



Anthropomorphism in the Anthropocene

Reassembling Wildlife Management Data in *Bear 71*

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Abstract Leanne Allison and Jeremy Mendes's interactive documentary *Bear 71* (2012) depicts the "story of a female grizzly bear monitored by wildlife conservation officers from 2001–2009" in Banff National Park. The film's visuals are composed of fragments from critter-cam footage, which alternate with a minimalist interface: a grid populated with dots signifying other animals and plants living in Banff. This essay argues that *Bear 71* uses two strategies to reframe the data-driven discourse of wildlife management. First, the anthropomorphized narrative of *Bear 71* reframes wildlife management data through attentiveness to the experience of a single grizzly bear, which functions as a counterdiscourse to the dominant framing of wildlife data as aggregate information about a species population. Second, the visual strategy of the minimalist interface prompts the viewer/user to navigate within a multispecies grid that gestures toward understanding animal endangerment as a problem not on the level of species but rather within a diverse multispecies assemblage that, crucially, includes humans. Although the eponymous *Bear 71* dies, the narrative refuses closure because her daughter and other animals continue to move across the interface after the narrative ends. *Bear 71* offers a model of "becoming-with" endangered animals through our attunement to both their singular stories and multispecies assemblages. It further models how the environmental humanities can be employed to rearticulate scientific data as innovative multispecies stories.

Keywords Anthropocene, anthropomorphism, wildlife ethics, conservation, multispecies

Leanne Allison and Jeremy Mendes's open-access interactive web documentary *Bear 71* (2012) depicts the increasingly complex, technological modes of wildlife management in Banff National Park, Canada. In the film, its creators state that the interactive documentary seeks to provide the "true story of a female grizzly bear monitored by wildlife conservation officers from 2001–2009." The film's visuals are composed of disparate fragments from critter-cam footage and park ranger videos, which were put together by Allison after she had sifted through thousands of images. Those visuals alternate with a minimalist interface created by Mendes: a grid populated with dots signifying other

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animals and plants living in Banff. Additional data about each animal or plant can be discovered if the viewer/user clicks on the dots while moving his or her own character across the grid. Meanwhile, a fictionalized autobiographical voice-over, written by J. B. MacKinnon, employs traces of wildlife data to develop a coherent narrative about a single grizzly bear, the eponymous *Bear 71*. Although critics have argued that the voice-over narrative amounts to a sentimentalized anthropomorphism that is “heavy-handed” and “nostalgic,”¹ I argue that the anthropomorphized narrative of *Bear 71* re-frames wildlife management data through attentiveness to the experience of a single grizzly bear, which functions as a counterdiscourse to the dominant framing of wildlife data as aggregate information about a species population.

Wildlife conservation proceeds through an assemblage of the “bodies, technologies, texts, and other materials through which knowledge is produced and ordering takes place,” Jamie Lorimer argues.² The creators of *Bear 71* rearrange the assemblage of wildlife conservation data by shifting the logic of conservation from the biopolitical management of a species to the suffering and experiences of a singular animal while at the same time placing that animal within a multispecies community. Narratives about animal endangerment and extinction in the Anthropocene, Thom van Dooren argues, should prompt us “to insist on a truth that is not reducible to populations and data: a fleshier, more lively, truth that in its telling might draw us all into a greater sense of accountability.”³ *Bear 71* is just such a lively story. As such, it demonstrates that the environmental humanities provide a vital approach to reframing the data—photos, film, biological samples, and territorial maps—gathered by conservation biologists and wildlife managers.

This essay argues that *Bear 71* uses two strategies to reframe the data-driven discourse of wildlife management. First, attentiveness to the singular experiences of a bear provides a different frame for wildlife data, one that reveals the violence involved in wildlife data collection and management. The imaginative narration of the bear’s singular experiences in *Bear 71*’s voice-over, moreover, uses autothanatography, a narrative mode with a first-person, omniscient narrator who is already dead. The creators of *Bear 71* risk sentimentality and distortion by anthropomorphizing a dead bear, yet at the same time the autothanatographical mode of the narrative engages in an identification and affective shift that reveals the shared violence that the neoliberal, biopolitical order inflicts on animals and humans alike. The voice-over narrative shares the death story of a single bear, while at the same time, the second, primarily visual, strategy of the minimalist interface further resists and displaces the discourse of species population.

1. Sarah Jaquette Ray argues that “the webdoc’s form, which deliberately blurs boundaries between wired and wild, offers a more constructive environmental sensibility than the narrative’s nostalgic position” (“Rub Trees, Crittercams, and GIS,” 238). Anat Pick argues, “The level of detail in the bear’s narration helps to offset the documentary’s otherwise heavy-handed anthropomorphism” (“Why Not Look at Animals?,” 116).

2. Lorimer, *Wildlife in the Anthropocene*, 10.

3. van Dooren, *Flight Ways*, 10.

Throughout the documentary, *Bear 71* and the viewer/user both navigate within a multispecies grid that contains many forms of life: bears, lynx, foxes, rabbits, trees, flowering plants, and so on. Thus the second section of this essay argues that the film's grid and the viewer/user's navigation of it gestures toward understanding animal endangerment not as a problem on the level of species but rather within a diverse assemblage that, crucially, includes humans.

Bear 71 reframes wildlife data to represent the bear as an affective, active, singular creature and as part of a larger, multispecies assemblage. It further resituates the endangerment of the bear within the Anthropocene, because the monitoring and interventions of wildlife officials are futile due to the scale of habitat loss and human encroachment that leaves grizzly bears and other wildlife barreling uncontrollably toward death like the train that kills *Bear 71* in the end. While *Bear 71* is already dead, the narrative is left open because her daughter and many other nonhuman forms of life survive and continue to move across the interface after the voice-over narrative ends. Thus the narrative ends with a violent death that disturbs the viewer yet at the same time poses the question of what kind of refuge or multispecies commons would allow the flourishing of grizzly bears and other wildlife. *Bear 71* demonstrates that "it matters what stories we use to tell stories" as it reassembles wildlife data to motivate responsibility and response-ability for animal endangerment and multispecies communities.⁴

Reassembling Wildlife Data through Anthropomorphism

The fictionalized autobiography of *Bear 71*'s life does not begin with her birth but, suggestively, with her drugging and tagging by park service rangers. With its posthumous narrator who speaks from the grave, *Bear 71* is an autothanatography. Autothanatographical narratives have been recently popularized by murder mysteries, such as Alice Sebold's *The Lovely Bones* (2002), that employ a murdered narrator to tell her own story. While the narrator is already dead, autothanatography nonetheless asserts some agency on the part of the victim because, as Alice Bennett argues, the victim is "the one who gets to arrange the telling of the story's events to ensure that the murderer is not the creative force in shaping the plot's dynamic."⁵ *Bear 71*'s narrative begins with the initial gathering of data about her: the first frames of the film show her struggling and panting against a snare while wildlife officials calmly load a dart gun. Her omniscient narrative begins: "That snare had a breaking strength of two tons. The dart was full of something called Telazol, brought to you by Pfizer, the same people who make Zoloft and Viagra. Next thing I know, I'm wearing a VHF collar and have my own radio frequency. They also gave me a number. I'm *Bear 71*." By beginning the autothanatography

4. Donna Haraway argues, "Response-ability is about both absence and presence, killing and nurturing, living and dying—and remembering who lives and who dies and how in the string figures of naturalcultural history" (*Staying with the Trouble*, 12, 28).

5. Bennett, "Unquiet Spirits," 467.



Figure 1. Bear 71 peers out of a cage before being released into Banff National Park with her new radio collar. *Bear 71* ©2012 National Film Board of Canada. All rights reserved.

with the bear's capture, the film suggests that bears are thus interpellated into a system of wildlife management that forces them to give signs—to speak and communicate—of their existence to humans. *Bear 71* notes that the radio collar thereafter is “constantly beeping my location to some ranger playing God.” *Bear 71*'s creators explain that after her collaring, “She lived her life under near-constant surveillance. . . . She was tracked and logged as data” (fig. 1). Wildlife conservation officers “tracked and logged” data about *Bear 71* in order to gather information about the endangered grizzly bear population; the anthropomorphized narrative of *Bear 71* reassembles the data into an invitation for viewers to listen to the singular experiences of the bear. Christine Biermann and Becky Mansfield argue: “Managing individual nonhuman lives is meaningless in responding to the crisis of biodiversity loss; individual lives acquire meaning only when they advance the long term well-being of the broader population.”⁶ *Bear 71*'s autothana-tographical narrative reframes wildlife conservation data into an affective mode of communication and address from the individual animal that gestures beyond the biopolitical tendency of species conservation.

While the mysterious gaze of animals confronts humans with their silence and otherness, the data captured through hair snags, blood samples, critter cams, and radio collars coerce unspeaking animals into confession. Jean Baudrillard observes that animals are “summoned to respond to the interrogation of science,” and the extent of such interrogation is justified by the endangerment of a particular species. As Baudrillard argues, wildlife conservation data advance by “making the extinct species speak, . . . making them present the confession for their disappearance.”⁷ By reframing the data

6. Biermann and Mansfield, “Biodiversity, Purity, and Death,” 264.

7. Baudrillard, *Simulacra and Simulation*, 133, 136.

wrested away from *Bear 71*, Allison and Mendes expose the violence of wildlife data collection while at the same time reassembling the data into an open-ended narrative that requires input from the viewer and prompts multiple opportunities for “listening” to the data (instead of merely analyzing it) and attuning to the animal in different affective registers. Moreover, *Bear 71*’s autothanatographical mode exposes the biopolitics of wildlife conservation data collection in the Anthropocene: endangered species are made to live within a “wilderness” that is more like a zoo or carceral behavior-modification center. Wildlife conservation in national parks has become “increasingly unrealistic and can only be obtained through intensive human management,” Irus Braverman argues, which means wildlife management has become increasingly biopolitical in its “administrative structures and networks of the emerging institutions of natures.”⁸ Thus conservation and wildlife management track wildlife that are already ghosts, no-longer-wild animals that have already fallen off what van Dooren calls “the edge of extinction,” that “slow unraveling of intimately entangled ways of life that begins long before the death of the last individual.”⁹ Thus data capture in wildlife conservation—making animals speak—is suspiciously tied to their disappearance from Earth.

Bear 71 reclaims and employs data in a fictionalized autothanatography that challenges the moral imagination through attentiveness to the signs of the emotional and social life of the bear. Anat Pick argues that in an autothanatography, “whether modeled on artificial or on ghostly intelligence, the dead narrator is not simply human or humanized but a narrative construct.”¹⁰ The narrative construct wrests data away from their violent function of reducing a bear’s existence to nothing more than a data point about a species’ population. Moreover, if the death writing of autothanatography is often written from the perspective of a murder victim, then we, the audience, are implicated in looking for a culprit, which returns the gaze to ourselves. In other words, *Bear 71* suggests that tagging and tracking wild animals does not save them from human encroachment on their habitat but rather is another form of encroachment and disturbance that does not adequately address our own culpability within grizzly bear endangerment. As *Bear 71* interrogates “what stories we use to tell stories” about endangered animals, it echoes the argument of grizzly advocate Jeff Gailus: “We do not need any more information about bears. . . . We need to stop focusing on the bears and ecosystems that we are pushing to the brink, and start finding a new and healthier way of managing ourselves.”¹¹

In turning wildlife data into the story of a single bear’s endangerment, surveillance, and death, the creators of *Bear 71* anthropomorphize the bear, giving her a human consciousness and voice. Anthropomorphism is avoided by most scientists and

8. Braverman, *Wild Life*, 5, 11.

9. van Dooren, *Flight Ways*, 12.

10. Pick, “Why Not Look at Animals?,” 117.

11. Gailus, *Grizzly Manifesto*, 136.

even by literary scholars; as Onno Oerlemans argues, anthropomorphism reminds us of the naïveté of children’s literature and fables and thus is often seen as “a sign of charming delusion.”¹² However, in *Bear 71*, the voice-over narrative’s anthropomorphism cultivates an affective identification with the singular grizzly bear’s life and experiences. In Paul de Man’s distinction between the literary tropes of anthropomorphism and prosopopoeia, he argues that prosopopoeia is making or giving a face to the nonhuman other, whereas anthropomorphism is “not just a trope but an identification on the level of substance.”¹³ Anthropomorphism is partial identification that blurs the difference between nonhuman and human life in order to produce the affect of shared bodily vulnerability that is subject to suffering and exploitation. Bodily identification is made strongly in the first words of the bear’s voice-over narrative: “The dart was full of something called Telazol, brought to you by Pfizer, the same people who make Zoloft and Viagra.” When the bear is trapped, she is sedated using drugs so that the wildlife managers can take biological samples and fit her with a radio collar. Perhaps to justify the imaginative leap into anthropomorphic narrative, MacKinnon stresses in the script that the drug used to sedate the bear is made by the same manufacturer that makes popular drugs for humans. The choice of relating the bear sedative Telazol to Zoloft and Viagra demonstrates the bodily connection between humans and bears. Zoloft and Viagra are drugs that enhance mental mood and masculinity in humans; they enhance an individual’s human behaviors and moods in order to make those humans more culturally normative. Likewise, the bear’s capture and monitoring leads to her behavior modification so that she can live within a national park filled with human visitors without being a danger to them. The shared bodily connection, then, is based not on charming sentiment but rather on our mutual subjection to biopolitics, in which both humans and animals alike are compelled to live in ways that are considered to be appropriate and desirable for their species population.

While Sarah Jaquette Ray argues that *Bear 71* manages to redeem its unscientific anthropomorphism through its “disanthropocentric anthropomorphism,” I argue *Bear 71*’s anthropomorphism is firmly anthropocentric yet shared through a negative identification with the animal.¹⁴ The bear does not become the cuddly friend found in so many children’s stories but rather amounts to a ghostly shadow of an uncannily

12. Oerlemans, *Romanticism and the Materiality of Nature*, 68.

13. de Man, *Rhetoric of Romanticism*, 257. It is worth pointing out that not every anthropomorphism points to the singular characteristics of an animal. In fables, for example, anthropomorphism evokes more general qualities about a species. Anthropomorphism can also distort animal behavior so that humans can identify sentimentally with animals, such as in Timothy Treadwell’s affectionate anthropomorphism of grizzly bears in Alaska, which finally leads to his mauling death (*Grizzly Man*, dir. Werner Herzog et al., 2005). *Bear 71*, however, anthropomorphizes a bear’s life through narrative and voice while never losing sight of the bear’s nonhuman, singular, documented experiences.

14. Ray, “Rub Trees,” 250.

familiar prisoner within the biopolitical governance of neoliberalism. Amitav Ghosh argues that stories in the Anthropocene will demand use of an “environmental uncanny” that focuses on “the uncanny intimacy of our relationship with the nonhuman.”¹⁵ The bear’s voice is initiated through her capture into a web of biopolitical management that interpellates her into a system in which her behavior will be monitored and altered. Thus the anthropomorphism of Bear 71 is established through an affective intimacy with the bear that emphasizes what Anna Lowenhaupt Tsing describes as “our common slide into precarity” in the Anthropocene.¹⁶

The voice-over narrative of *Bear 71* insists that wildlife management is blatantly biopolitical, part of that “power that exerts a positive influence on life, that endeavors to administer, optimize, and multiply it.”¹⁷ Such biopolitical power is paradoxically almost as violent as the killing of bears by humans who hunt illegally. The bear’s life provides examples: if she ventures too close to human campgrounds to eat, then her behavior will be modified. Bear 71 says, “The first six months after I got the collar, I was chased away by rangers twelve times. They call it ‘aversive conditioning.’ I call it rubber bullets.” Bear 71 is shot with a gun, but instead of death, this gun carries the bullets of disciplinary power that will alter the bear’s behavior so that she can live within a national park filled with human visitors. Thomas H. Birch argues that wilderness management exhibits similarity to human incarceration or mental health systems,¹⁸ and *Bear 71* reveals that if a bear resists the discipline of the park, such behavior leads to captivity in a zoo. Clicking on “Grizzly Bear 16,” the viewer will read the mini-story of a bear that was transferred to a zoo after becoming accustomed to human food and nonresponsive to aversive conditioning. The narrative points then to what van Dooren argues is the “strange juxtaposition of care and violence” within wildlife conservation.¹⁹ In Banff National Park, Bear 71 advises, “the first rule of survival is, don’t do what comes naturally.”

Bear 71 is responsive to aversive conditioning, yet her life is still doomed. As more people move into the area, fewer bears are surviving. To reemphasize this shared vulnerability, later in the narrative, Bear 71 says, “Think of us as refugees, I guess. There used to be grizzlies all across the Canadian Prairies, and now there aren’t any. Not one.” To say that the bears are “like refugees” with the qualifier “I guess” shows our lack of thought about the political and ethical status of animal life without habitat. Donna Haraway argues for making the direct comparison between the vulnerability of animal and human life: “Right now, the earth is full of refugees, human and not,

15. Ghosh, *Great Derangement*, 32–33.

16. Tsing, *Mushroom at the End of the World*, 161.

17. Foucault, *Reader*, 259.

18. Birch argues, “Wilderness reservations are not intended or tolerated as places where nature is allowed to get out of control, even though a degree of aberrant behavior is permitted, just as a degree of it is permitted within the edifices of the penal system for humans” (“Incarceration of Wilderness,” 142–43).

19. van Dooren, *Flight Ways*, 17.

without refuge.”²⁰ The anthropomorphism of Bear 71, based on the scientific data about her, reveals the bear as a singular being instead of a mere part of the population, which draws the connection between an animal refuge and a human refugee camp. Yet at the same time, the film’s identification between animal and human, as it is narrated in *Bear 71*, elides the colonialist history of the national park system. Banff National Park was established (as Rocky Mountains Park in 1885) by actively banning the aboriginal Stoney from the region, because aboriginal subsistence hunting was seen as a threat to the interests of big game hunting and the so-called civilizing mission of European settlers.²¹ *Bear 71*’s omission of the material, historical connection between aboriginal people and the grizzly bears—the loss of their land and the violence done to them by European settlers—suggests that the environmental humanities must pay attention to environmental history and the injustice of settler colonialism in any critical reading of the practices of wildlife conservation.

Although it unfortunately failed to grapple with Banff’s colonial past and present, *Bear 71* introduces viewers/users to a critical view of conservation and wildlife management, which is defined by the proliferation of types of surveillance technologies and by the discipline of a proliferation of subjects (foxes, bears, even plants). Wildlife documentaries typically obscure the technological processes associated with wildlife surveillance so viewers can imagine they have entered a pristine environment with unmediated access to viewing wildlife.²² *Bear 71*’s interactive documentary instead highlights the technological aspects of surveillance to demonstrate that wilderness is in practice an exercise of national sovereignty through biopolitical management. Everything is categorized, named, mapped, and controlled with the goal of slowing the damage caused by an event that has already happened: the loss of habitat during the last two hundred years due to colonial and capitalist projects. In gesturing toward this long view, *Bear 71* demonstrates how the bears are suffering from what Rob Nixon calls attritional catastrophe, “a violence of delayed destruction that is dispersed across time and space.”²³ Without critical interrogation of the human behavior that precipitated attritional destruction of the grizzly bears, humans will continue to make the bears’ habitat smaller and endanger their lives.

Wildlife Data as Multispecies Assemblage

Bear 71’s voice-over narrative reframes wildlife management data to entice the viewer into identifying with the singularity of a particular bear. The second reframing strategy

20. Haraway, *Staying with the Trouble*, 100. Tsing also argues for the importance of refuges from biopolitical management: “Conservationists have come to believe that forests need refugia from management. But these refugia will have to be managed if they are to survive” (*Mushroom at the End of the World*, 176).

21. For a compelling history of the establishment of Banff National Park in relation to its aboriginal inhabitants, see Theodore Binnema and Melanie Niemi, “Let the Line Be Drawn Now.”

22. Cynthia Chris argues, “Televisual forms of nature have been made to fit a market that thrives on conflict that melts into happy endings, and drama that does not get mired in real-world political impasses but resolves in comfort” (*Watching Wildlife*, 201).

23. Nixon, *Slow Violence*, 2.

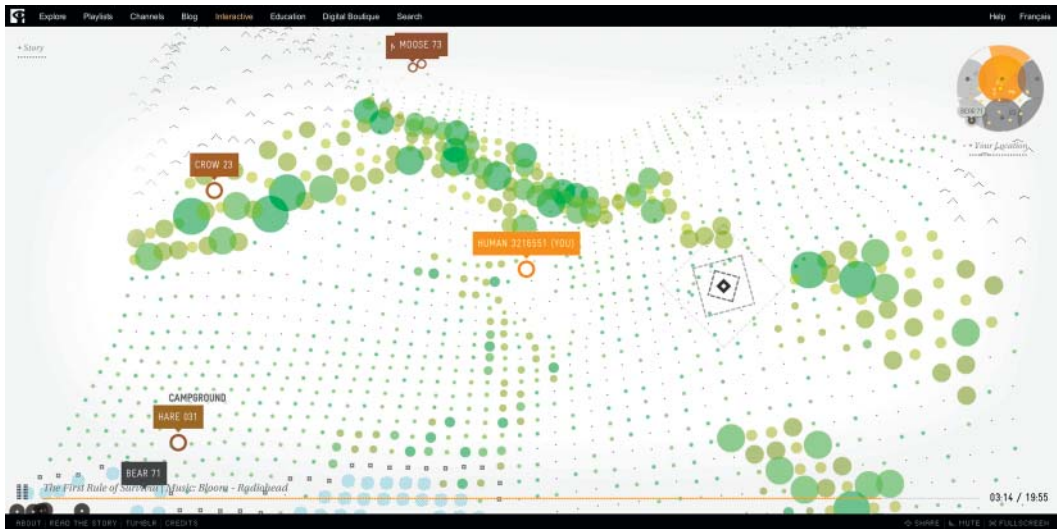


Figure 2. The minimalist grid interface. *Bear 71* ©2012 National Film Board of Canada. All rights reserved.

in *Bear 71* is visual: the background of *Bear 71* is a multispecies grid that represents the terrain of Banff National Park (fig. 2). *Bear 71*'s minimalist user interface challenges the idea of understanding bears in terms of their species population by reframing an individual bear within the larger context of the multispecies ecology of Banff National Park. As an interactive documentary, *Bear 71*'s user-generated platform uniquely pulls the viewer into the world of biopolitical wildlife management. As the viewer/user begins the film, there is a prompt to allow the computer's camera to film the viewer while watching the video. The viewer/user is then given a name, as in the figure above—"Human 3,216,551"—and becomes a little dot on the "grid" that has the agency to maneuver the abstract landscape made up of thousands of data points. In this way, the viewer/user has a simulated immersive experience with the nonhuman life existing within the park: grizzly bears, lynx, moose, hares, crows, trees, and plants. After the viewer/user clicks on a plant or animal, a pop-up box delivers critter-cam images with information. For example, Lynx 106 travels a thousand miles a year, and Wolf 55 has been tracked going back and forth from Montana to Banff National Park, which might highlight some success in creating habitat corridors for wide-ranging animals. At the same time, Bear 114 was illegally killed by humans, who cut off her ears and collar and sent them down the river in a cooler in order to make it appear that she was still alive. While interacting with *Bear 71*, the viewer/user has the experience of a wildlife manager, monitoring the behavior of collared animals on a screen while having access to the data collected about them. At the same time, when the viewer/user allows *Bear 71*'s website to observe his or her participation through the computer's camera, the viewer becomes another monitored animal on the screen. A review of the film argues that the interactive aspect of the documentary "dilutes the impact of the main story line, as the adventure-game aspect of the project doesn't necessarily enhance the viewer's sympathy with the

animals.”²⁴ However, I argue that both forms of data reassemblage, the anthropomorphized story line of *Bear 71* and the interactive grid populated by other forms of life, actively demonstrate Tsing’s suggestion that “species are not always the right units for telling the life of the forest.”²⁵

Even though *Bear 71*’s story is coherent, it is told while simultaneously allowing the viewer/user to select and view the stories of other animals. The amount of information on the grid—thousands of data points—is nearly impossible to exhaust and certainly compels the viewer/user to watch the documentary again. In the interaction, the viewer/user can begin to imagine the vast, ecological community at Banff National Park. The grid puts forth a uniquely data-driven imaginary of what Aldo Leopold called the “biotic community”: the grid allows that community to be imagined while at the same time highlighting the limitations of our understanding.²⁶ The biotic community that *Bear 71* asks the viewer to imagine is, like Banff itself, fragmented and overwhelming. Nixon argues that the development of the modern nation-state occurs through producing not only the imagined community of the nation but also “unimagined communities” that effectively become sacrifice zones in the work of economic “progress.” While Nixon’s notion of the unimagined community is concerned with marginalized people who become “developmental refugees,” an argument can be made that, as stated earlier, the grizzly bears and other animals in Banff National Park exhibit an uncanny similarity to human refugees.²⁷ As *Bear 71* prompts the viewer to imagine the unimagined multispecies community of a national park through its interactive format, it suggests that, as Tsing argues, “collaborative survival requires cross-species coordinations.”²⁸

The interactive part of the documentary allows viewers to travel through the park and have a limited amount of agency in clicking on and learning about the data that have been gathered about other tagged animals living there. In the grid, the viewer imagines a technological version of what Patrick Bresnihan calls the “manifold commons,” an “ongoing responsiveness and awareness of the many different forms of life which inhabit, even momentarily, a space.”²⁹ A study of viewer interaction with *Bear 71* notes that due to the interactive nature of the grid, “participants often described their relationship to the environment in terms of presence.”³⁰ Including the presence of the viewer/user in the denuded graphic field conveys the way in which humans are implicated in the animals’ endangerment as well as humans’ encoding in the facts of wildlife data. *Bear 71*’s “interactivity involves the audience in the representative process,” yet at the same time, while the viewer/user can navigate and learn about the terrain and its

24. Makarechi, “‘Bear 71’: Interactive Film at Sundance.”

25. Tsing, *Mushroom at the End of the World*, 162.

26. Leopold, *Sand County Almanac*, 384.

27. Nixon, *Slow Violence*, 150–74.

28. Tsing, *Mushroom at the End of the World*, 155–56.

29. Bresnihan, “John Clare and the Manifold Commons,” 88.

30. Nash, “Strategies of Interaction,” 227.

inhabitants, he or she cannot make any changes to the environment or intervene in the lives of animals.³¹ Like the park officials, the viewer/user has limited control while the narrative barrels toward its tragic ending.

While the viewer/user ranges over the grid-like simulation of Banff National Park, Bear 71's omniscient narrative notes the grizzly bears' historic range from the rocky mountains into the Midwestern plains, thus reminding the viewer/user that while the national park seems vast, it is a mere fraction of the bears' original habitat. As the narrative notes, the bears have been losing this habitat since European settlement. When the Midwestern plains became farms, the bears were pushed into the mountains, and thus grizzly bear habitat has been atrophying since the nineteenth century. Recent commercial development around the park has been a significant contributor to accelerating habitat loss and spillover harms that are currently endangering the grizzly bears' existence.³² The narrative then points to a problem within the national park system: national parks exist primarily for human recreation, not as animal refuges. As Bear 71 observes, "People come to Banff to see what's been lost almost everywhere else. Everyone wants to see a grizzly bear, but of course, no one wants to be killed by one." Both humans and bears seek Banff as a refuge, a place to live and thrive outside the pressures of urban, contemporary life. If the goal of the park is to provide humans with access to "wild" nature, that means, paradoxically, that grizzly bear behavior must be altered from its state of unpredictable wildness. Etienne Benson argues that the postwar project of tagging and tracking wildlife, particularly grizzly bears in Yellowstone National Park in the United States, originated out of a desire to reduce human-grizzly conflict rather than an interest in bear conservation.³³ Today in Yellowstone, another uptick in human visitors has similarly led to increased monitoring of the grizzly bears' behavior and even the selective execution of aggressive bears by park rangers, a phenomenon that David Quammen refers to as the "paradox of the cultivated wild."³⁴ The bears are left in a habitat with increasingly shrinking boundaries and are expected to tolerate accidental human contact yet stay away from humans. Bear 71 says, "There're fifteen remote-sensing cameras in my home range, plus infrared counters, and barbed wire snags to collect my hair. I suppose it's like most surveillance that goes on today—it's partly

31. *Ibid.*, 223.

32. The film states that the town of Canmore, which is within the park, has doubled in size in ten years, and the park gets five million tourists a year. Michael F. Proctor and colleagues suggest that the biggest threat to grizzly bears in Banff is more humans moving to the area to avoid heat in regions further south, which would lead to further grizzly population fragmentation. "Population Fragmentation and Inter-ecosystem Movements of Grizzly Bears," 36.

33. Benson argues, "Heavily visited parks such as Yellowstone had been troubled by increasing human-bear conflicts as visitorship expanded dramatically in the postwar decades. Techniques for safely studying and handling bears held out the promise of resolving these conflicts without reducing either the number of bears or the numbers of visitors" (*Wired Wilderness*, 52–53).

34. Quammen, "Yellowstone," 56.

there to protect you, and partly to protect everybody else from you.”³⁵ Just as in the beginning of the film, which links the drugging of the bear to humans taking Zoloft and Viagra, here the constant surveillance of behavior is linked to human life. The grid supplements this narrative by suggesting that all the animals in the park are somehow less than wild or are even the “living dead” as they are subject to many spillover harms while being biopolitically managed and “made to live” in less than wild ways.³⁶

Bear 71's narrative development of a bear who is already dead, combined with a visual multispecies grid in which most forms of wildlife are already mapped and monitored, falls in line with the affect of the Anthropocene, in which “the main revolutionary event is behind us,” as Bruno Latour argues.³⁷ The Anthropocene affect is reinforced by the way *Bear 71*'s life ends when she is hit by a train, on the line that has run directly through Banff National Park since its establishment in the nineteenth century. The train gestures toward the rise of what Andreas Malm calls “fossil capitalism,” the economic system characterized by unlimited growth and powered by fossil fuels, which begins with the invention of the steam engine in England in 1784.³⁸ The steam engine quickly powered many trains, and train mania swept North America. Completion of the Canadian Pacific Railway in 1881 gave sportsmen and other tourists easy access to the newly created park. The train that killed *Bear 71* has always barreled straight through Banff National Park and thus is associated with the advent of the Anthropocene, nineteenth-century colonialism, and manifest destiny—the same historical thrust that initially pushed the grizzly bears out of the plains and into the mountains. As Ray points out, moreover, the pressure of the rapidly growing population of human consumers also drives the need for a rising number of trains full of grain and consumer products crossing Banff National Park.³⁹ *Bear 71*, then, dies from something that figuratively has already happened, just as the narrative itself is given by a posthumous narrator, one who is already dead before the story begins. The sense of the inevitable is evoked repeatedly in the bear's death: as the bear's narrative states, “An accident is not

35. Likewise, the introductory text to the film explains, “Chances are your picture gets taken dozens of times a day without you really knowing it. This surveillance is done so that you don't steal gas, steal a car, or steal a kiss. Life was not so different for this bear. She was trapped, collared, and given a number at the age of 3.”

36. Hugo Reinert's study of the conservation of the lesser white-fronted goose also discusses how conservation is a “double bind, held in the pressured space between extinction (as a limit on numbers and time) and the fragile wild (as a limit on intervention). Fail to intervene, and the object is lost; intervene, and the object may also be lost, although in other ways,” through becoming less than wild. Thus the endangered birds become like ghosts through the constitutive withdrawal of the people who observe and monitor them (“Care of Migrants,” 22).

37. Latour, “Agency at the Time of the Anthropocene,” 1. See also Crutzen, “Geology of Mankind.”

38. Malm, *Fossil Capital*.

39. Ray argues that the grain on the tracks is highlighted because of Mackinnon's interest in the hundred-mile diet: “Humanity's rapacious appetite for corn grain and corn-fed animals precipitated the mass transportation of corn via railroad, without concern for the material impacts of those transportation networks” (Ray, “Rub Trees,” 246).

the same as a mystery.” The accident that kills the bear is not caused by individual human actors but rather by the inevitable rush of a train that figures the long-established and unstoppable march of colonialism and capitalism. Bear 71 explains, “If you look backward from any single point in time, everything seems to lead up to that moment,” and “looking back on it now, it all seems . . . *unstoppable*.”

To highlight how innovative this approach is, it might be useful to compare *Bear 71* to the recent conservation documentary *Virunga* (dir. Orlando von Einsiedel, 2014) about the last mountain gorillas in Virunga National Park, Democratic Republic of Congo. Virunga is threatened by the interests of the petroleum industry, which seeks to drill for oil on that land. In order to destabilize the conservationist goals of the park, the industry funnels money into local militias that kill gorillas and park rangers alike as well as create social chaos in local human communities. Unlike *Virunga*, *Bear 71* resists portraying environmental conflict as melodramatic, with obvious protagonists and antagonists. As is common with Anthropocene narratives, the threats to the bears and other animals in Banff are widely dispersed across space and time.⁴⁰ Thus *Bear 71*'s reassemblage of wildlife data reworks the imagination of biotic community by shifting the viewer from the role of spectator to a person with responsibility for the bear's endangerment simply by being part of Western culture. *Bear 71*, then, reflects what the crisis of the Anthropocene demands in narratives about animals on the edge of extinction; as van Dooren argues, “the ethical claim made on us to hold open spaces for other species requires an understanding of the complex histories and inheritances that draw us into responsibility and relationship with others.”⁴¹

Bear 71's reassemblage of wildlife data finally hints at possible human-animal collaborations in the multispecies commons of the forest, or what Tsing describes as “disturbance-based ecologies in which many species live together without harmony or conquest.”⁴² In a story about a particular “rub tree” frequented by bears, the critter cams reveal multiple stories of many animals using that rub tree, including human hikers and joggers who use it to stretch or rest. This multispecies assemblage—trees, bears, small mammals, and humans—are drawn there because “the forest has its own language.” *Bear 71* says, “It was like he [the jogger] knew he stopped there for a reason, but he couldn't quite remember what it was.” This story suggests the potential for a far greater attentiveness to the language of the forest through the marks and the guidance of nonhuman animals. Another story recalls a grizzly-human encounter: “I was browsing dandelions with the cubs when two people appeared. I reared up on my hind legs, and I was about to charge when I realized they were girls. Just two little girls crouched

40. Ursula K. Heise points out that the graphic novel *Virunga*, collectively authored by the Stanford Graphic Novel Project (2009), is more complicated than the film: the novel suggests “the conservation projects associated with the national park are not above ethical questioning and are deeply embroiled in national politics” (*Imagining Extinction*, 177).

41. van Dooren, *Flight Ways*, 40.

42. Tsing, *Mushroom at the End of the World*, 5.

down like they were praying. So, I chased the cubs into the bush, and everyone walked away from that one.” This encounter does not end in violence, not by the wildlife rangers or by the bears, but rather with the human girls prostrate before the animal, praying. This posture of respect, of penance for intruding on the animals’ territory, leads the bear not to charge, and “everyone walked away.” Both stories suggest an alternative model of wildlife ethics in which the nonhuman animal is sovereign in its own territory. Sue Donaldson and Will Kymlicka similarly call for a “wild animal sovereignty,” which “means that if and when we humans visit their territory, we do so not in the role of stewards and managers, but as visitors to foreign lands.”⁴³ Recognition of wild animal sovereignty would subvert the exercise of national sovereignty in biopolitical wildlife management.

If as Dinesh Joseph Wadiwel argues, recognizing animal sovereignty asks us “to imagine friendship as a pure and necessarily difficult reciprocity,” the end of *Bear 71*’s autothanatography suggests just such a continuing relationship.⁴⁴ Although *Bear 71* dies, the film ends with photographic evidence that the daughter of *Bear 71* lives on, though without a mother and thus at an even greater degree of vulnerability. The anthropomorphized narrative of *Bear 71* is not merely nostalgic but rather an example of what Haraway calls “staying with the trouble” that prompts the viewer/user to “become with the dead and the extinct.”⁴⁵ *Bear 71* presents a model of “becoming-with” endangered animals through our attunement to both their singular experiences and multispecies assemblages. The documentary demonstrates one way that the environmental humanities can be employed to rearticulate scientific data as innovative and inclusive stories that imagine multi-species commons in which both humans and animals might flourish together.

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43. Donaldson and Kymlicka, *Zoopolis*, 170.

44. Wadiwel, “War against Animals,” 294. Although the voice-over narrative manifests the dominant trope of extinction elegy—which, as Heise points out, “tends to leave out species that cannot be easily associated with particular cultural histories, and its nostalgic and pessimistic tone puts off many potential supporters” (*Imagining Extinction*, 50)—I argue the ending of *Bear 71* moves beyond elegy to a demand for a response.

45. Haraway, *Staying with the Trouble*, 101.

References

- Allison, Leanne, and Jeremy Mendes. *Bear 71* (interactive documentary). National Film Board of Canada, 2012. bear71.nfb.ca/#/bear71.
- Baudrillard, Jean. *Simulacra and Simulation*. Ann Arbor: University of Michigan Press, 1994.
- Bennett, Alice. "Unquiet Spirits: Death Writing in Contemporary Fiction." *Textual Practice* 23, no. 3 (2009): 463–79.
- Benson, Etienne. *Wired Wilderness: Technologies of Tracking and Making Modern Wildlife*. Baltimore: Johns Hopkins University Press, 2010.
- Biermann, Christine, and Becky Mansfield. "Biodiversity, Purity, and Death: Conservation Biology as Biopolitics." *Environment and Planning D: Society and Space*, no. 32 (2014): 257–73.
- Binnema, Theodore, and Melanie Niemi. "'Let the Line Be Drawn Now': Wilderness, Conservation, and the Exclusion of Aboriginal People from Banff National Park in Canada." *Environmental History* 11, no. 4 (2006): 724–50.
- Birch, Thomas H. "The Incarceration of Wilderness." In *Postmodern Environmental Ethics*, edited by Max Oelschlaeger, 137–61. Albany: State University of New York Press, 1995.
- Braverman, Irus. *Wild Life: The Institution of Nature*. Stanford, CA: Stanford University Press, 2015.
- Bresnihan, Patrick. "John Clare and the Manifold Commons." *Environmental Humanities* 3, no. 1 (2013): 71–91.
- Chris, Cynthia. *Watching Wildlife*. Minneapolis: University of Minnesota Press, 2006.
- Crutzen, Paul J. "Geology of Mankind." *Nature* 415 (2002): 23.
- de Man, Paul. *The Rhetoric of Romanticism*. New York: Columbia University Press, 1984.
- Donaldson, Sue, and Will Kymlicka. *Zoopolis: A Political Theory of Animal Rights*. Oxford: Oxford University Press, 2011.
- Foucault, Michel. *The Foucault Reader*. New York: Pantheon, 1984.
- Gailus, Jeff. *The Grizzly Manifesto: In Defence of the Great Bear*. Victoria/Vancouver/Calgary: Rocky Mountain, 2010.
- Ghosh, Amitav. *The Great Derangement: Climate Change and the Unthinkable*. Chicago: University of Chicago Press, 2016.
- Haraway, Donna. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press, 2016.
- Heise, Ursula K. *Imagining Extinction: The Cultural Meanings of Endangered Species*. Chicago: University of Chicago Press, 2016.
- Latour, Bruno. "Agency at the Time of the Anthropocene." *New Literary History* 45, no. 1 (2014): 1–18.
- Leopold, Aldo. *A Sand County Almanac, and Sketches Here and There*. Oxford: Oxford University Press, 1968.
- Lorimer, Jamie. *Wildlife in the Anthropocene: Conservation after Nature*. Minneapolis: University of Minnesota Press, 2015.
- Makarechi, Kia. "'Bear 71': Interactive Film at Sundance Tells Dark Side of Human Interaction with Wildlife." *Huffington Post*, January 24, 2012. www.huffingtonpost.com/2012/01/23/bear-71-interactive-film-sundance_n_1225040.html.
- Malm, Andreas. *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*. London: Verso, 2016.
- Nash, Kate. "Strategies of Interaction, Questions of Meaning: An Audience Study of the NFB's *Bear 71*." *Studies in Documentary Film* 8, no. 3 (2014): 221–34.
- Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. Cambridge: Harvard University Press, 2011.
- Oerlemans, Onno. *Romanticism and the Materiality of Nature*. Toronto: University of Toronto Press, 2004.
- Pick, Anat. "Why Not Look at Animals?" *European Journal of Media Studies* 4, no. 1 (2015): 107–25.
- Proctor, Michael F., David Paetkau, Bruce N. McLellan, Gordon B. Stenhouse, Katherine C. Kendall, Richard D. Mace, Wayne F. Kasworm, Christopher Servheen, Cori L. Lausen, Michael L. Gibeau,

- Wayne L. Wakkinen, Mark A. Haroldson, Garth Mowat, Clayton D. Apps, Lana M. Ciarniello, Robert M. R. Barclay, Mark S. Boyce, Charles C. Schwartz, and Curtis Strobeck. "Population Fragmentation and Inter-ecosystem Movements of Grizzly Bears in Western Canada and the Northern United States." *Wildlife Monographs* 80, no. 1 (2012): 1–46.
- Quammen, David. "Yellowstone: America's Wild Idea." Special issue. *National Geographic*, May 2016.
- Ray, Sarah Jaquette. "Rub Trees, Crittercams, and GIS: The Wired Wilderness of Leanne Allison and Jeremy Mendes' *Bear 71*." *Green Letters: Studies in Ecocriticism* 18, no. 3 (2014): 236–53.
- Reinert, Hugo. "The Care of Migrants: Telemetry and the Fragile Wild." *Environmental Humanities* 3, no. 3 (2013): 1–24.
- Tsing, Anna Lowenhaupt. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press, 2015.
- van Dooren, Thom. *Flight Ways: Life and Loss at the Edge of Extinction*. New York: Columbia University Press, 2014.
- Wadiwel, Dinesh Joseph. "The War against Animals: Domination, Law, and Sovereignty." *Griffith Law Review* 18, no. 2 (2009): 283–97.