. Her future depends on her ability to climb (4:33)	One third of spider monkeys never make it to adulthood (4:23)	Whimsical/innocent, as evidenced by the music.	Playing on a practice tree with her older brother and sister, she's already learning to use her tail as a

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					safety line (4:45)
Playing/game 1	She's keen to join in the game	She's keen to join in the game. But she's the youngest, and, as is the way of things, she's not always welcome.	But she's the youngest, and, as is the way of things	Whimsical/ playful, as evidenced by the music.	So, she chooses her own place to play (5:23)
Danger 2 (heights)	MS baby spider monkey slipping (5:23); This one is for more advanced climbers.	But not all trees are the same. This one is for more advanced climbers.	MS baby spider monkey slipping (5:23)	Whimsical/ playful, as evidenced by the music.	Practice: "Technique? room for improvement." (5:59)
Danger/ heights 3	A fall from here will mean certain death (6:39)	The top of the canopy isn't for youngsters... A fall from here will mean certain death (6:39) ... As she climbs still higher, the branches get thinner and thinner (But father's not looking, and the temptation to join the others is irresistible.	Negative, as evidenced by lowered tone of voice and dramatic music when the baby spider monkey falls.	She'll need to be careful... Her tail has caught her (7:26)
Danger/stuck 1 (heights)	But now she's stuck in mid- air, unable to reach any other branch	But now she's stuck in mid- air, unable to reach any other branch (7:23)	Series of shots of baby spider monkey falling; series of shots of baby spider monkey hanging by her tail.	Father spider monkey = heroic, as evidenced by triumphant music when he comes into frame (7:41). Baby spider monkey = foolish, as evidenced by disapproving, lowered tone of voice when DA says "lesson	Father, however, was watching. He's big and strong enough to form a bridge with his body, so that she can climb to safety.

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				learned” (8:28)	
Abundance 1	finding the right tree can mean a home for life; It’s a perfect place to settle down	And, if you’re small, finding the right tree can mean a home for life... This one tree could provide him with all he will ever need.	He’s only the size of a pencil, and he eats ants... A conveyor belt of food... CS lizard eating ants (9:18)	Bizarre/strange /unsettling – as evidenced by the music, and strange sound effects.	It’s a perfect place to settle down (9:23)
Aggression/ Territoriality 1	This, larger male is the tree’s owner... The owner’s not only intimidating, he’s prepared to battle	Well, it would be, but there’s already someone here (9:37)... The owner’s not only intimidating, he’s prepared to battle (10:16)	This, larger male is the tree’s owner (9:46), and dracos don’t share		Run away, as evidenced by series of VCS of lizards running.
Dead End/danger 1	A dead end	A dead end. Safety is a long way away. LS forest floor from above (10:36) Now he must choose. Fight, or flee? (10:40). CS lizard running along branch from screen left to right (10:42)	A dead end. Safety is a long way away... CS lizard running along branch from screen left to right (10:42)	Heroic, as evidenced by super hero music as lizard glides	MS lizard gliding from below (10:58)
Dragon 1	soar like dragons	Only in the jungle do you find lizards that can soar like dragons (11:09)	It’s a very fast and efficient way to move through the jungle (11:23).	Heroic, as evidenced by super hero music as lizard glides.	
Competition 2 (space/light)	Everything in the jungle has to compete for	Everything in the jungle has to compete for	Only 2% of the sun’s rays reach the	Heroic: evidenced by the triumphant	It has succeeded in doing what

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	space; race for light	space (11:46) ... so even the plants must battle for the light they need to grow... 300 years ago, this Hura tree began its race for light.	ground, so even the plants must battle for the light they need to grow (12:00)	music at 12:21, upward- facing, rising camera angles, spectacular lighting at 12:47, and, "...it's success has given life to others (12:52)"	every tree must do to survive: rise above the gloom of the jungle floor (12:40)
Abundance 2	jungles are home to more species of plants than anywhere else on Earth	... As a consequence, jungles are home to more species of plants than anywhere else on Earth (13:43). And they, in turn, support a wealth of animals.	A thousand plants growing on one, single tree (13:25). Throughout the forest, this story is repeated endless times...		
Competition 3 (food)	competition is at its most intense; all fighting for nectar	In Ecuador, competition is at its most intense. Here, there are a hundred species of hummingbirds alone: all fighting for nectar (14:08)	Here, there are a hundred species of hummingbirds alone... Each flower only has a small amount [of nectar] at any one time, and so it's first come, first served (14:16)	Positive: "extraordinary beak"	A sword- billed's extraordinary beak, however, enables it to reach the places that others can't (15:03)
Drawback/ preening 1	But, having a beak longer than your body does have its drawbacks; Harder still, how do you preen your body feathers?	But, having a beak longer than your body does have its drawbacks (15:48) ... Harder still, how do you preen your body feathers?	Unlike the other hummers, sword-billeds can't reach their body feathers with their beak (16:18)	Strange/unorth- odox: evidenced by whimsical music at 16:32 and series of CS of hummingbirds apparently 'looking' at the sword-	The only option: a good, old scratch (16:31)

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				billed scratching. Also, “It’s a little unrefined, but... (16:53).	
Abundance/ Rain 3, 1	Series of shots of clouds gathering and rain falling.	Jungles are the richest places on Earth because of one remarkable fact (17:21) They make their own weather (17:25). Every day, water rises from the surface of the leaves as vapor; it’s as if the trees breathe out clouds. They gather over the forest, until finally, they burst (17:51).	Necessary, but inconvenient: “Rain is the lifeblood of every jungle (18:10). And all have to do their best to endure the daily downpour (18:23).	And all have to do their best to endure the daily downpour
Exploration/ discovery 1	A place few people have ever explored; We have much to discover...	This is a mysterious world. A place few people have ever explored (19:37).	In some jungles, like here in Brazil, it rains so much that, for part of the year, the trees are almost totally submerged (19:15).	Mysterious: “This is a mysterious world.” ... Positive/exciti ng: “If this forest can hide a new species of dolphin, what else might there be here, awaiting discovery?” (21:07)	Learn more: “We have much to discover about the animals for which this is home” (19:51) ... “If this forest can hide a new species of dolphin, what else might there be here, awaiting discovery?” (21:07)
Unexpected 1	Including some you might never expect to find, amongst trees.	Including some you might never expect to find, amongst trees. (20:00) Here, one and a half thousand kilometers		Beautiful: evidenced by soft, pleasing music and a succession of beautiful shots of dolphins swimming in the flooded forest.	

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		from the sea, are dolphins.			
Blind 1	they have become almost totally blind	In these black, tangled waters, they have become almost totally blind.	...black, tangled waters		So they move slowly, carefully using their sonar to scan the forest floor for fish (20:53).
Abundance 4	Here, food is so abundant, it supports giants (21:28); lush vegetation	Here, food is so abundant, it supports giants (21:28)	At the shallow margins of the flooded jungle, rivers flow through lush vegetation (21:20)	Epic/exciting: evidenced by mighty- sounding music.	
Rulers/ Danger 1, 4 (predation)	And the rulers of these rivers; and kill anything they get between their jaws	And the rulers of these rivers: Caiman (21:51).	They grow to 10 ft long, and kill anything they get between their jaws (21:56).	Dangerous: evidenced by CS caiman's open jaw (21:59)	But there are more artful hunters (22:06)
Competition/ Territoriality/ Ruler 3, 2	But here, he has competition (22:41); He's now in the territory of a female. She has ruled this stretch of river for five years.	A jaguar, the supreme jungle predator (22:26). The river marks the edge of his territory. But here, he has competition (22:41); MS jaguars fighting (22:55)	He's now in the territory of a female. She has ruled this stretch of river for five years. This is her place to hunt (23:20).	Powerful: evidenced by MS jaguars fighting, MS capybara fleeing, and DA's hushed tone of voice.	MS male jaguar exiting screen right (23:07)
Stealth 1	MS stalking jaguar entering river (23:44); "The key is stealth" MS jaguar swimming stealthily (23:58);	MS stalking jaguar entering river (23:44) ... "Capybara are strong, and wary (23:53)" ... "She needs to get to within a metre, if she's to pounce" (24:24)	MS capybara in river (23:39)	Exciting/suspe nseful: evidenced by music and DA's hushed tone of voice.	"The key is stealth" (23:58)

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Abundance/ Ruler 4, 3	Each part of this jungle's edge is ruled by a different queen	She's not the only female here. Each part of this jungle's edge is ruled by a different queen (25:05).	Abundant food: "Few places on Earth have enough food to support so many big cats" (25:20).	Positive/ Beautiful: evidenced by LS jaguar on riverbed (24:58); CS jaguar staring intently with incredible lighting (25:03); MS jaguar pouncing with incredible lighting (25:06); soft, soothing music.	
Powerful/ Awesome 1	MS jaguar fighting caiman (26:45); "Jaguars have the most powerful bite [crunching noises] of any cat" (27:15); MS capybara staring at camera (27:36)	Series of shots of capybara fleeing ... "The male hunts in a different way. Weighing over 130 kilos, it's hard to be stealthy" (26:01). "And with so many other jaguars around, he doesn't bother with wary capybara" (26:11)	Male's size and competition with other jaguars: "Weighing over 130 kilos, it's hard to be stealthy" (26:01). "And with so many other jaguars around..."	Powerful: evidenced by epic music at 26:46; DA's hushed tone of voice; "killer of killers"	He seeks a different prey (26:18) ... "He's become a killer, of killers" (26:45) ... "Jaguars have the most powerful bite [crunching noises] of any cat (27:15). And he knows the caiman's most vulnerable point: the back of its skull" (27:27) ... MS jaguar dragging caiman up riverbank.
Camouflage 1	Series of CS and VCS of well-camouflaged insects and other animals.	Hunters living in the dense understory of the jungle come in all shapes and	The long contest between predator and prey has produced	Unbelievable/ awesome: "Astounding accuracy"	

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		sizes, but they share a problem: how to tell what is a plant, and what is prey (28:16). This is a game of hide and seek that can be won or lost in the blink of an eye.	mimicry of astounding accuracy (29:06)		
Danger 5 (Predation)	Almost everything that walks past here could eat him	A glass frog (30:15). A male, and tiny, no bigger than your fingernail. And almost entirely transparent (30:31). As he needs to be. Almost everything that walks past here could eat him (30:39). Even a cricket.	...and tiny, no bigger than your fingernail	Positive/remarkable: "...one of the most remarkable" (30:03)	And almost entirely transparent (30:31... His best chance is to stay absolutely still, and hope that the cricket looks right through him (30:54).
Father 1	because he is a father	...because he is a father (31:26). And he's guarding some very precious eggs.	For the last few weeks, females, one after the other, have visited him and entrusted him with their offspring (31:45)	Positive: "very precious eggs" and soft, toddler-esque music.	
Danger/ predator 6	But in the jungle, there's always someone out to get you; This wasp is a specialist	There are several clutches [of eggs] on the leaf, and those at the top, the most recently laid, are barely	This wasp is a specialist hunter of frog's eggs (32:22). It's noticed the wriggling tadpoles at the	Wasp = Negative: evidenced by ominous music as wasp appears. Tadpoles = Positive:	But these tadpoles are not as helpless as they might appear (33:11); MS tadpole wriggling free

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	hunter of frog's eggs	a day old (32:02). But in the jungle, there's always someone out to get you (32:09) ... The youngest eggs are the most vulnerable, and he can't guard them all (32:50).	bottom of the leaf (32:29).	evidenced by "incredibly" (33:24).	and falling towards water (33:11); Incredibly, the un-hatched tadpoles can sense danger. And the oldest and strongest wiggle free and drop into the stream below (33:24).
Danger/ predator 7	the wasps' stings could kill him (34:35). Many shots of wasps trying to land on eggs.	The eggs at the top of the leaf, however, are still too young to hatch (33:44). And now, the wasps know they're there (33:49)... Using his own body as a decoy is a huge risk, the wasps' stings could kill him (34:35).	It's noticed the wriggling tadpoles at the bottom of the leaf (32:29) ... Why using his own body as a decoy is so risky: "the wasps' stings could kill him (34:35)"	Wasps = Negative: evidenced by dramatic music when they appear. Frog = heroic: evidenced by, "Using his own body as a decoy is a huge risk, the wasps' stings could kill him (34:35).	But the male's back looks very like the youngest cluster of eggs. And that seems to confuse the wasps (34:05). Many shots of frog kicking wasps.
Danger 8	But in the jungle, just surviving the day can count as a success; remain on guard	He'll have to remain on guard for another two weeks (35:13).	The jungle is extremely dangerous: "But in the jungle, just surviving the day can count as a success" (35:20)		Remain on guard: "He'll have to remain on guard for another two weeks."
Reproduction 1	which they reproduce; each releases millions of microscopic spores.	Fungi, unlike plants, thrive in the darkness of the forest floor. They're hidden, until they develop the incredible structures with	Many have fruiting bodies that reach upwards to catch any feeble current there might be in the clammy air (36:27).	Positive/Incredible: "until they develop the incredible structures with which they reproduce."	Remedy to "clammy air" = reach upwards.

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		which they reproduce (36:07)			
Mystery 1	Why fungi light up has remained a mystery	But this one, as it grows, becomes luminous (36:36). Why fungi light up has remained a mystery (36:55).		Creepy/spooky: evidenced by the music.	Science: “Scientists studying the brightest fungi in the world, think they may have an answer” (37:14). “Like a beacon, the light attracts insects” (37:23).
Cooperation 1	...he carries these spores to other parts of the forest	Confused, he starts searching for a female, and that helps the fungus (38:14).	To this click beetle, a bright light means only one thing: a female click beetle (37:46) ... But he doesn't get the reception he was expecting (38:04); LS of click beetle on fungus, with the fungus clearly not doing anything (38:04).	Creepy/strange : evidenced by the music and, “And, there are even stranger things glowing in the jungle night (38:33).	By the time he gives up, he's covered in the fungus' spores. And as he continues his quest for a female, he carries these spores to other parts of the forest (38:27)
Danger/ predation and Stealth 9, 2	It's hunting for millipedes; fast-paced music; the railroad worm in stealth mode is virtually invisible	It's [railroad worm] hunting for millipedes (38:09). When it finds the trail of one, it switches off its yellow lights. Now it only has a red light on its head (39:39).	Millipedes can't see red light. So to them, the railroad worm in stealth mode is virtually invisible (39:54).		And that is the end of the millipede (40:08).
Competition 3 (mating)	Competition in the jungles...	This has produced some of the most	Competition in the jungles forces animals	Positive: "...some of the most beautiful	Specialize: "Competition in the jungles

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		beautiful and elaborate displays on the planet (40:36).	to specialize in every aspect of their life (40:24): including courtship.	and elaborate displays on the planet.”	forces animals to specialize in every aspect of their life”
Competition 4 (mating)	competing to attract a female by dancing	A male red bird of paradise; competing to attract a female by dancing (40:50) ... She is an independent lady, and she will select whichever male takes her fancy (41:17).	One has come to survey what’s on offer (40:54).		Remedy for the males = dance, as evidenced by many shots of males dancing. Also, “competing to attract a female by dancing.”
Disappointment 1	slow, soft piano music that plays at 42:20; MS of female red bird of paradise with male looking at her in the background (42:26).	She makes her choice. But now, she doesn’t seem quite so sure (41:58).	MS of male red bird of paradise getting all up in the female’s face, who notably leans away (42:04). “Perhaps he’s just a little too keen” (42:11).	Sad, as evidenced by the slow, soft piano music that plays at 42:20.	Maybe he’ll have better luck tomorrow (42:27).
Mating 1	...and he too needs to attract a mate	He’s [Wilson’s bird of paradise] lived most of his life alone. But now he’s an adult, and he too needs to attract a mate (43:09).	But now he’s an adult		This little patch of light might help him do so (43:17)
Cleaning 1	First, he tidies up	First, he tidies up. Showing off in this jumble of leaves wouldn’t be	He doesn’t want bright leaves to divert a visitor’s attention (43:46).	Positive/perfect: “It’s perfect” (44:17).	“They all need to go. Even the green ones. Especially the green ones (44:00);”

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		easy, and his beauty will stand out better against a plain background (43:32).			Many shots of the male bird of paradise throwing leaves around.
Mating/ calling 2	And now, he must hope a female hears his call (44:22); MS Wilson's bird of paradise calling (44:24)	And now, he must hope a female hears his call (44:22).	But now he's an adult, and he too needs to attract a mate (43:09).		Call for a female: MS Wilson's bird of paradise calling (44:24). Be patient: "He can wait here for weeks on end" (44:40).
Spectacle 1	In the gloom of the forest floor, he is a dazzling blaze of iridescent green; MS male bird of paradise deploying green chin strap (45:38).	At last, a female (44:49) ... She will judge him by the brightness of his feathers (45:00) ... But, for the female to see him at his best, he needs her to perch directly above his stage; under the light (45:15), This might be his only chance to shine (45:23).	"Now, when she's looking directly down on him, he reveals a display for her eyes only (45:38)." MS male bird of paradise deploying green chin strap (45:38) ... "In the gloom of the forest floor, he is a dazzling blaze of iridescent green (45:45)."	Positive/ Spectacular: "In the gloom of the forest floor, he is a dazzling blaze of iridescent green."	"In the gloom of the forest floor, he is a dazzling blaze of iridescent green (45:45). The brightest leaf in the forest. And that does the trick" (46:03).
Competition 5 (space)	Each animal must find its own way of surviving the competition of the jungle; This crowded world is so full of invention	This crowded world is so full of invention, that almost all kinds of animals on land can trace their origins back here.	Each animal must find its own way of surviving the competition of the jungle (46:16).		Each animal must find its own way of surviving the competition of the jungle

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		Including us (46:46).			
Home/Family 1	These forests in Madagascar are home to one of our distant cousins; This female indri has fought to keep this particular patch of forest safe for herself and her family	These forests in Madagascar are home to one of our distant cousins (46:55). This female indri has fought to keep this particular patch of forest safe for herself and her family (47:05).	Why the indri sing: “Their way of reminding others that this is their home (47:24).” Why this forest is home to the indri: “Indri are so closely adapted to living here, that now they can live nowhere else” (47:37).	Very, very sad, as evidenced by the sorrowful music and indris’ cries.	“Every morning, the family come together to sing (47:21).” Lots of shots of indri singing.
Sanctuary 1	he jungle, is a sanctuary	For them, and the billions of animals with whom they share their home, the jungle, is a sanctuary (47:50).	“Indri are so closely adapted to living here, that now they can live nowhere else” (47:37).	Very sad, as evidenced by the sorrowful music.	
Destruction	Even in the 10 years since the head of this family was born, 10,000 square kilometers of rainforest have been destroyed in Madagascar alone.	But this is changing (47:55). Even in the 10 years since the head of this family was born, 10,000 square kilometers of rainforest have been destroyed in Madagascar alone. And with them, half the indri families that once lived there (48:15).		Negative, as evidenced by lowered tone of voice and sorrowful music.	Remember our origins: “The local people say that the indri are our brothers, and their song is a call to remind us that we too once depended on the jungle (48:28).”

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Eden/ Protection 2, 1	This Eden is still a place of wonder and magic; Something, surely, worth protecting	This Eden is still a place of wonder and magic (48:38).		Positive/worth protecting: “Something, surely, worth protecting” (48:51). However, the sorrowful music and CS indri closing its eye at the end of the film (49:00) give the impression that all hope is lost.	Protect the jungle: “Something, surely, worth protecting” (48:51).

“Deserts” Frames Spreadsheet

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
Danger/ Harshness/ Scarcity 1, 1, 1	where temperatures rise to 50 degrees Centigrade; with almost no food or water; Series of shots of impending sandstorm	“Imagine a world where temperatures rise to 50 degrees Centigrade. Imagine a world, with almost no food or water. These are the conditions in one third of the lands of our planet (1:15);” Series of shots of impending sandstorm.		Negative: evidenced by ominous music, shots of approaching sandstorm, and emphasis on heat and barrenness of the desert.	To live here demands the most extraordinary survival strategies (1:21).
Struggle/ aridity 1	It’s been dry for 55 million years. Life	This is the oldest desert in the world. The	Why the Namib is the oldest desert in		

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	here for a hunter is as hard as it gets	Namib in southwest Africa (1:53). It's been dry for 55 million years.	the world: "It's been dry for 55 million years."		
Struggle/ hunting 1	Life here for a hunter is as hard as it gets; The only prey within 30 kilometers; Hunting here presents a special problem	Life here for a hunter is as hard as it gets (2:07). Hunting here presents a special problem (2:49).	<u>Lack of prey</u> : "A herd of oryx. The only prey within 30 kilometers (2:57)." <u>No cover</u> : "Out here, there is no cover for an ambush (3:05)."	Negative/harsh : "One of the very few that endures this desert's scorching temperatures and lack of water."	It will have to be a straight chase (3:08).
Starvation 1	each failed hunt brings the lions closer to starvation; To find enough to eat, the pride continually searches an area the size of Switzerland	They have failed. And each failed hunt brings the lions closer to starvation (3:47).	Lack of prey: "A herd of oryx. The only prey within 30 kilometers (2:57)." To find enough to eat, the pride continually searches an area the size of Switzerland (4:08)."	Negative: evidenced by DA's lowered tone of voice.	To find enough to eat, the pride continually searches an area the size of Switzerland (4:08).
Desperation 1	Three days and 150 kilometers later, and still, no kill (4:25).	These are desperate times (4:31).	Three days and 150 kilometers later, and still, no kill (4:25).	Negative: evidenced by DA's lowered tone of voice.	
Danger/ Hunger 1, 1	But these one-tonne giants could kill a lion with a single kick; but this pride can't go on much longer without food; VCS panting lion's mouth (5:13).	"The only animals here are giraffe (4:44). Lions seldom tackle such formidable prey, but this pride can't go on much longer without food (5:13)." VCS panting	But these one-tonne giants could kill a lion with a single kick (4:49).		The whole pride must work together as a team if they're to succeed (5:45).

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		lion's mouth (5:13)			
Teamwork/ cooperation 1	The whole pride must work together as a team if they're to succeed; Two lionesses lead the chase. Others race to cut off possible escape routes	The whole pride must work together as a team if they're to succeed (5:45).	The giraffe has the speed and stamina to outrun the pride (6:40).	Exciting, as evidenced by the fast-paced, galloping music.	Two lionesses lead the chase. Others race to cut off possible escape routes (6:19) ... But it's being chased into a trap (6:44).
Struggle/ hunting 2	Most lion hunts end in failure	Most lion hunts end in failure. But no lions fail more often, than those that live in the desert (7:31).			Once again, the pride must continue their search (7:40).
Spectacle/ Storm 1	Series of shots of lighting, along with lightning and thunder sound effects; Here in the American west, storms can strike with devastating force	It does, sometimes, rain in the desert. Here in the American west, storms can strike with devastating force (8:16).		Awesome/spectacular, as evidenced by dramatic shots of lighting.	
Spectacle/ Flood 1	MS raging flood (8:29); LS flood running off cliff (8:48).	Series of shots of flood-waters.	After ten months of drought, millions of tonnes of water are dumped on the land in under an hour (8:26).	Awesome/spectacular, as evidenced by dramatic shots of floods.	
Spectacle/ Erosion 1	MS of light beam in slot canyon (9:22); MS brilliant sun around the	Slot canyons, 50 metres deep (9:32) ... In some places these canyons	Over millions of years, sand and gravel carried by the rampaging	Spectacular/beautiful: "...some of the most dramatic landscapes on	

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	corner of a canyon (9:59); VLS desert landscape (10:20); Over millions of years, sand and gravel carried by the rampaging floods have carved channels through the solid rock	have widened, until the land between them is sculpted into table lands and pinnacles (10:10).	floods have carved channels through the solid rock (9:25) ... In some places these canyons have widened...	the planet” (10:19).	
Dangerous/ Spikey 1	Series of CS and VCS of cacti spines; a barricade of spines	Cacti are unique to American deserts (10:54). They all hoard water, storing it in swollen stems and protecting it behind a barricade of spines (11:02). They're so successful, that they dominate these deserts (11:09).	They all hoard water, storing it in swollen stems and protecting it behind a barricade of spines	Greedy/Dangerous: "... They all hoard water, storing it in swollen stems and protecting it behind a barricade of spines (11:02)." Series of CS and VCS of cacti spines.	
Dangerous/ Spikey 2	But this forest of spikes can cause problems for the animals that live here; MS of Harris's hawk perching on top of cactus, moving around as if the spikes hurt its feet (11:27)	But this forest of spikes can cause problems for the animals that live here (11:21).	MS of Harris hawk perching on top of cactus, moving around as if the spikes hurt its feet (11:27).		A Harris hawk. It has developed special techniques for hunting amongst the cacti (11:32).
Teamwork/ cooperation/	These are the only birds of	Ground squirrels. Prey	Prey (11:45).	Exciting: evidenced by	But the hawks have a tactic to

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Hunting 2, 1	prey that hunt in packs (12:17). Flying in formation, they try to drive their quarry into the open (12:24).	(11:45). At the first sign of danger, they bolt for the safety of the thorns (11:55).		faster rate of speech; fast and dramatic music; swooping sound effects as hawks fly.	flush them out (12:09). These are the only birds of prey that hunt in packs (12:17). Flying in formation, they try to drive their quarry into the open (12:24).
Teamwork/ cooperation/ Hunting 3, 2	So the hawks continue the hunt on foot;	But this squirrel is staying put (12:37).		Dramatic, as evidenced by DA's lowered tone of voice.	So the hawks continue the hunt on foot (12:49) ...
Trapped 1 (predation)	The squirrel is trapped; They're [hawks] closing in from all sides; Soon, all escape routes are cut off	The squirrel is trapped (13:34).	They're [hawks] closing in from all sides (12:59) ... Soon, all escape routes are cut off (13:21).	Dangerous: evidenced by VCS of hawk beaks and talons.	
Horror 1	So, why should these spikes be hung with corpses?; There's a mysterious killer at work in this desert; series of CS of mutilated animals hanging on spines.	So, why should these spikes be hung with corpses? What kind of creature could be responsible for creating such a gruesome scene? (14:13). There's a mysterious killer at work in this desert (14:26).	It's a butcher bird. This little song bird uses the spines as a butcher uses his hook: to hold its prey as it dismembers it (14:45).	Gruesome: "What kind of creature could be responsible for creating such a gruesome scene? (14:13)"	
Butcher/ ingenuity 1	It's a butcher bird. This little song bird uses the spines as a butcher uses his hook; An	It's a butcher bird. This little song bird uses the spines as a butcher uses his hook: to hold its prey as	And with chicks to feed, he also uses the spines as a larder (14:58) ... Hanging his prey out of the	Ingenious, if a little macabre: "An ingenious solution to making the good times last in the desert, if	The butcher bird's habit is a remedy to the scarcity of the desert: "An ingenious solution to

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
	ingenious solution...	it dismembers it (14:45). And with chicks to feed, he also uses the spines as a larder (14:58).	reach of scavengers on the ground ensures that his newly- hatched young will never go hungry (15:18).	a little macabre (15:30)."	making the good times last in the desert..."
Scarcity/ Aridity 1	Some deserts are so arid, they appear totally devoid of all vegetation	Some deserts are so arid, they appear totally devoid of all vegetation (15:42).	Lack of water: "Some deserts are so arid..."		Yet even these landscapes can be transformed in a matter of days (15:53).
Transformat- ion 1 (abundance)	LS desert landscape transforming (15:55); LS desert landscape transforming (16:05)	The deserts of Peru are amongst the driest in the world (16:05). But just add a little water, and plants that have lain dormant for months will burst into life (16:15).	plants that have lain dormant for months...	Positive/Land of opportunity: "And when a desert suddenly turns green, even the most seemingly desolate can become a land of opportunity (16:40):" Happy music and close-ups of green vegetation.	But just add a little water..
Locusts/army 1	MS many locusts from above (17:18); LS many locusts (17:22)	No creature exploits the greening of a desert more quickly, or more dramatically, than a locust (16:58) ... Now, an army is on the march (17:22) ...	Madagascar's arid southwest has received its highest rainfall in years (17:13); "...attracted by the smell of newly- sprouting grass (17:23).	Negative, as evidenced by ominous music at 17:31.	
Locusts/ unstoppable force 2	but when food becomes suddenly	Locusts are normally solitary	...but when food becomes suddenly	Awesome/ Powerful: "... an unstoppable	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
	plentiful, they come together into an unstoppable force that devours everything in its path	creatures (17:38), but when food becomes suddenly plentiful, they come together into an unstoppable force that devours everything in its path (17:47).	plentiful...; Series of CS and MS of locusts eating grass.	force that devours everything in its path”	
Locusts/ devastation 3	But this devastation is about to get a lot worse	But this devastation is about to get a lot worse (18:07).	The locusts now transform into winged adults (18:26), and with conditions as good as this, they do so three times faster than normal (18:31). Now, they are at their most voracious. And with wings, they can take to the skies (18:44).	Awesome/ Devastating: “But this devastation is about to get a lot worse;” Intensifying, epic music at 18:44.	
Locusts/ plague 4	MS locust swarm (19:23); “A super swarm of this scale may only appear once in a decade (19:31);	Nothing can strip a land of vegetation with such speed and thoroughness as a plague of locusts (20:26).	Once airborne, the locusts can travel over 100 kilometres a day in their search for new feeding grounds (19:13) ... This one [super swarm] extends over 500 square kilometres and contains	<u>Awsome</u> , as evidenced by epic music at 19:14; “This one [super swarm] extends over 500 square kilometres and contains several billion individuals (19:38).” <u>Devastating</u> : “But not	When the food eventually runs out, the whole army will die (20:34).

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
			several billion individuals (19:38). Between them, they will devour 40,000 tonnes of food in a day (19:46).	before it's devastated the land" (20:38).	
Harshness/ Barrenness 1	With no plants to bind them, thin soils soon turn to dust and blow away. Now, these barren lands are left to the mercy of the elements	Scorched by the sun and scoured by windblown sand, desert rock is shaped by strange, otherworldly landscapes (21:35); Many aerial shots of barren, rocky landscapes with spectacular light.	With no plants to bind them, thin soils soon turn to dust and blow away. Now, these barren lands are left to the mercy of the elements (21:08).	Deceptively beautiful: "These rocky deserts may have a beguiling beauty, but when they become this barren, very little life can endure (21:50);" Many aerial shots of barren, rocky landscapes with spectacular light.	For many animals, the only way to survive the most hostile times is to keep moving (22:06).
Scarcity 3	Food and water are becoming increasingly scarce	Food and water are becoming increasingly scarce (22:21).	In the Kalahari, brief rains have given way to the dry season (22:17).		For these zebra, it's time to leave (22:27). They're setting off on the longest over-land migration made by any mammal in Africa, marching towards the scent of distant rains (22:45).
Scarcity/ Drought 1	As drought intensifies; LS elephant cow and calf, calf	As drought intensifies, desert-living elephants must	As drought intensifies...	Negative/harsh: LS elephant cow and calf, calf	The older females can remember where, even in

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	stumbling (23:08).	also undertake long journeys in search of water (22:59).		stumbling (23:08).	times of extreme drought, there may still be water (23:26), and sometimes lead the herd to a waterhole they may not have visited for decades (23:33).
Journey 1	These zebra are almost at the end of their journey	These zebra are almost at the end of their journey (24:08).			This is what they've been heading for: a rare waterhole (24:22).
Scarcity/ Drought 2	CS zebra drinking (24:31); In deserts, most waterholes are short-lived (24:31). They appear after rains, but then vanish almost as quickly as they came (24:40).	In deserts, most waterholes are short-lived (24:31). They appear after rains, but then vanish almost as quickly as they came (24:40).		Positive: CS zebra drinking (24:31); CS elephant calf shaking its head as it [apparently] nears water, looking happy (24:36).	
Danger 2	Yet, this can be a dangerous place in which to linger	Animals have come here from many kilometres around. Yet, this can be a dangerous place in which to linger (24:58).		Negative, as evidenced by DA's lowered tone of voice.	
Harshness/he at/Father 1, 1	MS intense sun (25:41); With only their mother to shield them from the sun, if they get nothing to	A hundred kilometres away, in the heart of the desert, sandgrouse chicks are hatching	It's safer for them to be here (25:17).	Negative/ Risky: "But, being so distant from water is a gamble." MS intense sun (25:41).	Their only hope is their father (25:45). Every morning, he makes the 200- kilometre round trip to

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
	drink, they will be dead within hours	(25:14) ... But, being so distant from water is a gamble (25:25). With only their mother to shield them from the sun, if they get nothing to drink, they will be dead within hours (25:35).			get water for the family (25:50).
Danger 3	There's safety in numbers; CS of grouse amongst oryx hooves (26:23); CS grouse amongst oryx hooves (26:25).	Grouse from all over the desert visit this oasis, arriving together in large flocks (26:04).	There's safety in numbers (26:13).	Important: "And that is important" (26:07).	
Sponge 1	Using specially adapted breast feathers, he can soak up water like a sponge	The male snatches a drink (26:30). But he also needs to collect water for his chicks (26:34)			Using specially adapted breast feathers, he can soak up water like a sponge (26:39).
Danger/ predation 1	MS goshawk chasing sandgrouse (26:49); Sandgrouse here are their main prey	But it takes time, and he is in danger (26:45).	MS goshawk chasing sandgrouse (26:49). "Goshawk (26:53). Sandgrouse here are their main prey (27:12).	Exciting, as evidenced by the fast-paced, galloping music at 27:01.	This is why sandgrouse nest so far from waterholes (27:49).
Hero 1	Again and again, the male sandgrouse risk their lives	Again and again, the male sandgrouse risk their lives	...to collect water for their chicks	Exciting, as evidenced by the fast-paced, galloping	At last, he's soaked up as much as he can (28:17).

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	in order to collect water for their chicks	in order to collect water for their chicks (27:24).		music at 27:31.	Carrying a quarter of his bodyweight in water, he can now set off on the long journey home (28:30).
Hero 2	He's back, and just in time; But he will have to undertake this perilous journey every day for the next two months...	He's back, and just in time. He can give the chicks their first-ever drink (29:00).	With only their mother to shield them from the sun, if they get nothing to drink, they will be dead within hours (25:35).	Positive/ Savior: "He's back, and just in time."	But he will have to undertake this perilous journey every day for the next two months, until his chicks can finally make the flight to the waterhole for themselves (29:16).
Heat 1	MS intense sun (29:27); The hottest time of the year	It's July in the deserts of Nevada in the western United States. The hottest time of the year (29:37). Bands of wild horses, mustang, are converging on one of the last remaining waterholes around (29:59).	Why there's only a few waterholes left: "The hottest time of the year (29:37)"		Bands of wild horses, mustang, are converging on one of the last remaining waterholes around (29:59).
Domination 1	Now, water not only offers them the chance to drink. It can also bring power; So stallions try to dominate these pools, fighting	Now, water not only offers them the chance to drink. It can also bring power (30:10).	If a stallion can control access to water, he will have secured mating rights to the entire herd (30:20).		So stallions try to dominate these pools, fighting off rivals who venture too close (30:26).

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
	off rivals who venture too close				
Challenger 1 (fight)	A stranger; So he will have to fight	A stranger. He's traveled 15 kilometres to be here, because the pools where he's come from have already dried up (30:50) ... With him come his females. If he can't provide them with water, they will leave him for the white stallion who already dominates this pool (31:03).	... because the pools where he's come from have already dried up (30:50).		So he will have to fight (31:18).
Aggression/ fighting 1	Lots of shots or horses fighting; angry horse sound effects.	Lots of shots of horses fighting.	If he can't provide them with water, they will leave him for the white stallion who already dominates this pool (31:03).	Dramatic: fast- paced music, angry horse sound effects, and, "There is everything to lose. A broken leg or a shattered jaw would mean a slow and painful death (32:26).	A missed kick, and it's all over (32:50).
Aggression/ overthrow 1	The white stallion's rule is over	The white stallion's rule is over (33:11).	The new arrival has won (32:54). And his prize is more than just a chance to drink. He has provided for his herd, and in the	Positive, as evidenced by DA's slightly more high- pitched tone of voice.	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
			process, stolen his rival's females (33:05).		
Heat 2	Desert life is shaped not only by the scarcity of water, but by the relentless power of the sun (33:28); CS intense sun (33:28). LS intense sun behind dead tree in a barren landscape (33:37).	The highest temperatures on Earth have all been recorded in its deserts (33:38).	Desert life is shaped not only by the scarcity of water, but by the relentless power of the sun (33:28).	Negative: evidenced by DA's lowered tone of voice and LS intense sun behind dead tree in a barren landscape (33:37).	
Climate Change and Desertification 1	Changes in the climate; Every year, a further 130,000 square kilometres of grass and farmland are turning into barren stretches of dust and rock	Changes in the climate mean temperatures here are rising more than the global average (33:53). And as deserts heat up, they are also expanding (34:02). Every year, a further 130,000 square kilometres of grass and farmland are turning into barren stretches of dust and rock (34:11).	Changes in the climate...	Negative, as evidenced by DA's lowered tone of voice and LS solitary tree amidst a barren, desert landscape with heat waves (33:52).	
Heat 3	In the heat of the day, surface temperatures can reach a scorching 70 degrees	Far too hot to handle for most (34:24). But not for this shovel-snouted lizard (34:31).	In the heat of the day, surface temperatures can reach a scorching 70 degrees (34:22).	<u>Whimsical/ Silly</u> , as evidenced by light-hearted music. <u>Disgusting</u> , as evidenced by very close	Raising each of its feet off the ground in turn enables each to briefly cool (34:43).

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
				shots of lizard's eye that are accompanied by nauseating sound effects.	
Heat 4	LS dead trees in a barren landscape (35:03); can't stand the heat for long	But even this dancing desert specialist can't stand the heat for long (34:57).			One option is to find shade (35:03) ... But just below the surface of the sand, it is several degrees cooler (35:20). VCS snake burying itself (35:17).
Heat 5	the extreme heat	Avoiding the extreme heat imposes a rhythm on desert life (35:34).	...the extreme heat	Spooky, as evidenced by the music at 35:53.	And many animals here choose the simplest option of all, staying hidden all day and only venturing out in the cool of the night (35:45).
Danger/ predation 2	And among them, inevitably, are hunters; Lowered tone of voice as DA says, "hunters."	As darkness falls, animals appear from seemingly nowhere (36:00). And among them, inevitably, are hunters (36:13).	And many animals here choose the simplest option of all, staying hidden all day and only venturing out in the cool of the night (35:45).	<u>Spooky</u> , as evidenced by the music at 36:00. <u>Hunters</u> = very bad, as evidenced by lowered tone of voice when DA says, "hunters."	
Mysterious 1	This mysterious creature hardly ever appears on the surface of the dunes	One of the most voracious nocturnal predators is also one of the hardest to see (36:34).	This mysterious creature hardly ever appears on the surface of the dunes (36:41).	Mysterious: "This mysterious creature..."	But there are signs on the sand that can give it away (36:53).
Specialization 1	It lives only here, where	It lives only here, where	...where the sand grains are	Whimsical/	

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	the sand grains are so perfectly dry and polished that they flow almost like water	the sand grains are so perfectly dry and polished that they flow almost like water (37:12).	so perfectly dry and polished that they flow almost like water	Cute, as evidenced by light-hearted music at 37:12.	
Blindness 1	It's totally blind	A golden mole. It's totally blind (37:28)but there's nothing to see underground anyway (37:31).	Whimsical/ Cute, as evidenced by light-hearted music at 37:31.	Instead, it has superb hearing (37:40).
Amplifier 1	Its entire head acts as an amplifier	Its entire head acts as an amplifier (37:45) ...	Its entire head acts as an amplifier (37:45) that picks up vibrations through the sand.	Whimsical/ Cute, as evidenced by light-hearted music at 37:54.	So, to locate prey on the surface of the dune, it has, paradoxically, to thrust its face into the dune (37:54).
Blindness 2	Not easy to catch when you're blind	Termites. Not easy to catch when you're blind (38:08).		Whimsical/ Cute, as evidenced by light-hearted music at 38:06.	Far better to go into stealth mode (38:15). Once below the sand, it can detect the slightest movement (38:22). Allowing it to strike with pinpoint accuracy (38:27).
Shark 1	Little wonder it is sometimes called "the shark of the dunes"	Little wonder it is sometimes called "the shark of the dunes" (39:07).	CS mole eating grasshopper (39:09).	Negative, as evidenced by DA's lowered tone of voice.	
Scarcity 4	Food can be so scarce in the desert	Food can be so scarce in the desert that even at night, animals can't afford to be choosy about	Food can be so scarce in the desert		animals can't afford to be choosy about what they eat

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
		what they eat (39:26).			
Vampire 1	ominous music at 39:45 and spooky music at 39:52, along with dramatic, slow-motion shots of bats.	Israel's Negev Desert. Otonycteris, the desert long-eared bat, is on the hunt (39:49).	Most bats catch flying insects on the wing. But there are so few of these in the desert that this bat must do things differently (39:58).	Negative, as evidenced by ominous music at 39:45, spooky music at 39:52, and DA's lowered tone of voice.	It has to hunt on the ground (40:06).
Danger 4 (venom)	CS scorpion stinger (40:23); The venom of this species is potent enough to kill a human	A deathstalker scorpion. The venom of this species is potent enough to kill a human (40:34). Tackling it seems madness for a bat weighing just 15 grams (40:39).	The venom of this species is potent enough to kill a human (40:34)	Mad/Crazy: "Tackling it seems madness for a bat weighing just 15 grams (40:39)."	
Blindness 3	In the pitch black, both predator and prey are effectively blind	In the pitch black, both predator and prey are effectively blind (40:46).	In the pitch black,	Dangerous, as evidenced by DA's lowered tone of voice and CS scorpion pincer at 41:15.	But the scorpion has one advantage, he can sense the approach of the bat through vibrations in the sand (40:51). Otonycteris must rely entirely on its hearing (41:01).
Battle 1 (predation)	The battle is on	The battle is on (41:24).	CS bat bumping into scorpion (41:21).	Exciting, as evidenced by dramatic music at 41:24.	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
Danger 5 (venom)	this scorpion is a dangerous opponent	this scorpion is a dangerous opponent (41:32).	Armed with crushing pincers and a sting loaded with venom (41:31) ...	Exciting, as evidenced by dramatic music throughout this scene (such as 41:41).	<i>Otonycteris</i> clearly has some immunity to the venom (42:16).
Water 1	most will hold a little water in one form or another	Although some deserts may not see rain for several years, most will hold a little water in one form or another (43:19).	most will hold a little water in one form or another		The trick is simply knowing how to reach it (43:25).
Fog 1	Moist air lying over the neighboring Atlantic is cooled and blown inland, forming fog banks that shroud the desert in mist; Aerial shot of sand dunes shrouded in mist (44:39).	Dawn in the dunes of the Namib, and something magical is happening (43:37). .. This precious moisture lies tantalizingly out of reach at the top of the dunes, and it won't last long (44:23). It will be burnt off by the sun just hours after it rises (44:27).	Moist air lying over the neighboring Atlantic is cooled and blown inland, forming fog banks that shroud the desert in mist (44:05).	Positive: "something magical is happening (43:37)," "This precious moisture." Also, positive, upbeat music.	Darkling beetles race to the top of the dunes to reach the fog before it vanishes (44:49).
Everest 1	this is the equivalent of us climbing a dune twice the height of Everest (45:11).	Some of the Namib's dunes are 300 metres high, the tallest in the world (45:03). For a beetle no larger than a thumbnail (45:05), this is the equivalent of us climbing	Some of the Namib's dunes are 300 metres high... For a beetle no larger than a thumbnail (45:05)	Awesome: "this is the equivalent of us climbing a dune twice the height of Everest (45:11)."	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
		a dune twice the height of Everest (45:11).			
Awesome/ impressive 1	But even more impressive is what it does next; This little beetle has learned how to conjure water out of the air in one of the driest places on Earth.	Standing perfectly still, facing into the wind, the beetle does a headstand (45:31).	Fog begins to condense on its body (45:38). Microscopic bumps on its wing cases direct the water to grooves that channel it towards the mouth (45:45).	Awesome/Imp ressive: “But even more impressive is what it does next (45:20).”	<u>Remedy to thirst</u> : “Before returning down the slip face, it will drink 40% of its bodyweight (45:58). This little beetle has learned how to conjure water out of the air in one of the driest places on Earth (46:10).
Water 2	Multiple CS of gecko drinking water that’s condensed on its body.	And it’s [beetle] not alone on the top of the dunes (46:22). Web-footed geckos use a similar trick (46:28).	VCS bumpy gecko foot with water droplets (46:28). VCS gecko licking water off of bumpy nose (46:31).	Awesome/Imp ressive: “Surely, few animals go to greater lengths to get a drink” (46:40).	
Danger/ predation 3	CS beetle being grabbed by chameleon tongue (46:57).	CS beetle being grabbed by chameleon tongue (46:57)	Unfortunately, Namaqua chameleons know that on foggy mornings, the beetles coming down the dunes are juicier than those going up (47:05).	Negative: “Unfortunately ...”	
Awesome/ diversity 1	The diversity of life that thrives in a world almost totally devoid of water is	The diversity of life that thrives in a world almost totally devoid of water is truly	<u>Why such diversity exists</u> : “Success in the desert depends on an extraordinary	Awesome/Re markable: “The diversity of life that thrives in a world almost totally devoid	<u>Remedy to desert challenges = evolution</u> : “Success in the desert depends on an

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis	Moral Judgement	Remedy Promotion
	truly remarkable	remarkable (47:26).	variety of survival strategies that have evolved over millions of years (47:36)."	of water is truly remarkable."	extraordinary variety of survival strategies that have evolved over millions of years (47:36)."
Climate Change and Desertificat- ion 2	But our planet is changing (47:43). The world's deserts are growing bigger, hotter, and drier, and they're doing so faster than ever before	But our planet is changing (47:43). The world's deserts are growing bigger, hotter, and drier, and they're doing so faster than ever before (47:51).		Negative: Ominous music at 47:44.	How life will cope here in the future remains to be seen (47:58).

"Grasslands" Frames Spreadsheet

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis/	Moral Judgement	Remedy Promotion/ Action Directive
Awesome/ amazing 1	a single, remarkable type of plant (0:41); Almost indestructible, it can grow half a metre a day (0:48). And be tall enough to hide a giant (1:01).	One quarter of all the land on Earth is covered by a single, remarkable type of plant (0:41). That plant is grass. And the world it creates is truly unique (1:09).	Almost indestructible, it can grow half a metre a day (0:48). And be tall enough to hide a giant (1:01).	Remarkable/B eautiful: "remarkable type of plant," CS dew- covered spider web amidst grass (0:50), beautiful theme music.	
Awesome/ amazing 2	The grass in northern India is the tallest on the planet, home to some of the most	The grass in northern India is the tallest on the planet, home to some of the most		Positive, as evidenced by soft, soothing theme music.	

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis/	Moral Judgement	Remedy Promotion/ Action Directive
	impressive creatures to tread the Earth; Close Shots of charismatic megafauna (elephants, buffalo, tiger, rhino).	impressive creatures to tread the Earth (1:29).			
Seasonality 1	But in just a few months, all this fresh growth will be gone; A cycle of abundance, destruction, and rebirth (2:09)	These are the good times. But in just a few months, all this fresh growth will be gone (1:53).	That is the way things are on grasslands across the planet (2:04). A cycle of abundance, destruction, and rebirth (2:09) that affects every creature that lives here (2:15).	Positive, as evidenced by soft, soothing theme music.	And the animals will be forced to move on (1:57).
Awesome/ amazing 3	The largest grassland on Earth, the vast Eurasian Steppe (2:34), stretches one third of the way around our planet (2:39).	The largest grassland on Earth, the vast Eurasian Steppe (2:34), stretches one third of the way around our planet (2:39).		Positive/ Impressive: “The largest grassland on Earth, the vast Eurasian Steppe”	
Baby/infant 1	a baby Saiga antelope; Just three hours old; LS two baby Saigas in grass (3:05).	A relic from the Ice Age, a baby Saiga antelope (2:56). Just three hours old (2:59). His only company, his twin (3:05).	Spring rain has brought fresh grass, and with it, new life (2:45).		
Danger 1	“They should be safe as long as they remain quiet” implies	Until they can stand, their mother has left them hidden in			They should be safe, as long as they

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis/	Moral Judgement	Remedy Promotion/ Action Directive
	that there is danger about.	the grass (3:08).			remain quiet (3:21).
Migration 1	Their herd will soon be moving on, seeking the freshest new grass; nomadic life	For these calves, the clock is already ticking (3:30)... The young twins will now begin the nomadic life they share with most animals on the world's open plains (4:52).	Their herd will soon be moving on, seeking the freshest new grass (3:34).	Positive/ Precious, as evidenced by MS mother saiga greeting calf (4:17).	Their lanky legs are a sure sign that they're built for life on the move (3:55) ... Their bizarrely- shaped nose can detect fresh growth from hundreds of kilometres away (4:37).
Storm 1	Multiple of shots of ominous storm clouds (such as 5:52); VLS lightning (5:44); Storms like these	Grasslands occur where rain is too sporadic for forests too exist (5:24). The rain that a grassland needs to survive for a year might arrive all at once (5:38).	Storms like these can release 30 centimeters of rain in 24 hours (6:02).	<u>Awesome</u> : Multiple of shots of ominous storm clouds (such as 5:52); VLS lightning (5:44). <u>Miserable</u> : "Not much fun if you're out in it (6:19);" MS miserable- looking lion getting soaked in the rain (6:11).	
Transformat- ion 1	and the grassland undergoes a radical change	... and the grassland undergoes a radical change (6:40).	Eventually, the earth can't soak up any more (6:33) ...		Remedy is to transform: "and the grassland undergoes a radical change"
Growth 1	They grow so fast, their leaves quickly rise above the water and into the sunlight; Multiple Close and Very	Many plants would drown here, but grasses thrive (6:48).	They grow so fast, their leaves quickly rise above the water and into the sunlight (6:57).		Remedy is to grow quickly: "They grow so fast, their leaves quickly rise above the water and into the sunlight"

Frame Name	Keyword(s)/ Phrase(s)	Problem/Issue Definition	Causal Analysis/	Moral Judgement	Remedy Promotion/ Action Directive
	Close Shots of grass growing through water, such as 6:57.				
Awesome/ Transformat- ion 1	water transforms	Here in Southern Africa, water transforms one of the most remarkable grasslands on Earth: the Okavango (7:13).	Every year, 8,000 square kilometres of grassland are flooded (7:19).	Awesome/ Remarkable: “one of the most remarkable grasslands on Earth.”	
Struggle/ hunger 1	lions struggle to run it down in water; If their mothers don’t make a kill soon, the cubs might not survive the week	For one pride of lions, this [flooding] poses a major problem (7:34)... The pride has three-month- old cubs. They’ve never seen water before (7:52). If their mothers don’t make a kill soon, the cubs might not survive the week (8:00).	There may be plenty of prey around, but lions struggle to run it down in water (7:42).	Negative/ desperate: “If their mothers don’t make a kill soon, the cubs might not survive the week”	But, fueled by the flood, the eruption of grass attracts new possible prey (8:14).
Danger 2	Powerful, aggressive, and united, they’re the most dangerous animal a lion can face	Buffalo arrive in herds 2,000 strong (8:26). Powerful, aggressive, and united, they’re the most dangerous animal a lion can face (8:36).	Powerful, aggressive, and united		
Danger 3	At 900 kilos, he weighs more than all	The biggest bulls don’t run. They’re	At 900 kilos, he weighs more than all	Exciting/suspe nseful, as evidenced by	The pride do have numbers

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	five lionesses combined; but one sweep of his horns could be deadly	simply too huge to be scared of lions (9:23) ... but one sweep of his horns could be deadly (9:41).	five lionesses combined (9:29).	slowly building music.	on their side (9:36) ...
Teamwork/ cooperation 1	One [lioness] distracts the bull up front, while her sisters attack from behind; MS of lions working together (9:57).	One [lioness] distracts the bull up front, while her sisters attack from behind (9:57)... but with swamp underfoot, they cannot get any traction (10:15).		Exciting, as evidenced by fast-paced music.	The cats must somehow topple the buffalo (10:11) ...
Battle 1 (predation)	It's now a battle of will as much as strength; many shots of lionesses and buffalo fighting	It's now a battle of will as much as strength (11:09).	CS lioness biting buffalo's rump, much blood visible (10:54). The bull is weakening, but the lions are tiring too (11:02).	Exciting, as evidenced by fast-paced music.	To live, the bull must somehow shake off the lioness (11:17).
Injury 1 (predation)	The bull is wounded (11:57); MS buffalo covered in blood (12:01).	The bull is wounded (11:57) but thanks to his thick hide, he will recover (12:01).	... but thanks to his thick hide, he will recover (12:01)		
Scarcity/ hunger 1	For the pride, these are hungry times	For the pride, these are hungry times (12:11).	There may be plenty of prey around, but lions struggle to run it down in water (7:42).	Negative, as evidenced by DA's lowered tone of voice.	But, ultimately, once the water recedes there will be new life, and new food to benefit all (12:27).
Rainforest 1	And for creatures	Grasses become the	In the right conditions,	Positive, as evidenced by	

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	living within the grass, this is a landscape as vast and towering as any rainforest	miniature equivalents of fruiting trees (12:53). And for creatures living within the grass, this is a landscape as vast and towering as any rainforest (13:06).	grasses have the extraordinary ability to grow from first shoots to flower in a matter of only days (12:44).	light-hearted flute music and the phrase, “extraordinary ability.”	
Treehouse 1	An excellent place to build a tiny treehouse	An excellent place to build a tiny treehouse, for a harvest mouse (13:21).	And for creatures living within the grass, this is a landscape as vast and towering as any rainforest (13:06).	Positive, as evidenced by light-hearted flute music.	
Forest/ Climbing 1	Climbing grass is harder than climbing trees; so she’s as agile as a monkey clambering around in a tree; lots of shots of mouse climbing grass	During summer, European meadowlands are full of food (13:36), but only for those that can reach it (13:43).	CS mouse walking by thorn (13:50); Climbing grass is harder than climbing trees, not least because their stems just won’t stay still (14:08).	Positive, as evidenced by light-hearted music and bright lighting.	Her prehensile tail acts like a fifth limb, so she’s as agile as a monkey clambering around in a tree (14:20).
Danger/ predation 1	Feeding up here, she’s exposed; A barn owl (14:59)	Feeding up here, she’s exposed (14:51) ... A barn owl (14:59)	And just as well, for the best food in this tiny forest is at the very top of its canopy (14:36).	<u>Barn owl</u> = Very, very bad. Evidenced by ominous sound effects when owl appears at 14:45; lowered tone of voice when DA says, “A barn owl (14:59)”	Make haste to lower levels of the grass forest, as evidenced by MS mouse climbing downwards at 15:04 – which immediately follows a shot of the barn owl flying towards the camera.
Chase 1 (predation)	Interspersed shots of mouse	Interspersed shots of mouse	Many shots of owl flying	Not very graceful: “Not	LS mouse hanging by

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	climbing downwards and owl flying towards grass.	climbing downwards and owl flying towards grass.	towards the grass.	her finest move”	tail; let’s go and falls to the ground (15:26). Not her finest move, but it did the trick (15:37).
Danger 4	Creepy insect noises (starting at 15:37); It’s a tangled and dangerous world down here	Harvest mice seldom go all the way down to the ground (15:43). It’s a tangled and dangerous world down here (15:47).		Negative/ dangerous, as evidenced by DA’s lowered tone of voice as he says, “It’s a tangled and dangerous world down here.”	But she can read the pattern of the stems overhead like a map, and so, find her way home (16:10).
Family/ mother 1	CS baby mice (16:26); CS baby mouse suckling at mother (16:39).	And not a minute too soon. There are mouths to feed (16:26).	CS baby mice (16:26); CS baby mouse suckling at mother (16:39).	Positive/ touching, as evidenced by soft music.	
Seasonality 2	They need to harvest the summer grasses while they’re still rich with food (16:49).	Her babies must fatten up quickly (16:42).	They need to harvest the summer grasses while they’re still rich with food (16:49).		They need to harvest the summer grasses while they’re still rich with food (16:49).
Seasonality 3	On the African savannah, too, seasonal grasses are filled with life	On the African savannah, too, seasonal grasses are filled with life (17:00). But it won’t last long (17:04).			
Hunting 1	Carmine bee- eaters are superb aerial hunters, experts at catching insects in mid- air	Carmine bee- eaters are superb aerial hunters, experts at catching insects in mid- air (17:14). But they have	Once alarmed, most insects stay put (17:40).		The bee-eaters need someone to stir things up a bit (17:47). CS Kori bustard face (17:46).

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		no way of flushing their prey out of the grass (17:26).			
Teamwork/ cooperation 2	MS bee-eater riding on top of Kori bustard (18:03).	A Kori bustard (17:54). It's the world's heaviest flying bird, so it should be bulky enough to kick up some insects (18:02)	It's the world's heaviest flying bird, so...	Whimsical/silly, as evidenced by whimsical music when bustard appears.	Bingo! MS bee-eater catching flying insect while perched atop bustard (18:13).
Competition 1	MS second bee-eater landing on bustard (18:21)	Until someone else comes along and cramps your style (18:20).	MS second bee-eater landing on bustard (18:21), CS bustard chasing both bee-eaters off (18:26).		Never mind, perhaps there are bigger opportunities ahead (18:33).
Teamwork/ cooperation 3	MS bee-eater riding atop ostrich (18:51); LS another ostrich with another bee-eater on it (19:06).	What about an ostrich? (18:36). This time, there's more than enough transport to go around (18:50) ... But free-riders are only tolerated for so long (19:13); MS ostrich smacking bee-eater (19:11).	The heaviest bird of all (18:40).	Whimsical/silly, as evidenced by whimsical music throughout the ostrich scene.	What the bee-eaters really need is a creature so big it won't even notice them (19:27). Nothing cuts a swathe through grass like an African bull elephant (19:39).
Competition 2	As more insects are stirred up, the competition intensifies; the race to stock up	They only have a split second to grab the prize (20:06) ... As more insects are stirred up, the competition	With summer drawing to a close, the race to stock up is on (20:46). Soon the grass will wither, and this opportunity	Positive/playful: evidenced by light-hearted, fast-paced flute music; bright lighting; and shots of bee-eaters	The trick is to fly as close to the front of the giant as possible (20:01).

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		intensifies (20:18).	will have gone (20:54).	banking to and fro.	
Scarcity/ hunger 1	As the dry season takes hold, food becomes increasingly thin on the ground	As the dry season takes hold, food becomes increasingly thin on the ground (21:12).	As the dry season takes hold; MS intense sun and dry grass (21:07).	Negative/ harsh, as evidenced by MS intense sun and dry grass (21:07).	<u>Specialize:</u> Now, only the most specialized predators on the plains can make a living (21:16).
Weapon/ Radar 1, 1	But a serval cat's main weapon are enormous radar ears	But a serval cat's main weapon are enormous radar ears (22:03).	They help her pinpoint prey hiding in the grass (22:11).		
Hunting 2	But the prey she seeks	But the prey she seeks are canny (22:23). Southern vlei rats (22:28).	They know that any sustained movement can give them away (22:34). So they move in short bursts (22:43).		But even the slightest rustle will give her a clue (22:52).
Scarcity/ hunger 2	But now, with so few rodents around, she will have to go hungry	In better times, she could catch 10 a day (25:09). But now, with so few rodents around, she will have to go hungry (25:11).	with so few rodents around... As drought intensifies, life gets tougher for all (25:21).	Negative: "she will have to go hungry" and, "as drought intensifies..."	Predators with permanent territories must tough it out while most of their prey disappear over the horizon (25:37).
Scarcity/ hunger 3	To avoid starvation	Over two million wildebeests wander the East African savannahs, chasing the rains (25:55).	To avoid starvation... chasing the rains	Positive/epic, as evidenced by epic theme music at (25:55).	To avoid starvation, many grassland animals follow a nomadic way of life (25:46).
Mating/ courtship 1	This male wants a mate; elaborate breeding plumage	Arriving on the wing, Jackson's widow birds	Although, it's not just food that they're after (26:23). This male		He's grown elaborate breeding plumage for

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		also seek fresh grass (26:16).	wants a mate (26:30).		this moment (26:36).
Mating/ courtship 2	His bachelor pad is sufficiently neat and tidy to attract a female	... but he needs a stage on which to show it [breeding plumage] off (26:40).	... to attract a female	Whimsical/silly, as evidenced by whimsical music at 26:54.	By carefully selecting grass blades, each trimmed to the correct length, he's creating something very special (26:53). He needs an even surface, and a centre-piece (27:13). The stage is set. His bachelor pad is sufficiently neat and tidy to attract a female (27:22).
Mating/ Competition 3, 3	He has competition; It might take more than a little gardening to impress the ladies	The problem is, can she see it [bachelor pad]? (27:28). He has competition (27:34);		Whimsical/silly, as evidenced by whimsical music at 27:50.	It might take more than a little gardening to impress the ladies (27:47).
Competition/ Mating 4, 4	His rival makes it look easy; Time to raise his game	Jumping is the right idea, but he's misjudged the height of the grass (27:53). His rival makes it look easy (28:09).	CS female widow bird looking towards camera (28:12).	Whimsical/silly, as evidenced by whimsical music at 27:50.	Time to raise his game (28:33); LS male widow bird jumping above tall grass (28:34).
Competition/ Mating 5, 5	Several shot of multiple male widow birds jumping above grass	Many shots of multiple male widow birds jumping above grass;	MS female widow bird looking towards camera (28:55).	Whimsical/silly, as evidenced by whimsical music at 27:50.	It's not only who jumps the highest, but who can keep doing so the longest (29:12). Unable to go the distance,

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					his rivals drop out one by one (29:25).
Mating/ courtship 6	MS male widow bird mounting female; Now he can show off his courtship arena;	Now he can show off his courtship arena (29:39). And engage in a little romantic hide-and-seek (29:51).	Stamina has won him admirers (29:33).	Whimsical/silly, as evidenced by whimsical music at 29:54.	Finally, he's done enough (30:05); MS male widow bird mounting female (30:05).
Industry/ lumberjack 1	Yet they're harvested on an industrial scale; tree-felling sound effects as grass blades are cut.	These blades are so tough, that virtually no large grass eaters can stomach them (31:07). Yet they're harvested on an industrial scale (31:12) by tiny grass cutter ants (31:16). But they themselves can't digest one bit of it (31:28). So, why bother? (31:33).	But they themselves can't digest one bit of it	<u>Awesome/ amazing</u> : One of the most remarkable is found here, on the grasslands of South America (30:57). <u>Positive/ Clever</u> : And it's very ingenious.	The answer is underground, and it's very ingenious (31:43). Each blade is cut to length and placed into a garden of fungus (31:54). The rotting grass feeds the fungus, and in turn, the fungus feeds the ants (32:05).
Industry/ lumberjack 2	But feeding five million workers requires intensive agriculture; they are an industrious lot; tree-felling sound effects as grass blades are cut.	But feeding five million workers requires intensive agriculture (32:12).	feeding five million workers	Positive: "Luckily"	Luckily, they are an industrious lot (32:19).
Awesome/ amazing 4	that's a mind-boggling	It's estimated that over one third of the	The colony alone will collect over	Awesome/ amazing: "that's a mind-	

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	amount of grass	grass that grows on Earth will be harvested by an insect (33:20).	half a tonne of grass every year. With billions of ant colonies across the world's grasslands all doing exactly the same thing, that's a mind- boggling amount of grass (32:39).	boggling amount of grass."	
Industry/ construction 1	termites memorialize their industry in sculpture; They're always built; builders	In northern Australia, termites memorialize their industry in sculpture (33:29) ... They're always built on a north-south axis, which is why their builders are called compass termites (33:44).	These castles of clay protect their builders from extremes of heat and seasonal floods experienced on many grasslands (34:08).	Awesome/ amazing "These astonishing mounds are three metres tall (33:39).	Mounds are remedies to, "extremes of heat and seasonal floods experienced on many grasslands (34:08)."
Danger/ predation 2	But they [termites] themselves can be food for those that can reach them; It can devour 20,000 insects a day	But they [termites] themselves can be food for those that can reach them (34:31) ... A giant anteater on the plains of South America (35:00). It can devour 20,000 insects a day (35:10).	A half-metre long tongue covered in microscopic hooks (34:43), followed by claws longer than those of a velociraptor (34:50) ... Powerful forelegs enable it to rip apart a termite hill with ease (35:18).	Disgusting, as evidenced by very close shots of saliva- covered tongue and nauseating sucking sound effects.	
Danger/fire 1	And as the sun bakes the grass, the	And as the sun bakes the grass, the	And as the sun bakes the grass; MS	Negative, as evidenced by DA's lowered	

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	termites face new danger; CS igniting grass (35:46)	termites face new danger (35:35).	intense sun with heat waves (35:41).	tone of voice and ominous music starting at 35:37.	
Fire/renewal 1	MS anteater in burnt grassland (36:10); Weeks, months may pass, but eventually the rains will return and the grass will sprout again	In minutes, fire turns grassland to ash (35:59). But the grasses are not dead (36:18).	Their underground stems are unharmful (36:21).		Weeks, months may pass, but eventually the rains will return and the grass will sprout again (36:31).
Winter 1	As winter approaches, the prairies of North America begin to freeze	Some grasslands must endure not only fire, but ice (36:45). As winter approaches, the prairies of North America begin to freeze (36:53).	As winter approaches		
Snow 1	CS grass leaf sticking out of snow (37:24); CS snow flurry (37:26); VCS snow (37:33)	In summer, bison roamed freely, almost continuously cropping the abundant green grass (37:16). Now, that grass is not only withered and frozen, it's about to be buried (37:23).		Beautiful, as evidenced by soft, bell-filled music and striking shots of snow falling.	
Struggle/ hunger 2	Pushing through deep snow is exhausting work, and the bison are now	Sixty million tonnes of snow now blanket this herd's territory (37:47).	Sixty million tonnes of snow now blanket this herd's territory (37:47) ...	Negative: "Pushing through deep snow is exhausting work, and the	The only thing that will keep them alive is buried beneath a metre of snow (38:32).

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	slowly starving	Pushing through deep snow is exhausting work, and the bison are now slowly starving (37:58). Just keeping warm saps huge amounts of energy (38:10)... The only thing that will keep them alive is buried beneath a metre of snow (38:32).	Their thick coats can insulate them down to minus 30 Celsius. It's now minus 40 (38:24).	bison are now slowly starving"	
Struggle/ hunger 3	The food the fox seeks is also deep beneath the snow (39:01). The survival of both creatures depends on getting through to the ground	And that's a problem shared with a surprising neighbour (38:40). The food the fox seeks is also deep beneath the snow (39:01).	The food the fox seeks is also deep beneath the snow (39:01).	Positive, as evidenced by light-hearted music that plays when the fox appears at 38:46.	The survival of both creatures depends on getting through to the ground (39:18).
Strength vs. Precision 1	For the bison, it will be a matter of brute strength (39:26) ... Their lightweight neighbour needs more precision (39:45).	For the bison, it will be a matter of brute strength (39:26) ... Their lightweight neighbour needs more precision (39:45).	<u>Brute strength for bison because</u> , "Massive neck muscles enable them to shovel five tonnes of snow a day (39:37)." <u>Precision for fox because</u> , "lightweight."	Whimsical/silly, as evidenced by whimsical music starting at 39:48.	For the bison, it will be a matter of brute strength (39:26). Massive neck muscles enable them to shovel five tonnes of snow a day (39:37). Their lightweight neighbour needs more precision (39:45).

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Brain vs. Brawn 1	To get through the winter on these prairies, sometimes brain beats brawn	The bison have reached their goal, a mouthful of withered grass (40:20). And where the bison have dug, the fox spots an opportunity (40:27).	<u>How fox catches vole:</u> MS fox stepping carefully (40:40); MS fox with ears and head erect (40:50); “He listens carefully, to pinpoint his target (40:50);” MS fox launching into the air and landing head-first in the snow (41:17).	Bison/grass = negative, fox/vole = positive: “To get through the winter on these prairies, sometimes brain beats brawn (41:40).”	A vole (41:22). Small, but 100 times more nutritious than a mouthful of dried grass (41:30). To get through the winter on these prairies, sometimes brain beats brawn (41:40).
Spring/ renewal 1	Shot of Canada thawing out from space (42:03); CS snow melting to reveal grass (42:09)	800 kilometres further north than any tree can survive, grass returns to life (42:25).	Springtime, as evidenced by shot of Canada thawing out from space (42:03)	Positive, as evidenced by upbeat theme music playing at 42:17.	
Baby/infant 2	Over 70,000 caribou babies will be born in the next few days; Many shots of caribou babies, such as MS caribou calf and mother (43:01).	Caribou females have journeyed to the far north to calve (42:42). Over 70,000 caribou babies will be born in the next few days (42:47).	As the calves appear, so too do the leaves of the newly sprouting grass (42:59).	Positive, as evidenced by light-hearted flute music throughout.	
Migration 2	Within days they will have to keep up with their parents on a never-ending march	And the calves must strengthen quickly (43:07). Within days they will have to keep up with their parents on a	Within days they will have to keep up with their parents on a never-ending march (43:11).	Positive, as evidenced by light-hearted flute music throughout.	And the calves must strengthen quickly (43:07).

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		never-ending march (43:11).			
Playfulness 1	MS calf running, seemingly for joy (43:19); MS calf running, seemingly for joy (43:24); It may look playful...	They're testing the legs that will carry them thousands of kilometres (43:24).	It may look playful, but there's no harder life on the grasslands than that facing these infants (43:56).	Positive, as evidenced by light-hearted flute music throughout.	Better to learn their limitations now (43:30).
Migration 3	They're setting off on the greatest overland trek made by any animal	The caribou mothers now join together, each with an infant exactly the same age (44:03).	They're setting off on the greatest overland trek made by any animal (44:18).	Positive/epic, as evidenced by theme music and very long aerial shot caribou herd at 44:29.	
Danger/ predation 3	But, wherever grass eaters travel, predators lie in wait	But, wherever grass eaters travel, predators lie in wait (44:47). Here they are, Arctic wolves (44:57).	They must seize their chance while the caribou pass through their territory (45:10).	<u>Predators</u> = Very, very bad, as evidenced by DA's lowered tone of voice as he says, "predators." <u>Wolves</u> = Very, very bad, as evidenced by DA's lowered tone of voice as he introduces them at 44:57.	The wolf runs at the herd, trying to flush out the weak or the slow (45:50).
Danger/ predation 4	Multiple aerial shots of an Arctic wolf chasing a caribou calf.	A calf is separated (46:03). At full tilt, 60 kilometres an hour, the wolf is just faster (46:16).		Negative and exciting, as evidenced by ominous and fast-paced galloping music at 46:02.	But the calf has stamina (46:26).
Migration/ journey 1	for these young caribou have now started a	Only a few weeks old, and this calf's will to survive is	And it needs to be, for these young caribou have now	<u>Calf</u> = Awesome/rem arkable: "Only a few weeks	Forever chasing the seasonal growth of the

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	journey that will last a lifetime (47:13). Forever chasing the seasonal growth of the grass on which they depend (47:22)	remarkable (46:59).	started a journey that will last a lifetime (47:13). Forever chasing the seasonal growth of the grass on which they depend (47:22).	old, and this calf's will to survive is remarkable (46:59)." <u>Young caribou in general</u> = Positive, as evidenced by Aerial LS caribou herd and beginning of theme music at 47:08.	grass on which they depend (47:22).
Awesome/ amazing 5	"Grass can survive some of the harshest conditions on Earth: flood, fire, and frost, and still flourish (47:51)." "So it is that grasslands provide a stage for the greatest gatherings of wildlife on planet Earth (48:09)."	Like all grassland creatures, they are at the mercy of these unpredictable, but ultimately bountiful lands (47:38) ... So it is that grasslands provide a stage for the greatest gatherings of wildlife on planet Earth (48:09).	<u>Why bountiful</u> : "Grass can survive some of the harshest conditions on Earth: flood, fire, and frost, and still flourish (47:51)."	<u>Grass</u> = Awesome/ amazing: "Grass can survive some of the harshest conditions on Earth: flood, fire, and frost, and still flourish (47:51);" Intensifying, epic theme music at 47:55.	